

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2011-0028

WASTE DISCHARGE REQUIREMENTS
FOR
TRIANGLE ROCK PRODUCTS, INC.
FLORIN ROAD AGGREGATE PLANT
SACRAMENTO COUNTY

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

1. Triangle Rock Products, Inc. (hereafter referred to as Discharger) submitted a Report of Waste Discharge (RWD) on 23 August 2010 to obtain revised Waste Discharge Requirements (WDRs) to expand its Florin Road Aggregate Plant (hereafter referred to as Facility) in Sacramento County. Additional information was submitted during the months of August through October 2010.
2. The processing plant is at 11501 Florin Road in southeast Sacramento in Section 31 of T8N, R7E, MDB&M as shown on Attachment A, which is attached hereto and made part of this Order by reference. The Discharger owns and operates the plant.
3. The Facility is comprised of 413 acres located on property identified by Assessor's Parcel Number (APN) 067-0120-069, and the 121-acre expansion area (hereafter referred to as Expansion Area) located south of Florin Road and identified by APN 067-0120-074, as shown on Attachment A.
4. Order No. R5-2004-0135, adopted by the Central Valley Water Board on 11 September 2004, prescribes waste discharge requirements for the discharge of industrial wastewater generated at the Facility. This revision to the WDRs is necessary to include a description of the Expansion Area.
5. The total mining operation is now comprised 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.

Mining Operations and Wash Water Discharges

6. The Discharger mines sand and gravel from the historical stream channel deposits on the original 413-acre site. The original site extends along both sides of Laguna Creek and includes 249 acres divided into ten discrete mining phases, a 27-acre creek preserve area, and 137 acres of vernal pool mitigation areas.
7. Wastewater is generated from the aggregate washing operations and discharged to a settling/recycling pond system located in the original mining area. Silt from the wastewater is used as fill for previously mined areas.
8. Mining Phases I through VIII have been completed and are in the process of being filled. The remaining phases to be mined include Phase X (the processing plant), Phase IX (future settling ponds), and the Expansion Area. These areas are shown on Attachment B, which is attached hereto and made part of this Order by reference.

9. Current mining activities are within mining Phase IX (including former Settling Ponds 1 and 2). These ponds had a total surface area of nine acres, were approximately 19 feet deep, and had a combined capacity of approximately 153 acre-feet at two feet of freeboard. Former Settling Ponds 1 and 2 were removed during the mining of Phase IX and replaced with Settling Ponds 3 through 6 in excavated mining Phases I and II.
10. The operation, as permitted by the County of Sacramento, processes up to 15,000 tons of aggregate per day. The mining operation lowers the existing land surface an estimated 65 feet by removing approximately 25 feet of overburden soil and 40 feet of aggregate using dry excavation methods.
11. Mining techniques may include, but are not limited to excavators and front-end loaders. The mined aggregate is transported to the processing plant in the original mining area via a conveyor belt or truck. The mined aggregate is washed, screened and stockpiled according to product type. Oversize material is crushed, washed, screened, and stockpiled. No washing or other processing activity is performed in the Expansion Area.
12. The site was not historically mined for gold. Any gold recovered by the Discharger from the aggregate is by gravity separation only. Non-ionic surfactants may be used in this process.
13. The aggregate washing process uses approximately 6.3 million gallons per day (mgd) of water, most of which is recycled. The aggregate washing wastewater is discharged to a clarifier where polymers are added to enhance solids settling. Approximately 0.63 mgd of silt-laden (or sediment slurry) water from the clarifier is currently discharged to settling ponds. The decant water is pumped to the fresh water tank for reuse. A process flow diagram is provided as Attachment C, which is attached hereto and made part of this Order by reference.
14. The silt-laden water is conveyed from the clarifier to the settling ponds through a high density polyethylene pipe. Where the pipeline crosses over Laguna Creek, the pipe is encased in steel pipe mounted to an existing bridge structure.
15. Silt-laden water is discharged into Settling Ponds 3, 4, 5, and 6 located within mining Phases I and II. Phases I and II comprise approximately 50 acres, excavated to 62 feet below surrounding grade, providing a capacity of 5.1 million cubic yards (approximately 3,200 acre-feet) at two feet of freeboard.
16. The silt-laden water is rotated to each of the settling ponds. When a pond is filled with silt, the water is diverted to another pond to allow silt in the first pond to dry. Once the silt in a pond has dried, the silt is compacted as fill. The levees of each pond are raised and the process is repeated.
17. A floating electric pump is used to skim water from the ponds and pump it back to the freshwater tank for reuse.
18. Approximately 0.95 mgd of makeup water is needed for aggregate washing. Two supply wells, Well 1 and 2, provide makeup water to replace water lost to evaporation or retained in the gravel. Well 1 is sampled to monitor groundwater quality. Both wells are located near the water clarifier as shown in Attachment D, which is attached hereto and made part of this Order by reference. Additional makeup water can also be obtained from the wastewater settling ponds.

19. Based on monthly monitoring reports from 2004 through 2010, the wastewater (sediment slurry) discharged to the settling ponds is compared with the analytical results of groundwater samples collected from Well 1, as listed on the following table:

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 Solids	195	110 - 350	181	160 - 210	mg/L

The data indicates on average, that the wastewater has not contributed significant concentrations 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. Therefore, this Order requires the Discharger to submit a *Salinity Reduction Feasibility Study* to determine if best practicable treatment and controls (BPTCs) are available to further reduce the salinity of the Facility's wastewater.

20. Standard minerals and metal data of the wastewater (sediment slurry from the clarifier) sampled in August 2003 and August 2010 are listed below.

Constituent	August 2003 Wastewater ^{1,2}	August 2010 Wastewater ¹
Calcium, mg/L	14	16
Magnesium, mg/L	7.6	8.1
Sodium, mg/L	18	32
Bicarbonate, mg/L	31	72
Carbonate, mg/L	<5	ND, 5.0 ³
Hydroxide, mg/L	<5	ND, 5.0 ³
Total Alkalinity, mg/L	31	72
Chloride, mg/L	33	24
Fluoride, mg/L	0.61	0.53
Sulfate, mg/L	15	18
TDS, mg/L	190	220
pH, std. Units	7.47	7.9
Nitrate as NO ₃ , mg/L	5.2	11
Hardness, mg/L as CaCO ₃ O ₃	67	73
Aluminum	<50	ND, 50 ³
Antimony	<6	ND, 6.0 ³
Arsenic	<2	3.6
Barium	<100	ND, 100 ³
Beryllium	<1	ND, 1.0 ³
Cadmium	<1	ND, 1.0 ³
Chromium, total	<10	ND, 10 ³
Copper	<50	ND, 50 ³
Iron	<100	ND, 100 ³

Constituent	August 2003 Wastewater ^{1,2}	August 2010 Wastewater ¹
Lead	<5	ND, 5.0 ³
Manganese	12	ND, 10 ³
Mercury, total	<0.20	ND, 0.20 ³
Nickel	<10	ND, 10 ³
Selenium	<5	ND, 5.0 ³
Silver	<10	ND, 10 ³
Thallium	<1	ND, 1.0 ³
Vanadium	6.6	11
Zinc	53	ND, 50 ³

¹ µg/L except as noted

² Sample was filtered prior to preservation.

³ ND denotes not detected, reporting limit shown.

21. Temporary soil and overburden stockpiles are maintained for site reclamation. Sediments from the wastewater settling ponds are also periodically removed and used for these purposes.
22. Domestic wastewater is discharged to a septic system, which consists of a 1,500 gallon septic tank and two 35-foot deep seepage pits at the location depicted on Attachment D. The septic system is operated under a permit issued by the Sacramento County Environmental Management Department.
23. The Discharger maintains a lubricating oil storage area. Waste oil is stored in drums within a bermed secondary containment area. Motor oil and hydraulic fluids are stored in double-walled tanks.
24. The Discharger maintains a 10,000 gallon above-ground fuel storage tank at the Facility. The tank is double-walled with secondary containment. The Discharger has complied with the Aboveground Petroleum Storage Tank Act by completing a Spill Prevention Control and Countermeasure Plan.
25. The Discharger proposes to use 98 acres of the acquired 121-acre Expansion Area for mining purposes. The remaining 23 acres, including Laguna Creek, will serve as a wildlife habitat corridor.
26. The average ground surface elevation at the Expansion Area is approximately 108 feet above mean sea level. Aggregate will be mined to a depth of approximately 70 - 75 feet below ground surface.
27. The Discharger proposes to construct an underground conveyor system that will convey the mined aggregate from the Expansion Area to the existing processing plant. The conveyor system location is depicted on Attachment B.
28. No aggregate stockpiling, processing or waste discharge will occur on the Expansion Area. Temporary soil and overburden stockpiles will be maintained at the Expansion Area for site reclamation purposes.
29. The processing, discharge system and discharge volume will remain the same.

30. Former Ponds 1 and 2 may be converted into multiple settling ponds to receive silt-laden water from the mining activities. The future ponds may have a total surface area of 28 acres, an average depth of 47 feet, and a capacity of approximately 1,000 acre-feet with a two feet freeboard. The silt will be used as needed to fill the previously mined areas.
31. The remaining silt storage capacity in Ponds 3, 4, 5 and 6, with five feet of freeboard, as of August 2010, is 780.6 acre-feet (1.26 million cubic yards). The settling ponds can accommodate the silts generated from Phase IX and the Expansion Area mining activities.

Site-Specific Conditions

32. Soils beneath the original mining area are deposits of the Laguna Formation. 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 area. Laguna Creek traverse the Expansion Area.
33. The upper soil (overburden) within the original mining area 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.
34. The topography of the original mining area is disturbed due to ongoing grading and excavation. The ground surface in the main processing area is approximately 110 to 130 feet above mean sea level.
35. Natural drainage features direct storm water from the unmined portions 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.
36. 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, as depicted on Attachment B. With the exception of Phase X, the remainder of the site is outside of the 100-year floodplain.
37. Based on surface water monitoring data provided in the monthly monitoring reports from 2001 through November 2010, electrical conductivity values in Laguna Creek upstream (SW-1) of the Facility are not significantly different than values downstream (SW-2). The same appears to be true for pH. Turbidity data for periods when Laguna Creek is actively flowing along the entire reach within the Facility boundaries indicates that turbidity is typically reduced along that reach, except during spring, when it tends to increase. Surface water sample locations, SW-1 and SW-2, are shown on Attachment D.
38. The surrounding land is zoned for agricultural use.
39. The Facility lies within the Herald Hydrologic Subarea Boundary No. 531.11, as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

Groundwater Conditions

40. The RWD included historical data from the California Department of Water Resources Groundwater Level Data for Well No. 03N07E31J001M located just to the east between the South Folsom Canal and Sunrise Boulevard as shown in Attachment D. 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.
41. The depth to groundwater in the existing, inactive irrigation well at the Expansion Area was 130 feet below the ground surface as measured in May 2007.
42. The Discharger operates two supply wells, Well 1 and Well 2, at the Facility. Well 1 was sampled in August 2003 to provide a preliminary characterization of groundwater quality. Additional testing was performed in August 2010. The groundwater data is summarized below.

Constituent	Groundwater (August 2003) ^{1,2}	Groundwater (August 2010) ¹
Calcium, mg/L	12	14
Magnesium, mg/L	7.1	7.2
Sodium, mg/L	20	25
Bicarbonate, mg/L	93	87
Carbonate, mg/L	<5	ND, 5.0 ³
Hydroxide, mg/L	<5	ND, 5.0 ³
Total Alkalinity, mg/L	93	87
Chloride, mg/L	6.1	7.7
Fluoride, mg/L	0.21	0.21
Sulfate, mg/L	3.8	12
Total dissolved solids, mg/L	180	190
pH, std. units	7.59	7.6
Nitrate as NO ₃ , mg/L	<2	ND
Hardness, mg/L as CaCO ₃	59	64
Aluminum	<50	ND, 50 ³
Antimony	<6	ND, 6.0 ³
Arsenic	2.7	4.9
Barium	<100	ND, 100 ³
Beryllium	<1	ND, 1.0 ³
Cadmium	<1	ND, 1.0 ³
Chromium, total	<10	ND, 10 ³
Copper	<50	ND, 50 ³
Iron	<100	120
Lead	<5	ND, 5.0 ³
Manganese	<10	110
Mercury, total	<0.20	ND, 0.20 ³
Nickel	<10	ND, 10 ³

Constituent	Groundwater (August 2003) ^{1,2}	Groundwater (August 2010) ¹
Selenium	<5	ND, 5 ³
Silver	<10	ND, 10 ³
Thallium	<1	ND, 1.0 ³
Vanadium	<3	ND, 3.0 ³
Zinc	67	ND, 50 ³

¹ ug/L except as noted.

² Sample was filtered prior to preservation

³ ND denotes not detected, reporting limit shown

Based on the data presented, wastes constituents remain fairly steady. However, manganese concentration in the groundwater appeared to have increased since the 2003 monitoring event.

Basin Plan, Beneficial Uses, and Regulatory Considerations

43. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board (State Board). Pursuant to Section 13263(a) of the California Water Code, waste discharge requirements must implement the Basin Plan.
44. 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.
45. The beneficial uses of underlying groundwater are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.
46. State Water Resources Control Board Resolution No. 68-16 (the Antidegradation Policy) 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.

47. The treatment and control practices described herein provide commonly implemented treatment and control for the aggregate wastewater, and should prevent the discharge from creating a condition of pollution or nuisance, and maintain water quality. The following treatment and control practices will be implemented at the site:
 - a. Settling ponds are routinely used in the aggregate mining industry to settle suspended solids.
 - b. 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.
 - c. This Order requires monitoring of the sediment slurry and water supply.
48. The Discharger has provided an antidegradation analysis. Data provided in the analysis demonstrated that wastewater quality does not have reasonable potential to cause degradation of groundwater beyond water quality objectives or pose a threat to beneficial uses. The Discharger has stated that the Expansion Area is an economic benefit. The current permitted mining site has limited mining reserves and the Discharger anticipates the need for aggregate material for upcoming construction projects. The Expansion Area will sustain the jobs for current Triangle Rock Product employees as well as provide additional jobs for the construction of the tunnel and conveyor system necessary to transport the mined aggregate from the Expansion Area to the processing facility. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and therefore sufficient reason to accommodate expansion and limited groundwater degradation provided terms of the Basin Plan are met.
49. Based on the threat and complexity of the discharge, the Facility is determined to be classified 2-C as defined below:
 - a. Category 2 threat to water quality, defined as, "those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short term violation of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance.
 - b. Category C complexity, defined as, "any discharger for which waste discharge requirements have been prescribed pursuant to Section 13263 of the Water Code not included as a Category "A" or Category "B" as described above. Included would be discharges having no waste treatment systems or that comply with best management practices, discharges having passive treatment and disposal systems, or dischargers having waste storage systems with land disposal.
50. California Water Code Section 13267(b) provides that: *"In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of 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 reports required by this Order and the attached Monitoring and Reporting Program No. R5-2011-0028 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

51. 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:
 - a. Completion of flood control berm along the western bank of Laguna Creek prior to commencing Phase X.
 - b. Diverting storm water drainage from lands north of Jackson Highway to discharge directly to Laguna Creek, rather than the mining site.
52. A Notice of Determination was filed by Sacramento County on 27 February 2009 to add the additional 121-acre Expansion Area. The following mitigation measures for the Sacramento County Use Permit 2007-CZB-UPB-REB-00397 were made a condition of the approval to protect water quality:
 - a. During the mining phase, construct a temporary berm along the easy bank of Laguna Creek to protect against the erosion of the pit wall and head cuts that could migrate upstream and damage the creek channel or structures. The top of the berm shall be elevation 112.5 feet (National Geodetic Vertical Datum 29 or NGVD 29) at Florin Road tapering to 109 feet (NGVD 29) at the south property line.
 - b. Construct a berm along the south property boundary to stop offsite runoff from large storm events from entering the expansion site from the south. The berm shall be constructed to elevation 108 feet (NGVD 29).
 - c. During the mining phase, to mitigate for the loss of 250 acre feet of floodplain storage during a 100-year storm event, construct the proposed detention basin in Phase IX of the existing mining area north of Florin Road as described in the Drainage Study.
 - d. Implement the proposed reclamation plan and install a side channel weir as described in the Drainage Study in order to provide flood storage similar to the pre-project conditions such that creek levels are equal to pre-project conditions.
 - e. Design the low-flow meander belt such that it maintains a natural stability of the stream bed and bank relative to width, depth and meander. This design should be substantiated by providing a hydrogeomorphic analysis of the proposed restored Laguna Creek meander belt to the satisfaction of Sacramento County's

Department of Water Resources and Department of Environmental Review Agency.

- f. The temporary stormwater basin shall include the following design criteria to the maximum extent practicable:
 - i. The basin shall incorporate steep side slopes (3:1 or greater), and
 - ii. The basin shall be kept clear of vegetation that may provide nesting, roosting, or foraging opportunities for birds. Only herbaceous vegetation necessary for erosion control purposes will be allowed.
 - g. Upon the first filling of the temporary stormwater basin, the Discharger shall monitor the basin for bird activity on a daily basis. Monitoring shall occur early each morning during normal work days. The Discharger shall keep a daily log of this monitoring.
 - h. If the temporary basin begins to attract waterfowl, the applicant shall consult with a qualified wildlife biologist to develop appropriate measures to discourage water fowl presence. These measures may include, but are not limited to, the following:
 - i. Use of auditory methods (e.g. propane exploders, pyrotechnics, audio distress/predator vocalizations, etc.),
 - ii. Use of visual methods (laser, spotlights, etc), and
 - iii. Use of boats, including radio controlled boats, to physically disrupt resting birds.
53. Implementation of these specific mitigation measures set forth in the FEIR and Notice of Determination and compliance with waste discharge requirements will mitigate or avoid significant impacts to water quality.
54. The Discharger has filed a Notice of Intent to obtain coverage for the existing Facility under the State Board's Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System (NPDES), General Permit No. CAS 000001, Waste Discharge Requirements (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.
55. 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) is based on the following:
- a. The Central Valley Water Board is issuing waste discharge requirements.
 - b. The discharge complies with the Basin Plan.
 - c. The wastewater does not need to be managed according to Title 22 CCR, Division 4.5, Chapter 11, as a hazardous waste.

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

Public Notice

57. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
58. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
59. In a public meeting, all comments pertaining to the discharge were heard and considered.

IT IS HEREBY ORDERED that Order No. R5-2004-0135 is rescinded and that, pursuant to Sections 13263 and 13267 of the California Water Code, Triangle Rock Products, Inc. and 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 methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.

A. Discharge Prohibitions:

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Discharge of domestic waste to the aggregate wastewater settling ponds is prohibited.
3. Discharge of waste from sources other than the aggregate operation is prohibited.
4. Discharge of waste classified as hazardous, as defined in Section 2521(a) of Title 23, CCR, Section 2510, et seq., (hereafter Chapter 15) is prohibited.
5. Discharge of waste classified as 'designated', as defined in Section 13173 of the California Water Code, is prohibited.
6. The operation of and or discharge of waste from an asphaltic concrete or Portland cement concrete plant is prohibited.
7. Use of chemical gold recovery methods including amalgamation, cyanide leaching, or any other chemical method is prohibited.
8. Surfacing of wastewater from the septic tank or leach lines is prohibited.
9. The discharge of industrial wastewater to septic systems is prohibited.
10. The operation of and/or discharge of waste from aggregate processing in the Expansion Area is prohibited.

B. Discharge Specifications:

1. Water or process wastewater, if used for dust control or onsite irrigation, shall be used in a manner that will not cause erosion or sedimentation in runoff discharged off-site.
2. The discharge shall remain within the property boundaries (as described in this Order) at all times and outside of the 100-year floodplain. Additional ponds may be constructed as needed within the confines of the excavation areas and outside of the 100-year floodplain.
3. The wastewater system shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
4. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
5. Water impounded in any pond or drying bed shall not have a pH less than 6.5 or greater than 8.5.
6. Any wastewater settling ponds shall be managed to prevent breeding of mosquitoes. In particular,
 - a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the 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.
7. All stockpiled wastes and products shall be managed to prevent erosion of sediment to surface water drainage courses.
8. Newly constructed or rehabilitated levees or berms that hold back water shall be designed and constructed under the direct supervision of a California Registered Civil Engineer or Engineering Geologist. This requirement does not apply to the ponds developed within previously mined areas that do not drain to surface water.
9. The freeboard in any pond that receives or has received wastewater or sediment slurry shall never be less than two feet as measured vertically from the water surface to the lowest point of potential overflow.
10. The wastewater settling 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.
11. Neither the treatment nor the discharge shall cause a condition of pollution or nuisance as defined by the California Water Code, Section 13050.
12. The Discharger shall comply with all applicable sections of the Aboveground Petroleum Storage Tank Regulations (Section 25270, Health and Safety Code).

13. Septage shall be discharged only to a permitted municipal wastewater treatment or equivalent facility. All transportation of septage or other wastewater shall be performed by a duly authorized service.

C. Groundwater Limitations

The discharge shall not cause the 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).

D. Surface Water Limitations

The discharge shall not cause surface water to contain any waste constituent or parameter, including turbidity, in concentrations that exceed upstream water quality.

E. Provisions:

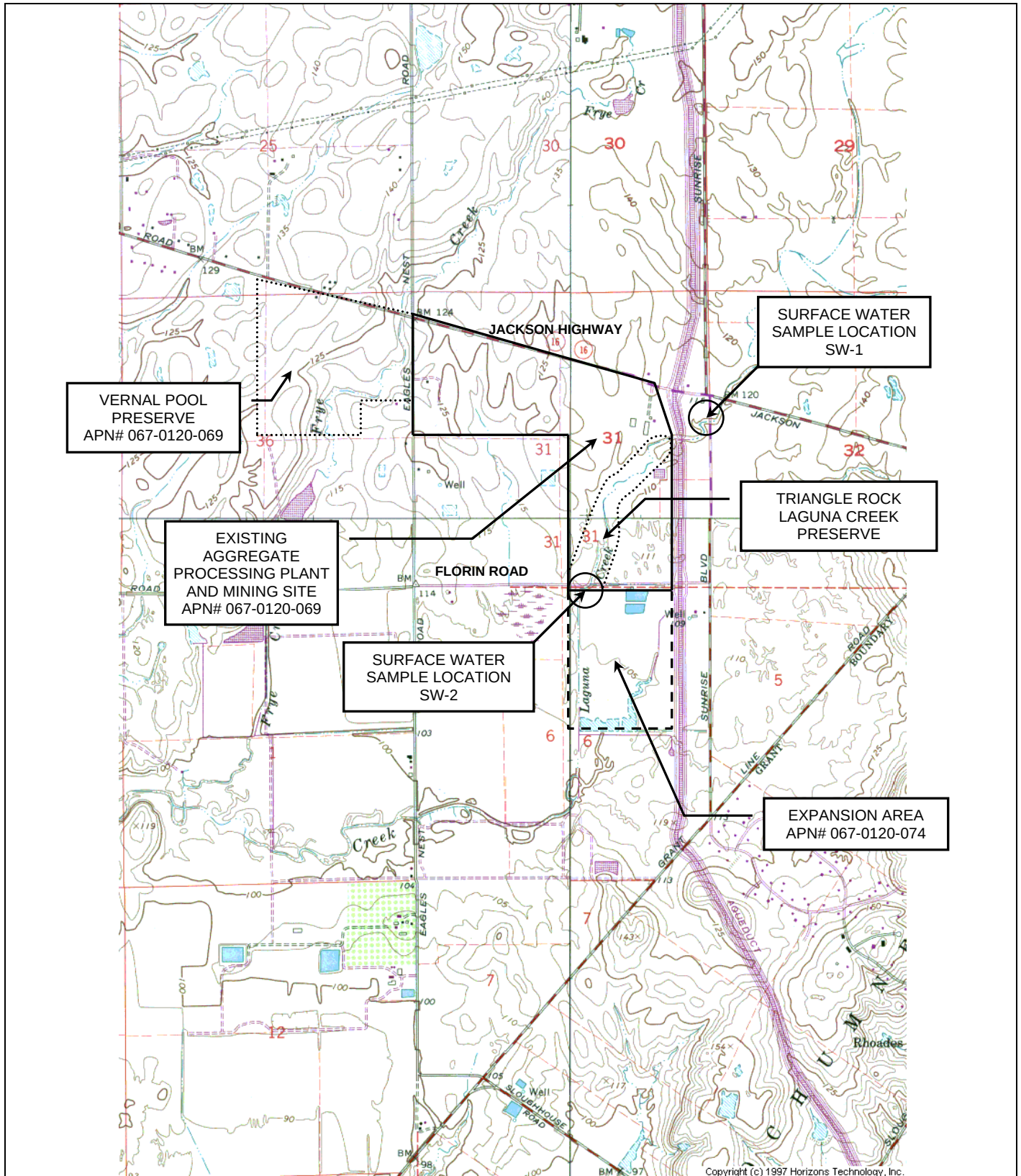
1. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant 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 **2 May 2011**, the Discharger shall submit a Notice of Intent for Order No. 97-03-DWQ, Discharges of Storm Water Associated with Industrial Activities for a change of information and coverage of the Expansion Area.
 - b. By **19 July 2011**, the Discharger shall submit a *Salinity Reduction Feasibility Study* to determine if further salinity reduction best practicable treatment and controls (BPTCs) are available. The Study shall include an analysis, to the extent feasible, of the costs and benefits of implementing additional BPTCs.
 - c. By **9 November 2015**, the Discharger shall submit a *Groundwater Quality Investigation Report* that characterizes background groundwater quality and presents a statistical analysis to determine if wastewater has contributed significant levels of waste constituents to groundwater quality. Groundwater quality is monitored by sampling supply well SW-1. The report shall include tabular summaries of all monitoring data obtained since the beginning of mining operations at this Facility (1997).

2. The Discharger shall comply with the Monitoring and Reporting Program No. R5-2011-0028, which is 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 is 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 the Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation as Discharger under the 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 the 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 Regional 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 Regional Board will review this Order periodically and will 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 8 April 2011.

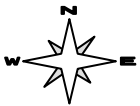
original signed by

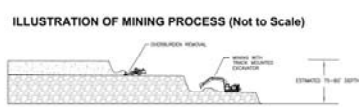
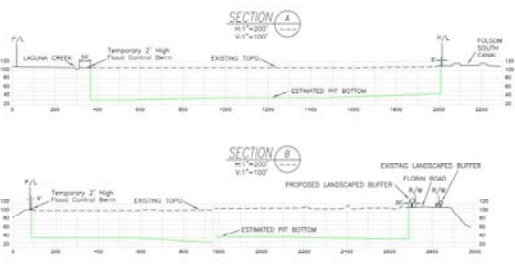
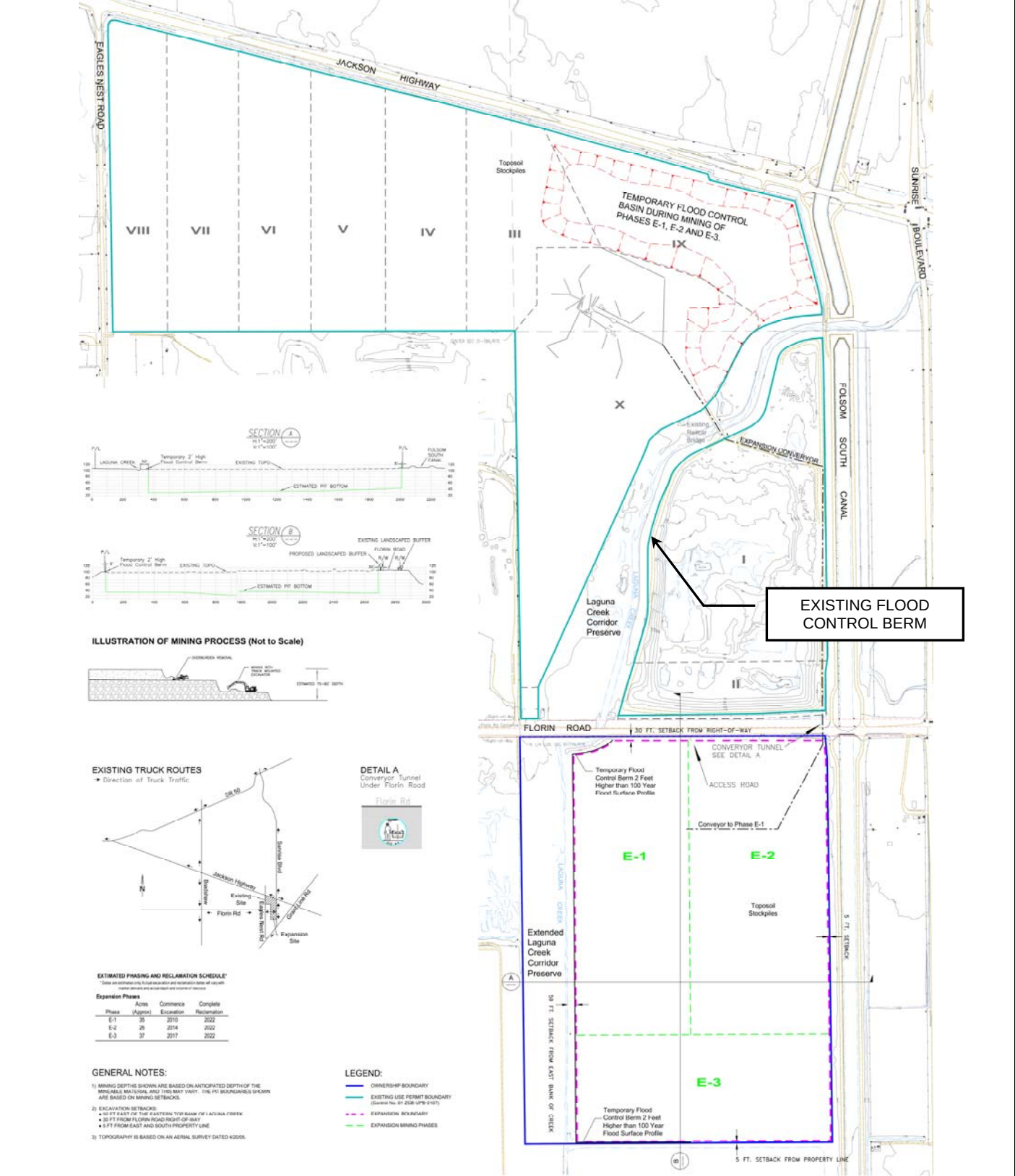
PAMELA C. CREEDON, Executive Officer



Drawing Reference:
U.S.G.S
Buffalo Creek
TOPOGRAPHIC MAP
7.5 MINUTE QUAD

VICINITY MAP
TRIANGLE ROCK PRODUCTS, INC
FLORIN ROAD AGGREGATE PLANT
SACRAMENTO COUNTY


approx. scale
1 in. = 2,000 ft.



ESTIMATED PHASING AND RECLAMATION SCHEDULE

Phase	Acres (Approx)	Commence	Complete
E-1	35	2010	2022
E-2	26	2014	2022
E-3	37	2017	2022

GENERAL NOTES:

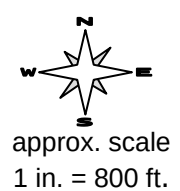
- 1) MINING DEPTHS SHOWN ARE BASED ON ANTICIPATED DEPTH OF THE MINING DEPTHS AND THE MAY 1987 - 1988 PVI BRANCHING SYSTEM ARE BASED ON MINING DEPTHS.
- 2) EXCAVATION SETBACKS:
 - 50 FT. EAST OF THE EXISTING TOP BANK OF LAGUNA CREEK
 - 30 FT. FROM FLORIN ROAD RIGHT-OF-WAY
 - 5 FT. FROM EAST AND SOUTH PROPERTY LINE
- 3) TOPOGRAPHY IS BASED ON AN AERIAL SURVEY DATED 4/20/05.

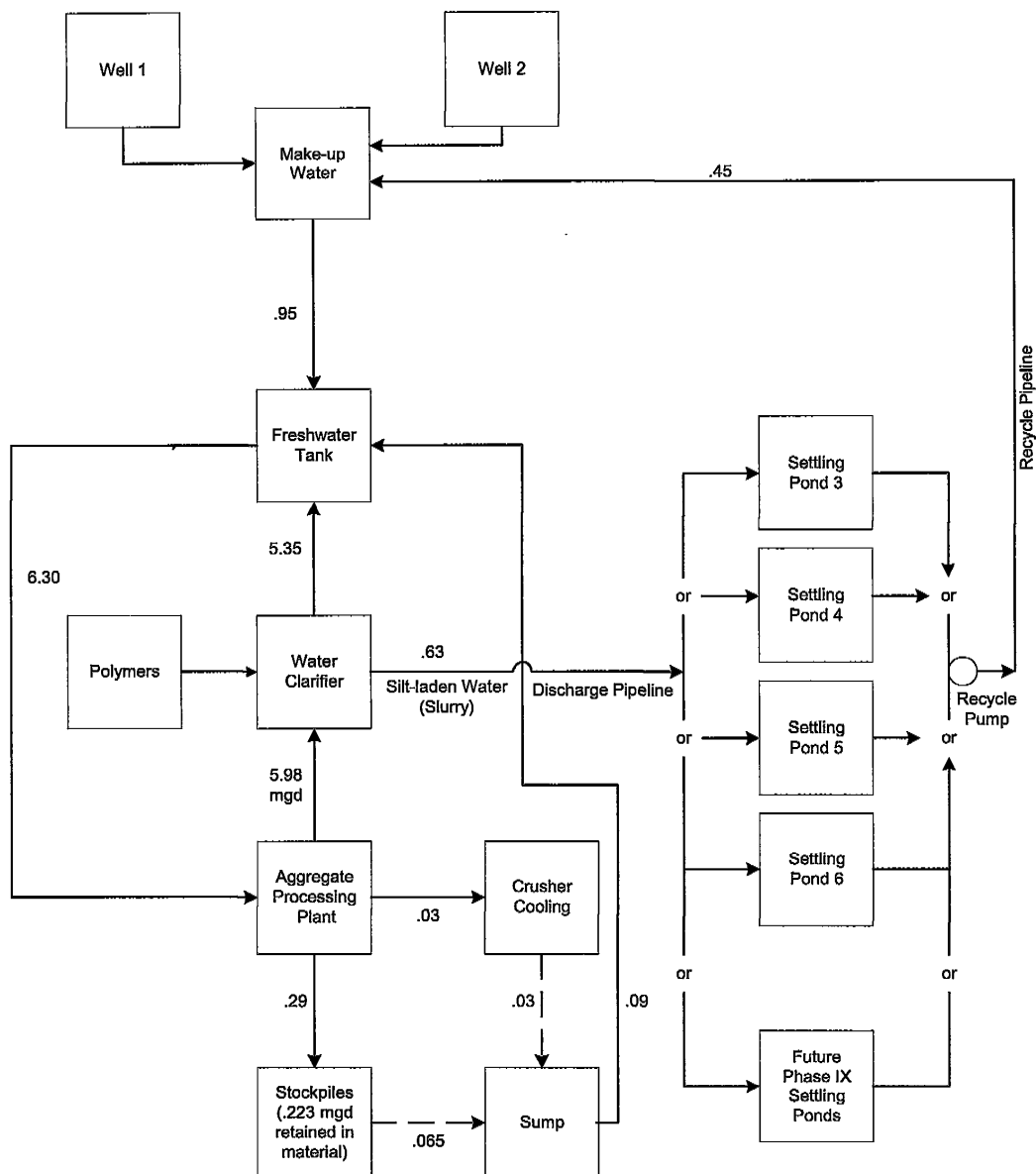
LEGEND:

- OWNERSHIP BOUNDARY
- EXISTING USE PERMIT BOUNDARY (Revised No. 30, 2/28/09 (1/2017))
- EXPANSION BOUNDARY
- EXPANSION MINING PHASES

Drawing Reference:
Report of Waste
Discharge, Buada and
Associates, 2010

EXPANSION AREA MINE PLAN
TRIANGLE ROCK PRODUCTS, INC
FLORIN ROAD AGGREGATE PLANT
SACRAMENTO COUNTY



**Legend:**

→ = direction of flow

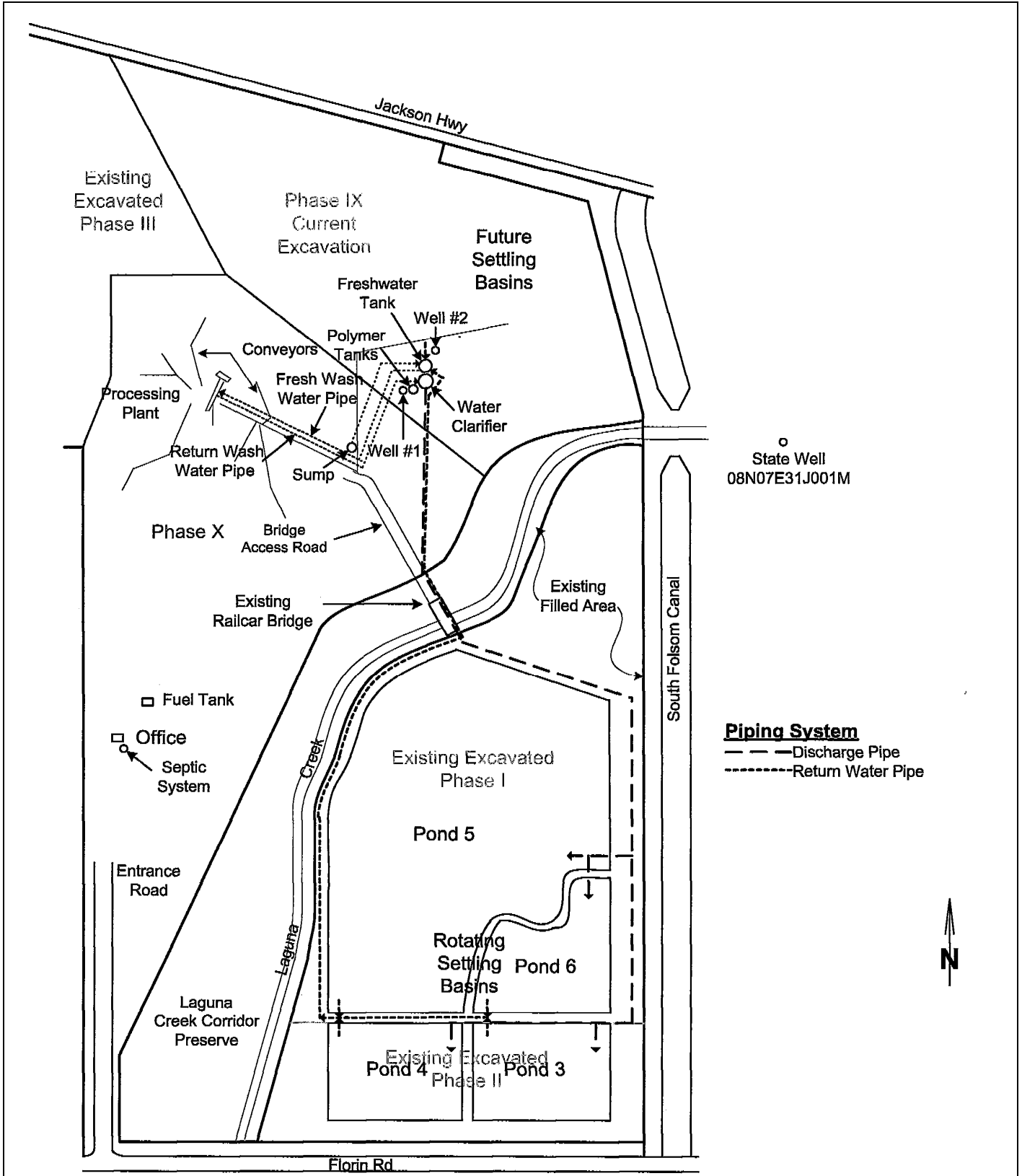
— = Pipe

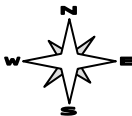
-- = Ditch

Triangle Rock Products, Inc.
Sand and Gravel Processing Plant
11501 Florin Rd, Sacramento, CA

Drawing Reference:
Report of Waste
Discharger, Buada
and Associates, 2010

PROCESS FLOW DIAGRAM
TRIANGLE ROCK PRODUCTS, INC.
FLORIN ROAD AGGREGATE PLANT
SACRAMENTO COUNTY



Drawing Reference: Report of Waste Discharge, Buada and Associates, 2010	EXISTING SITE PLAN TRIANGLE ROCK PRODUCTS, INC. FLORIN ROAD AGGREGATE PLANT SACRAMENTO COUNTY	 No Scale
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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2011-0028

FOR
TRIANGLE ROCK PRODUCTS, INC.
FLORIN ROAD AGGREGATE PLANT
SACRAMENTO COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring of the ponds, wastewater, surface water and water supply. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Field test instruments (such as those used to measure pH, electrical conductivity, turbidity, 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. The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of the MRP.

POND MONITORING

Each wastewater settling pond and drying bed shall be inspected weekly and monitored as follows:

<u>Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Influent flow	gallons	Measurement ¹	Weekly	Monthly
Freeboard	0.1 feet	Measurement	Weekly	Monthly
Berm condition	N/A	Observation	Weekly	Monthly

¹ May be based on flow meter totalizer reading or pump run time estimate. The method of measurement must be specified.

WASTEWATER MONITORING

A grab sample of sediment slurry from the clarifier shall be obtained and monitored as follows:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Electrical Conductivity	umhos/cm	Grab	Monthly	Monthly
pH	std.	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Semi-Annually ¹	Semi-Annually ¹
Standard Minerals ²	mg/L	Grab	Annually ³	Annually ³

¹ Semi-Annual samples shall be collected twice per year, January through June and July through December.

² Standard minerals include the following: chloride, sulfate, carbonate, bicarbonate, sodium, potassium, calcium, iron, magnesium, manganese.

³ Annual samples shall be collected once per year, July through September.

SURFACE WATER MONITORING

Grab samples of surface water shall be obtained from Laguna Creek when flowing water is present in the channel at the following locations:

<u>Station</u>	<u>Location</u>
SW-1	Laguna Creek at Sunrise Boulevard
SW-2	Laguna Creek at Florin Road

Surface water samples shall be monitored as follows:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
pH	std.	Grab	Monthly	Monthly
Turbidity	NTU	Grab	Monthly	Monthly
Electrical Conductivity	umhos/cm	Grab	Monthly	Monthly

The following observations shall also be made monthly. If no water is present, the monitoring report shall so state.

1. Apparent seepage through the banks of Laguna Creek;
2. Apparent erosion from discharge of storm water from the Site to Laguna Creek;
3. Apparent clarity of the water in Laguna Creek; and
4. Whether Laguna Creek is flowing along the entire reach, completely dry, or partially dry.

WATER SUPPLY MONITORING

A grab sample of water from supply well, Well 1, shall be obtained and monitored as follows:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Electrical Conductivity	umhos/cm	Grab	Monthly	Monthly
pH	std.	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Semi-Annually ¹	Semi-Annually ¹
Standard Minerals ²	mg/L	Grab	Annually ³	Annually ³

¹ Semi-Annual samples shall be collected twice per year, January through June and July through December.

² Standard minerals include the following: chloride, sulfate, carbonate, bicarbonate, sodium, potassium, calcium, iron, magnesium, manganese.

³ Annual samples shall be collected once per year, July through September.

REPORTING

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

A. Monthly Monitoring Reports

Monthly Monitoring Reports shall be submitted to the Central Valley Water Board on the **1st day of the second month following sampling** (i.e. the January Report is due by 1 March). At a minimum, the Monthly Monitoring Report shall include:

1. Results of pond, wastewater, surface water and water supply monitoring.
2. A map depicting the locations of all active wastewater ponds, drying beds, surface water sampling locations, and the locations where pond freeboard is measured.
3. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format.
4. If requested by staff, copies of laboratory analytical report(s).
5. A discussion of all septage and other off-site industrial waste disposal.
6. A calibration log verifying calibration of all monitoring instruments and devices used to comply with the prescribed monitoring program.

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 annual sampling schedule for groundwater shall be obtained between the months of July through September. The data shall be included in the 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 the wastewater monitoring.
2. Results of the water supply monitoring.
3. A scaled map showing relevant structures and features of the facility.
4. 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.
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 all analytical results.
8. 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 to the Central Valley Water Board by **1 February each year**. The Annual Monitoring Report shall include the following:

1. A written summary of all significant actions taken during the year.
2. Tabular summaries of all monitoring data obtained during the year. Data showing trends, such as groundwater elevation or quality, shall be presented in graphs.
3. A map showing the current location of the wastewater settling pond locations.

4. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.
5. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.
6. A summary of information on the management and disposal of sediments.
7. A forecast of wash water and sediment slurry flows for the coming year, as described in Standard Provision No. E.4.

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

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

original signed by

PAMELA C. CREEDON, Executive Officer

8 April 2011

(Date)

INFORMATION SHEET

ORDER NO. R5-2011-0028
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):
 - o The Central Valley Water Board is issuing waste discharge requirements,
 - o The discharge complies with the Basin Plan, and
 - o 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):
 - o 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.
 - o 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.