

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2004-0135

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 Regional Board), finds that:

1. Triangle Rock Products, Inc. (Discharger) submitted a Report of Waste Discharge (RWD), dated 30 May 2003, to dispose of industrial wastewater generated at its Florin Road aggregate mining and processing facility. Additional information was submitted on 29 March 2004 and 6 April 2004.
2. The Florin Road Aggregate 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 the Order by reference.
3. The facility comprises Assessor's Parcel Number 067-0120-061. The Discharger owns the land and the processing equipment.
4. Order No. 5-00-190, which prescribes requirements for land discharge of aggregate processing wastewater, was adopted by the Regional Board on 4 August 2000. This Order is no longer adequate because the Discharger wishes to designate all former, existing, and future excavation areas as potential sediment and wastewater discharge areas.

Existing Facility and Discharge

5. The Discharger mines sand and gravel from the historical stream channel deposits on a 413-acre site. The site extends along both sides of Laguna Creek and includes 249 acres that comprise ten discrete mining phases, a 27-acre creek preserve area, and 137 acres of vernal pool mitigation areas. Mining Phases I through IV are complete, and Phase V is underway. These areas are shown on Attachment B, which is attached hereto and made part of the Order by reference.
6. The operation, as permitted by the County of Sacramento, will process up to 15,000 tons of ore per day. The mining operation will lower 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.
7. Excavators are used to remove the overburden, which is transported by truck to previously mined areas for reclamation purposes. Mining is performed using loaders, and the mined ore is transported from the pit to the processing plant via a conveyor belt. After ore is washed, it is screened and stockpiled according to product type. Oversize material is crushed, washed, screened, and stockpiled.

8. The site was not historically mined for gold. The Discharger recovers gold from the aggregate by gravity separation only. Non-ionic surfactant may be used in this process.
9. 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 water from the clarifier is currently discharged to either of two wastewater settling ponds, and 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 the Order by reference.
10. Settling Ponds 1 and 2 have a total surface area of 9 acres and are approximately 19 feet deep. Each pond has a perimeter berm constructed from overburden soil. The combined capacity of these ponds is approximately 153 acre-feet at two feet of freeboard.
11. Two supply wells provide makeup water to replace water lost to evaporation or retained in the gravel. Additional makeup water can also be obtained from the wastewater settling ponds. Approximately 0.95 mgd of makeup water is needed for aggregate washing.
12. Based on monthly monitoring reports for 2001 through May 2004, the sediment slurry discharged to the wastewater settling ponds is characterized as follows:

<u>Constituent/Parameter</u>	<u>Typical Range of Results</u>
PH	6.5 to 8.4
Electrical Conductivity	190 to 300 umhos/cm
Chloride	15 to 51 mg/L

13. The RWD provided analytical data for a single sampling event to characterize the discharge to the aggregate wastewater settling ponds. One sample of sediment slurry from the clarifier and one sample of supply well water were analyzed. The analytical results are summarized below, and are contrasted with limits used to apply the applicable water quality objectives for protection of the beneficial uses of the underlying groundwater.

<u>Constituent</u>	<u>Analytical Result (ug/L except as noted)</u>		<u>Water Quality Limit (ug/L except as noted)²</u>
	<u>Sediment Slurry¹</u>	<u>Water Supply¹</u>	
Calcium, mg/L	14	12	NA
Magnesium, mg/L	7.6	7.1	NA
Sodium, mg/L	18	20	69
Bicarbonate, mg/L	31	93	NA
Carbonate, mg/L	<5	<5	NA

Constituent	Analytical Result (ug/L except as noted)		Water Quality Limit (ug/L except as noted) ²
	Sediment Slurry ¹	Water Supply ¹	
Hydroxide, mg/L	<5	<5	NA
Total Alkalinity, mg/L	31	93	NA
Chloride, mg/L	33	6.1	106
Fluoride, mg/L	0.61	0.21	1
Sulfate, mg/L	15	3.8	250
Total dissolved solids, mg/L	190	180	450
pH, std. Units	7.47	7.59	6.5 to 8.4
Nitrate as NO ₃ , mg/L	5.2	<2	45
Hardness, mg/L as CaCO ₃	67	59	NA
Aluminum	<50	<50	200
Antimony	<6	<6	6
Arsenic	<2	2.7	0.004
Barium	<100	<100	1,000
Beryllium	<1	<1	1
Cadmium	<1	<1	0.07
Chromium, total	<10	<10	50
Copper	<50	<50	170
Iron	<100	<100	300
Lead	<5	<5	2
Manganese	12	<10	50
Mercury, total	<0.20	<0.20	1.2
Nickel	<10	<10	12
Selenium	<5	<5	20
Silver	<10	<10	35
Thallium	<1	<1	0.1
Vanadium	6.6	<3	50
Zinc	53	67	2,000

NA Not applicable.

¹ Sample was filtered prior to preservation.

² Or the natural background concentration in groundwater, whichever is higher.

These data indicate that the gravel processing operation and the use of polymer flocculants do not contribute significant levels of waste constituents to the supply water.

14. 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.
15. 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, which is attached hereto and made part of the Order by reference. The septic system is operated under a permit issued by the Sacramento County Environmental Management Department.
16. A 10,000-gallon above-ground storage tank provides on-site fuel storage. The tank is double-walled and has secondary containment. Waste Oil is stored in drums within a bermed secondary containment area. Motor oil and hydraulic fluids are stored in double-walled tanks.

Proposed Changes in the Discharge

17. The Discharger proposes to modify the wash water system to discharge the sediment slurry from the clarifier directly to previously mined areas for use as fill. Initially, the slurry will be pumped into a series of drying beds developed within former excavation areas from Phases I and II, which will be filled to match the surrounding grade. Use of the drying beds will be rotated to allow each layer or lift of sediment to dry sufficiently to allow compaction. The proposed new drying beds are shown on Attachment D, which is attached hereto and made part of the Order by reference.
18. The Phase I and II area comprises approximately 50 acres which has been excavated to 62 feet below the surrounding grade, providing a capacity of 5.1 million cubic yards (approximately 3,200 acre-feet) at two feet of freeboard. Approximately 2.5 million cubic yards of sediment will ultimately be discharged into these pits.
19. The slurry will be conveyed through a high density polyethylene pipe. Where the pipeline crosses over Laguna Creek, the polyethylene pipe will be encased in steel pipe mounted to an existing bridge structure.
20. A floating electric pump will be used to skim water from the drying beds and pump it back to the fresh water tank for reuse. The original wastewater settling ponds will continue to be used as needed and sediments will periodically be removed from those ponds and placed as fill in reclamation areas.
21. The Discharger proposes a flow limit of 6 mgd as a monthly average for aggregate wastewater. The RWD presented a water balance that showed there would be adequate disposal capacity for that flow. However, because of the large area of land within the previously mined areas that is available to receive sediment slurry, the facility's true wastewater storage and disposal capacity is far greater than that demonstrated by the water balance. Therefore, imposing a minimum freeboard requirement on all ponds and excavation areas will be sufficient to prevent overflow or berm failure, and no flow limitation is necessary.

Site-Specific Conditions

22. Soils beneath the facility site are deposits of the Laguna Formation. The site is bounded on the east by the Folsom South Canal, a concrete lined channel. Both Laguna Creek and Frye Creek traverse the site.
23. 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.
24. The topography of the facility site is disturbed due to ongoing grading and excavation. The ground surface of the surrounding (relatively undisturbed) ground is at an elevation of approximately 110 to 130 feet above mean sea level (MSL).
25. Natural drainage features direct storm water from most of the unmined portion of the site to Laguna Creek. However, unmined portions of Phases V through VIII drain naturally to either Frye Creek or a wetland area south of Florin Road. 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 Discharger will construct a conveyance system to direct storm water flows from those properties directly to Laguna Creek.
26. 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. The Discharger will construction additional flood protection berms prior to mining Phase X.
27. Based on surface water monitoring data provided in monthly monitoring reports from 2001 through May 2004, electrical conductivity values in Laguna Creek upstream of the site are not significantly different than values downstream of the site. The same appears to be true for pH. Turbidity data for periods when Laguna Creek is actively flowing along the entire reach within the site boundaries indicates that turbidity is typically reduced along that reach, except during spring, when it tends to increase.
28. The surrounding land is zoned for agricultural use.

Groundwater Conditions

29. Based on historical data from State-owned well no. 08N07E31J001M, groundwater is present at 20 feet above mean sea level (MSL) or 95 feet below the surrounding grade. Historical data provided in the RWD show that the water table elevation has been decreasing since the 1950s, when it was as high as 55 feet below the surrounding grade.

30. The Discharger does not monitor groundwater quality, but operates two supply wells at the facility. One of those wells was sampled in August 2003 to provide a preliminary characterization of groundwater quality. The groundwater analytical data provided in the RWD are summarized below.

<u>Constituent</u>	<u>Analytical Result ¹</u>	<u>Water Quality Limit ²</u>
Calcium, mg/L	12	NA
Magnesium, mg/L	7.1	NA
Sodium, mg/L	20	69
Bicarbonate, mg/L	93	NA
Carbonate, mg/L	<5	NA
Hydroxide, mg/L	<5	NA
Total Alkalinity, mg/L	93	NA
Chloride, mg/L	6.1	106
Fluoride, mg/L	0.21	1
Sulfate, mg/L	3.8	250
Total dissolved solids, mg/L	180	450
pH, std. units	7.59	6.5 to 8.4
Nitrate as NO ₃ , mg/L	<2	45
Hardness, mg/L as CaCO ₃	59	NA
Aluminum	<50	200
Antimony	<6	6
Arsenic	2.7	0.004
Barium	<100	1,000
Beryllium	<1	1
Cadmium	<1	0.07
Chromium, total	<10	50
Copper	<50	170
Iron	<100	300
Lead	<5	2
Manganese	<10	50
Mercury, total	<0.20	1.2
Nickel	<10	12
Selenium	<5	20

<u>Constituent</u>	<u>Analytical Result ¹</u>	<u>Water Quality Limit ²</u>
Silver	<10	35
Thallium	<1	0.1
Vanadium	<3	50
Zinc	67	2,000

NA Not applicable

¹ ug/L except as noted.

² Or the natural background concentration in groundwater, whichever is higher.

Basin Plan, Beneficial Uses, and Regulatory Considerations

31. 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.
32. Surface water drainage in the vicinity of the facility is to Laguna Creek, which is tributary to the Cosumnes River. The Basin Plan designates the beneficial uses of the Cosumnes River as 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.
33. The Basin Plan designates the beneficial uses of underlying groundwater as municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.
34. State Water Resources Control Board (State Board) Resolution No. 68-16 (“Policy with Respect to Maintaining High Quality Waters of the State”) (hereafter Resolution No. 68-16) requires a regional board in regulating the discharge of waste to maintain high quality waters of the state (i.e., background water quality) until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than as described in plans and policies. The discharge is required to meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur and highest water quality consistent with maximum benefit to the people will be maintained.
35. The Discharger has not provided the required demonstration to be allowed to cause groundwater degradation pursuant to State Board Resolution No. 68-16. Therefore, none is authorized.
36. The Discharger uses flocculants to aid in solids settling, and it appears that the flocculants add chloride and other dissolved solids to the wastewater. Because the Discharger directly recycles

clarified wash water and will skim excess water from the drying beds, the potential for evapoconcentration and potential migration through the underlying clay at those areas will be reduced. In order to ensure that degradation does not occur, it is appropriate to require continued monitoring of the sediment slurry and water supply and to establish groundwater limitations for the facility that will not unreasonably threaten beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan. However, routine groundwater monitoring is not necessary at this time.

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

The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. R5-2004-0135 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

38. On 5 February 2003, the Sacramento County Department of Environmental Review and Assessment certified a Final Supplemental Environmental Impact Report (FSEIR) for the aggregate mining operation in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et seq.) and the State CEQA Guidelines. The FSEIR was prepared to be consistent with the requirements of a Section 404 permit issued by the Army Corps of Engineers and support revision of the Conditional Use Permit. Revisions to original project described in the environmental document included:
- a. Eliminating mining within the active Laguna Creek Channel and establishing a preservation corridor along the creek;
 - b. Requiring construction of flood control berms along Laguna Creek to provide 100-year floodplain protection;
 - c. Diverting storm water drainage from lands north of Jackson Highway to discharge directly to the creek, rather than the mine site;
 - d. Backfilling mining phases I and II to the original grade;
 - e. Revisions to the boundaries and numbering of the phase areas; and
 - f. Addition of new vernal pool mitigation areas.

39. The FSEIR contains the following Mitigation Measures to protect water quality:
 - a. Prohibit application of polluting or toxic substances to the pit floor; any pollutants used are required to be contained and disposed of off-site.
 - b. Require an Agricultural Management Plan if any land is reclaimed for any agricultural use other than unirrigated pasture.
 - c. Require erosion control measures to prevent siltation in Laguna Creek.
 - d. Require completion of the flood control berm along the western bank of Laguna Creek prior to commencing Phase X.
40. Implementation of the specific mitigation measures set forth in the FSEIR and compliance with waste discharge requirements will mitigate or avoid significant impacts to water quality.
41. The Discharger has filed a Notice of Intent to obtain coverage 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).
42. The Discharger maintains a lubricating oil storage area and an above-ground fuel storage tank at the facility site. The Discharger has complied with the Aboveground Petroleum Storage Tank Act by completing a Spill Prevention Control and Countermeasure Plan.
43. 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., (hereafter Title 27). The exemption pursuant to Section 20090(b), is based on the following:
 - a. The Regional Board is issuing these waste discharge requirements, which implement the Basin Plan;
 - b. The Discharger must comply with these waste discharge requirements; and
 - c. The wastewater does not need to be managed according to Title 22 CCR, Division 4.5, and Chapter 11, as a hazardous waste.
44. 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

45. 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.
46. 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.

47. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that Order No. 5-00-190 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 thereunder, 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. The 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 manufacture of asphaltic concrete or Portland cement concrete 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.

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 designated storage and disposal areas (as described in Finding Nos. 9, 10, 16, and 17) at all times and outside of the 100-year floodplain. Additional ponds and drying beds may be constructed as needed within the confines of the excavation areas and outside of the 100-year floodplain as defined on Attachments B and D.
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 8.4.
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 drying beds 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 and sediment drying beds 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

1. The discharge shall not cause the groundwater beneath or down-gradient of any pond receiving wastewater to contain any waste constituent in a concentration greater than natural background groundwater quality.

D. Surface Water Limitations

1. 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. The Discharger shall comply with the “Standard Provisions and Reporting Requirements for Waste Discharge Requirements”, dated 1 March 1991, which are attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as “Standard Provision(s).”
2. The Discharger shall submit to the Regional 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.
3. The Discharger shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.
4. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, then the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this office.
5. 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.
6. 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.
7. The Regional Board will review this Order periodically and will revise requirements when necessary.

I, THOMAS R. PINKOS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 10 September 2004.

THOMAS R. PINKOS, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2004-0135

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

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

All samples 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 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	Observation 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 monthly 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
Chloride	mg/L	Grab	Quarterly	Monthly
Total dissolved solids	mg/L	Grab	Quarterly	Monthly

SURFACE WATER MONITORING

Grab samples of surface water shall be obtained monthly 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:

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
4. Whether the creek is flowing along the entire reach, completely dry, or partially dry.

WATER SUPPLY MONITORING

A grab sample of water from the fresh water supply shall be obtained monthly 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
Chloride	mg/L	Grab	Quarterly	Monthly
Total dissolved solids	mg/L	Grab	Quarterly	Monthly

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 Regional 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. Annual Monitoring Report

An Annual Monitoring Report shall be prepared as the December monthly monitoring report. The Annual Monitoring Report shall include all monitoring data required in the monthly schedule and shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented in the Monthly Monitoring Reports, the Annual Monitoring Report shall include the following:

1. If requested by staff, tabular and graphical summaries of all data collected during the year;
2. 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;
3. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
4. A summary of information on the management and disposal of sediments; and
5. 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.

Ordered by: _____
THOMAS R. PINKOS, Executive Officer

10 September 2004
(Date)

ALO:9/10/04

INFORMATION SHEET

ORDER NO. R5-2004-0135
TRIANGLE ROCK PRODUCTS, INC.
FLORIN ROAD AGGREGATE PLANT
SACRAMENTO COUNTY

Triangle Rock Products, Inc. owns and operates an aggregate mine and processing plant along the banks of Laguna Creek south of Ranch Cordova. The Discharger mines sand and gravel from shallow historical channel deposits. The mined ore is transported from the pit to the processing plant, and is crushed, washed, screened, and stockpiled according to product type.

The aggregate washing process uses approximately 6.3 million gallons per day (mgd) of wastewater, most of which is recycled. The aggregate wash water is discharged to a clarifier where polymers are added to enhance solids settling. Approximately 0.63 mgd of silt-laden water from the clarifier is currently discharged to either of two wastewater settling ponds, and the decant water is pumped to the fresh water tank for reuse.

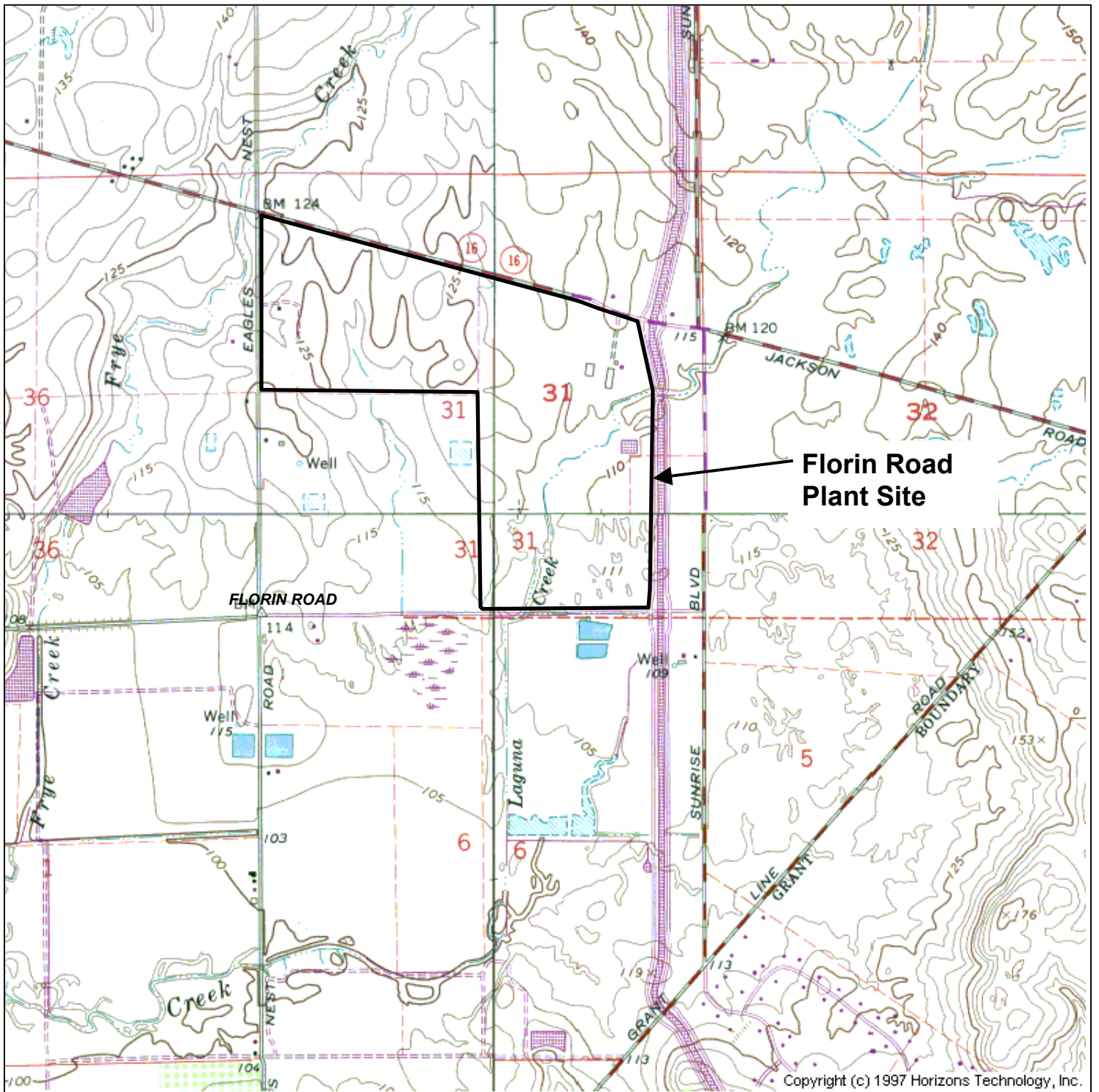
The Discharger proposes to modify the wash water system to discharge the sediment slurry from the clarifier directly to previously mined areas for use as fill. Initially, the slurry will be pumped into a series of drying beds constructed within former excavation areas from Phases I and II, which will be filled to match the surrounding grade. Approximately 2.5 million cubic yards of sediment will ultimately be discharged into these pits. A floating electric pump will be used to skim water from the slurry deposition areas and pump it back to the fresh water tank for reuse. The original wastewater settling ponds will continue to be used as needed and sediments will periodically be removed from those ponds and placed as fill in reclamation areas.

The Discharger proposed a flow limit of 6 mgd as a monthly average for aggregate wastewater, and the RWD presented a water balance that showed there would be adequate disposal capacity at that flow rate. However, because of the large area of land within the previously mined areas that is available to receive wash water and sediment slurry, the facility's true wastewater storage and disposal capacity is far greater than required. Therefore, imposing a minimum freeboard requirement on all ponds and excavation areas will be sufficient to prevent overflow or berm failure, and no flow limitation is necessary.

Groundwater beneath the site occurs at approximately 20 feet MSL (over 90 feet below the surrounding grade). There is a significant clay aquitard beneath the planned excavation base (65 feet below grade).

With the exception of chloride, analytical results for the sediment slurry indicate that the gravel processing operation and the use of polymer flocculants do not contribute significant levels of waste constituents to the supply water. Based on the analytical data, the depth to groundwater below the base of the discharge areas, the clay soil underlying the excavation areas, and the low potential for evapoconcentration and percolation within the proposed slurry depositions areas, there is very little potential for the discharge to degrade groundwater quality. Therefore, groundwater monitoring is not required. However, the proposed Order requires that the Discharger regularly monitor concentrations of select waste constituents in the sediment slurry and water supply. The Discharger will also continue to monitor surface water quality in Laguna Creek.

ATTACHMENT A



Drawing Reference:
USGS Topographic Map
7.5-Minute Quadrangle
East Sacramento

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

ORDER NO. R5-2004-0135



Approx. Scale: 1" = 1,700'

ATTACHMENT B



Drawing Reference:
Report of Waste Discharge, Buada
and Associates, 2003

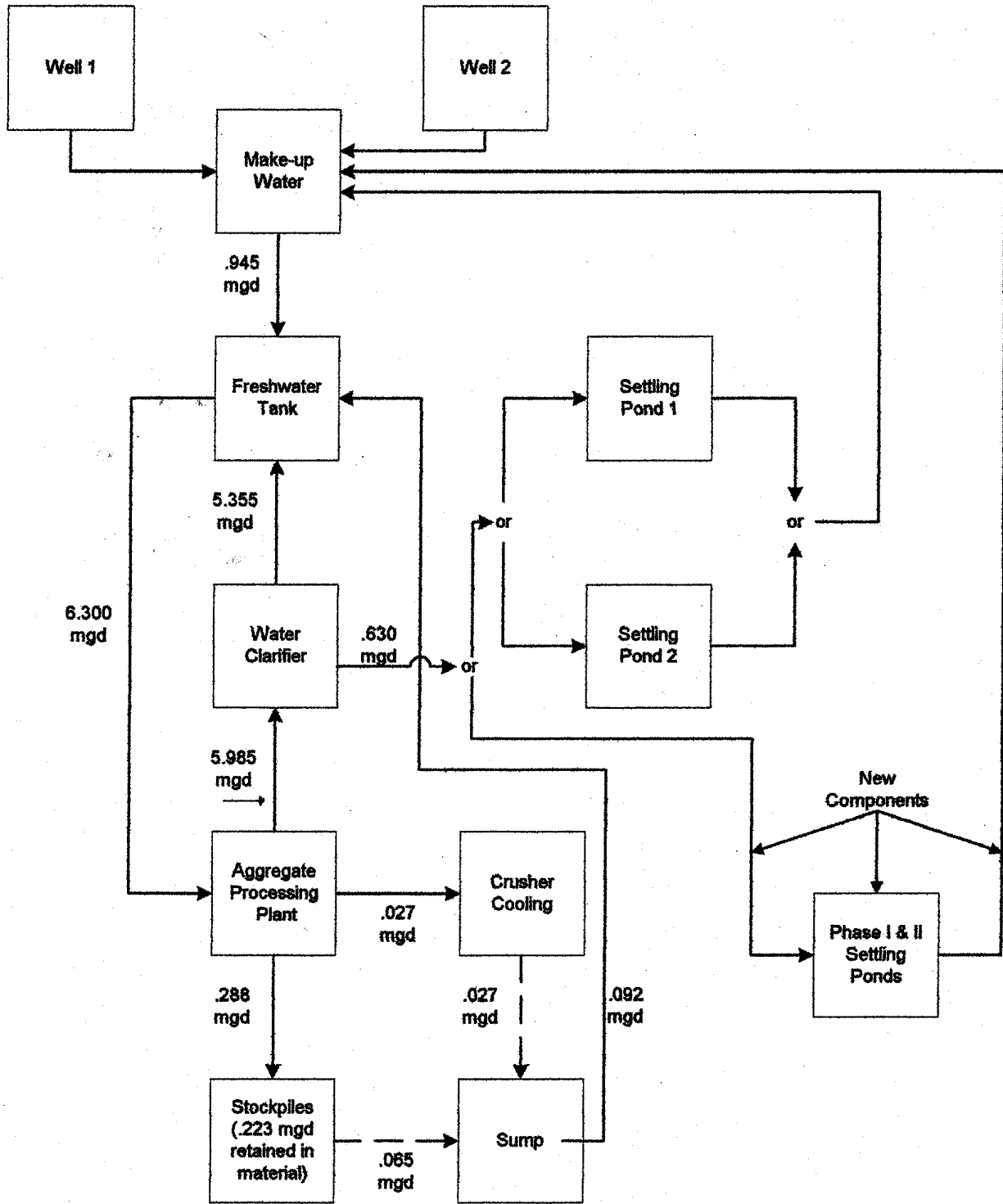
PHASE PLAN
TRIANGLE ROCK PRODUCTS, INC.
FLORIN ROAD AGGREGATE PLANT
SACRAMENTO COUNTY

ORDER NO. R5-2004-0135



No Scale

ATTACHMENT C

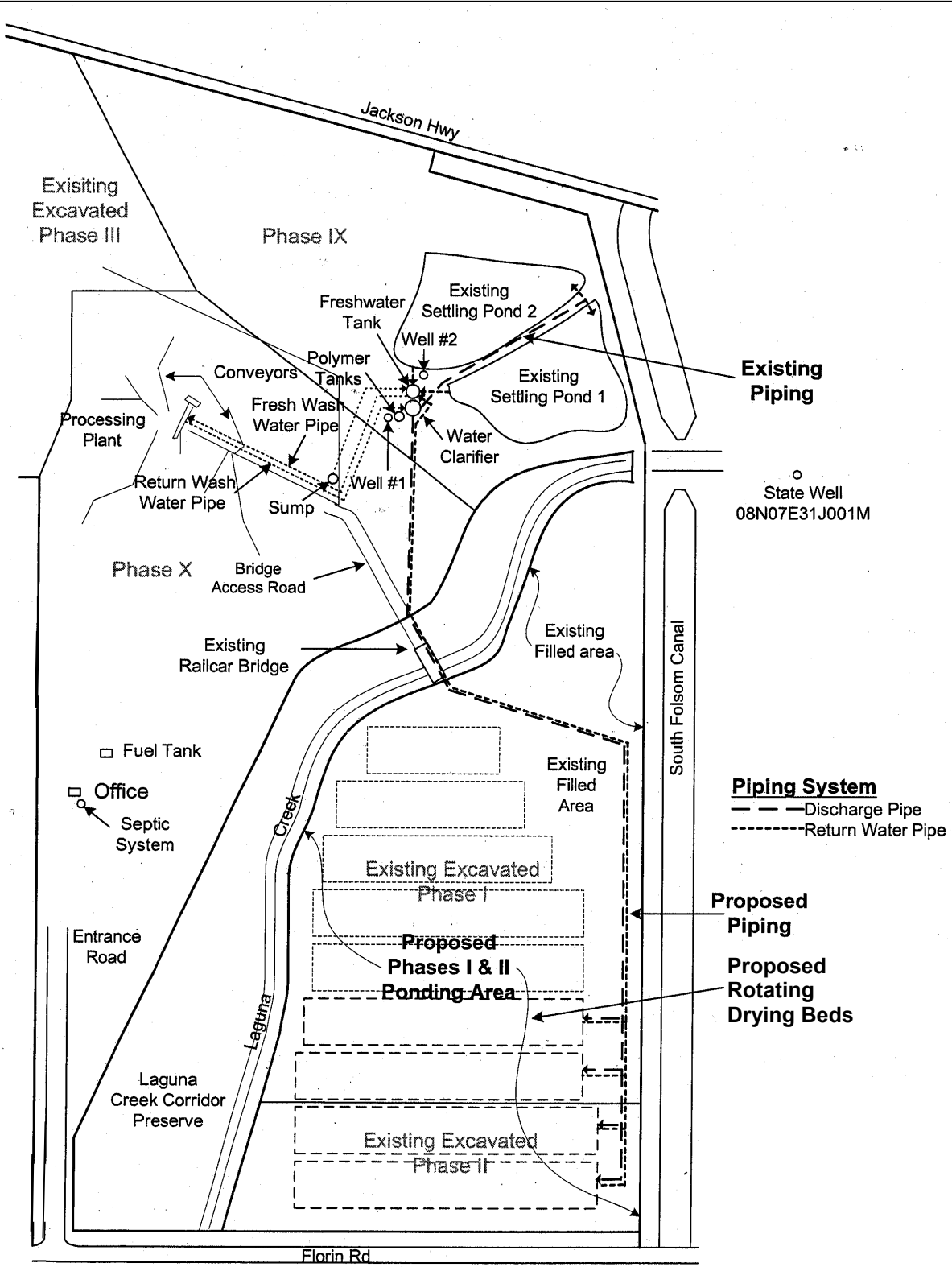


Drawing Reference:
Report of Waste Discharge, Buada
and Associates, 2003

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

ORDER NO. R5-2004-0135

ATTACHMENT D



Drawing Reference:
Report of Waste Discharge, Buada
and Associates, 2004

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

ORDER NO. R5-2004-0135

