

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
ORDER NO. R5-2007-0120
WASTE DISCHARGE REQUIREMENTS
FOR
NORTH FORK AGGREGATE
IGO
SHASTA COUNTY

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

1. North Fork Aggregate, Inc., submitted a Report of Waste Discharge, dated 29 August 2006 and supplemental information on 29 January 2007, for the operation of a sand and gravel extraction and processing plant. The facility is located at 14757 Gas Point Road approximately 13 miles west of the intersection of Gas Point Road and Interstate 5 within Sections 34 and 35 of T30N, R6W, and Sections 2 and 3 of T29N, R6W, MDB&M as shown on Attachment A, a part of this Order. The land on which the mining and processing occurs (Assessor's Parcel Numbers 045-170-005, 045-190-003, and 045-200-007) is owned by William and Robin Rich. North Fork Aggregate, Inc. and William and Robin Rich are hereafter referred to as "Discharger".
2. The Discharger obtained a Use Permit (No. 02-017) from Shasta County in 2002 and started mining operations in September 2002. The Discharger submitted a Report of Waste Discharge dated 29 August 2006 for the discharge of sediment laden process water to a settling pond. The Discharger submitted supplemental information on 29 January 2007 and Regional Board staff deemed the report complete on 28 February 2007.
3. The project includes the excavation, screening and crushing, and off-site transportation of sand and gravel, and reclamation of the extraction area as rangeland, ponds and riparian habitat. The mining, processing, and reclamation activities will directly affect approximately 80 acres of the 606-acre property. The remaining area will serve as setback areas or buffers from adjacent properties, Cottonwood Creek, and the North Fork of Cottonwood Creek. The site will be mined over a 10-year period, with a possible 20-year extension. Approximately 1.8 million cubic yards of sand and gravel would be exported from the site.
4. An onsite processing facility has been built to produce up to 105,000 cubic yards of sand and gravel per year (500 cubic yards per day, three weeks per month, and 10 months out of a year). Processing plant operations include the stockpiling of aggregate, loading of raw aggregate into conveyors, washing the aggregate, sorting, crushing the aggregate to market specifications, and delivery into the stockpiles or hauling trucks for delivery. In general, mining operations occur between the hours of 7:00 AM to 5:00 PM Monday through Friday three weeks per month during the months of February through November.

Loaders deliver raw mined aggregate to the plant chutes, which carry the aggregate into the crusher. After the aggregate is crushed, it is moved for screening and washing into its final form for delivery. An average of approximately 30 truck loads with a total of 500 cubic yards leave the processing plant on a normal production day, Monday through Friday. 1.8 million cubic yards are expected for the 10-year life of the project.

Approximately 480 gallons of water per minute, five days per week, is used for washing the aggregate and for dust suppression in the project site. This amounts to approximately 1.4 million gallons of water per week. The water used on the site for these purposes will be pumped from Cottonwood Creek located to the south of the project area to which the owner has water rights. No wash or process water will leave the site. Wash and process waters are retained in ponds onsite and are reused and replenished as necessary.

5. One processing plant is located at the site. As different areas are mined, the extracted aggregate will be hauled to the processing plant. The site will be mined in phases with each phase designated as a 'Work Area'. Work Area 1 is being mined first for aesthetic purposes as it is adjacent to Gas Point Road. After mining activities are completed in Work Area 1, mining will progress to Work Areas 2, 3, 4, and 5. The rate of mining depends on the demand for aggregate.
6. Waste water from the washing process is discharged into an oblong pond with an island in the middle. The water passes through two rock check dams to isolate the segments and promote sediment settling. At the end of run, the water is recycled as wash water. The maximum pond depth is approximately 17 feet below the original grade the water level in the pond is reflective of the groundwater elevation. The pond is not lined. In dry conditions, water from Cottonwood Creek is pumped to an intermediate pond then to the settling pond or directly to the washing process as make-up water. Except during dry conditions, no water is added to the settling pond system. The volume of water removed from the settling pond for washing is greater than that returned to the settling pond as waste wash water. This Order requires a minimum of two feet of freeboard in each segment of the settling pond. The area surrounding the ponds shall be graded to divert any surface water from entering the ponds. Because of the variability of the source material, the sizes of the settling pond may need to be adjusted to perform properly. There is adequate space at the site for pond size adjustments.
7. The Discharger has not proposed to use a flocculating agent in the process. However, because of the potential variability of the composition of the source material at the site, the Discharger may propose to use a flocculating agent if needed.
8. The North Fork Aggregate site is in a former gold mining region where sluice boxes and mercury were used to extract gold from mined material. Significant amounts of mercury were often lost during this process suggesting that residual mercury may exist at the site. This Order requires that the settling ponds be tested for mercury on a regular

basis. If mercury is detected at concentrations exceeding those stipulated in this Order, the Discharger will be required to collect additional water and sediment samples from the settling ponds, have them tested for mercury and provide a report of results. Based on the report findings, additional action may or may not be necessary.

9. There are no stationary fuel storage tanks on the site. Pacific Gas and Electric serves the necessary power to the crushing and water plants. Onsite diesel equipment is fueled from a truck-mounted tank. The Aboveground Petroleum Storage Act applies when a site has a single tank with a fuel capacity greater than 660 gallons or several tanks with a cumulative storage capacity of greater than 1,320 gallons of petroleum. The Aboveground Petroleum Storage Act does not apply to the Facility based on the information reported by the Discharger.
10. There is no discharge of domestic wastes at the site. Workers are provided with portable toilets.
11. The site is bordered on the west by the North Fork of Cottonwood Creek and on the south by Cottonwood Creek and is located in the Lower Cottonwood Hydrologic Area (No. 508.20) as depicted on interagency hydrologic maps prepared by the Department of Water Resources (DWR) in August 1986.
12. The average annual precipitation at the site is 39 inches. The six-hour 25-year storm event is 2.2 inches. Between 75 and 90% of the annual precipitation is received between November 1 and April 30 of each year.
13. The Regional Board adopted a *Water Quality Control Plan, Fourth Edition, for the Sacramento River Basin and the San Joaquin River Basin* (hereafter Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for protecting waters of the basin, including plans and policies adopted by the SWRCB and incorporated by reference into the Basin Plan. These requirements implement the Basin Plan.
14. The Basin Plan does not specifically designate beneficial uses of the North Fork of Cottonwood Creek. Based on the "tributary rule," the beneficial uses cited for the North Fork of Cottonwood Creek in this Order are for Cottonwood Creek.
15. The beneficial uses of Cottonwood Creek as specified in the Basin Plan and the North Fork of Cottonwood Creek by tributary rule from Cottonwood Creek are municipal and domestic supply, agricultural supply; industrial supply, water contact recreation; non-contact water recreation; warm and cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development of fish; and wildlife habitat.

16. The beneficial uses of underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
17. State Water Resources Control Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California, (hereafter Resolution 68-16) requires the Regional Board, in regulating the discharge of waste, to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with the maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Board's policies (e.g., quality that exceeds water quality objectives). The Regional Water Board finds that the project will not adversely impact water quality. The process at the site includes washing gravel with water. Turbid wash water is discharged to a settling pond where the suspended particles settle out. The soils at the site should be sufficiently fine grained to preclude turbid water from migrating beyond the pond's boundary. In addition, the ponds will self-seal with the settled fines increasing the filtering capability of the ponds. As discussed in Finding 19 below, the project is not expected to increase salt concentrations in ground or surface water.
18. Because of the use of Best Practicable Treatment and Control at the site, no surface or groundwater water quality degradation is anticipated and groundwater-monitoring wells are not required, at this time. Waste wash water is discharged to a settling pond where the suspended soil particles settle out and the water recycled. Sufficient freeboard is required to be maintained on the ponds to prevent surface discharge from the ponds. As discussed in Finding 19 below, the project is not expected to increase salt concentrations in ground or surface water. This permit does not allow surface or groundwater degradation.
19. The project is not expected to have an appreciable impact on total dissolved minerals or increase the electrical conductivity of the ground or surface waters of the site. Soils in the region generally have low salt content. In addition, the material being mined consists of dredge tailings that have been previously washed by the dredging process. While evaporation from the washing process concentrates total dissolved solids, wash water is entrained with the processed sand and gravel taking the salt load with it. Because the project is not expected to increase total dissolved minerals or increase the electrical conductivity of the ground or surface waters at the site, a salinity evaluation and minimization plan is not required from the Discharger at this time. EC monitoring is required.
20. Section 13267(b) of the California Water Code (CWC) states, in part, 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 having discharged or 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 having discharged or discharging, or who proposes to discharge waste outside of its region that could affect the quality of 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 Monitoring and Reporting Program No. R5-2007-0120 are necessary to assure compliance with these waste discharge requirements. The Discharger operates facilities that discharge wastes subject to this Order.

21. Federal Regulations for storm water discharges were promulgated by USEPA on 16 November 1990 (40 CFR Parts 122, 123, and 124) which require specific categories of facilities discharging storm water associated with industrial activity to obtain NPDES permits and to implement Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology to reduce or eliminate industrial storm water pollution.
22. The State Water Resources Control Board (SWRCB) adopted Order No. 97-03-DWQ (General Permit No. CAS000001), on 17 April 1997, specifying waste discharge requirements for discharge of storm water associated with industrial activities, excluding construction activities, and requiring submittal of a Notice of Intent (NOI) by industries to be covered by the permit. The Discharger has obtained coverage under Order No. 97-03-DWQ for this facility.
23. Shasta County was the lead agency for the project under the California Environmental Quality Act (CEQA, Public Resources Code Section 21000, et. seq.). The County filed a Notice of Determination adopting a Mitigated Negative Declaration on 9 January 2003 for this project in accordance with CEQA. As a responsible agency, the Board finds that the project as approved by Shasta County will not have a significant effect on water quality.
24. The discharge authorized herein is exempt from the requirements of Title 27 CCR. The exemption, pursuant to Section 20090(b), is based on the following:
 - a. The Regional Board is issuing these waste discharge requirements;
 - b. These waste discharge requirements implement the Basin Plan and allow discharge only in accordance with the Basin Plan; and
 - c. The wastewater does not need to be managed according to 22 CCR, Division 4.5, Chapter 11, as a hazardous waste.

25. The Regional Board has considered the information in the attached Information Sheet in developing the Findings of this Order. The attached Information Sheet is part of this Order.
26. The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written comments and recommendations.
27. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger, their 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:

A. Discharge Prohibitions

1. The discharge of wastes and process water to surface waters or surface water drainage courses is prohibited.
2. The discharge of wastes and process water in a manner different than specified in Finding Nos. 4, 5, and 6 is prohibited.
3. The use of chemical additives without prior Regional Water Board approval in the processing plant and settling ponds is prohibited.
4. The discharge or deposit of waste other than process water, settled solids, and allowable chemical additives at this site is prohibited.
5. Discharge of water, except direct precipitation, to a settling pond having a freeboard of two feet or less is prohibited.
6. Discharge of waste classified as "hazardous" as defined in Sections 2521(a) of Title 23, CCR, Section 2510, et seq., or "designated," as defined in Section 13173 of the CWC, is prohibited.

B. Discharge Specifications

1. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the activity area.

2. All 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.
3. All stockpiled products, wastes, and overburden materials shall be managed to prevent erosion of sediment to surface water drainage courses.
4. Dams, levees, and other earthworks intended to hold or convey water shall be designed and constructed under the direct supervision of and certified by a California Registered Civil Engineer or Engineering Geologist having expertise in the design of such earthworks.
5. All settling ponds shall be designed, constructed, operated and maintained to prevent inundation or washout due to floods with a return period of 100 years.
6. The settling pond system shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation, and ancillary inflow and infiltration to prevent inundation or washout during the winter months. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
7. The Discharger shall install and maintain a pond water freeboard gauge in each segment of the settling pond so freeboard can be readily assessed.
8. The discharge shall not cause the freeboard to be less than two feet in any segment of the pond, as measured vertically from the water surface to the lowest point of overflow.
9. On or about 1 October of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specification B. 5, 6, and 8.
10. Except for recycled process water and solids removed from the settling ponds, the discharge shall remain within the settling ponds at all times.

C. Groundwater Limitations

The discharge, in combination with other sources, shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than background water quality.

D. Provisions

1. **By 1 December 2007**, the Discharger shall submit a copy of its most recent Site Reclamation/Restoration Plan if it differs from the 11 August 2002 Site Reclamation/Restoration Plan. As the reclamation plans are updated or revised, the Discharger shall immediately forward such plans to this office.
2. If, as a result of the monitoring conducted by Monitoring and Reporting Program No. R5-2007-0120, mercury is detected at concentrations equal to or greater than 50 nanograms per liter (ng/L) in a liquid sample from any settling pond, then within **90 days** the Discharger shall submit a work plan to characterize mercury in the water and sediment within the settling pond. Within **120 days** of approval by the Executive Officer of the work plan the Discharger shall submit a report describing the results. If such report demonstrates the presence of mercury at concentrations that may adversely affect surface or groundwater quality or may cause bioaccumulation as a result of the final reclamation of the site, then within 120 days, the Discharger shall submit a report evaluating alternatives to reduce mercury to acceptable levels. Upon request of the Executive Officer, the Discharger shall create a financial assurance account (as described in Title 27 of the CCR) to mitigate bioaccumulation effects of the available mercury. All work plans and reports shall be prepared under the immediate supervision of a California Registered Civil Engineer or Engineering Geologist and shall be certified by such individual in accordance with the Business and Professions Code.
3. The Discharger shall maintain continuous coverage under the Water Quality Order No. 97-03-DWQ (as amended), the *General Permit for Discharges of Storm Water Associated with Industrial Activities*, or, if Order No. 97-03-DWQ is renewed, the most current version.
4. The Discharger shall comply with Monitoring and Reporting Program No. R5-2007-0120, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

5. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated February 2004, its update, or its replacement, which are incorporated herein and made part of this Order. This attachment and its individual paragraphs are commonly referenced as Standard Provision(s).
6. In the event of any change in control or ownership of land or waste discharge facilities described herein, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Regional Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the proposed owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved by the Executive Officer.
7. The Discharger shall immediately notify the Regional Water Board by telephone whenever a violation of these WDRs or an adverse condition that may impair water quality occurs as a result of the extraction operations or the discharge; written confirmation shall follow within two (2) weeks.
8. The Discharger shall report promptly to the Board any material change or proposed change in the character, location, or volume of the discharge. The Discharger shall obtain confirmation from the Board that such proposed modifications are acceptable under the terms of these WDRs. Confirmation or new WDRs shall be obtained before any modifications are implemented. If the Executive Officer does not disapprove the proposed change within 60 days of receiving a written report describing the proposed change, the discharge may proceed in accordance with the proposed modifications. Possible changes under these WDRs include, but are not limited to, the need to expand the settling basins and/or the need to use a flocculating agent in the settling ponds.
9. The Discharger must 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.

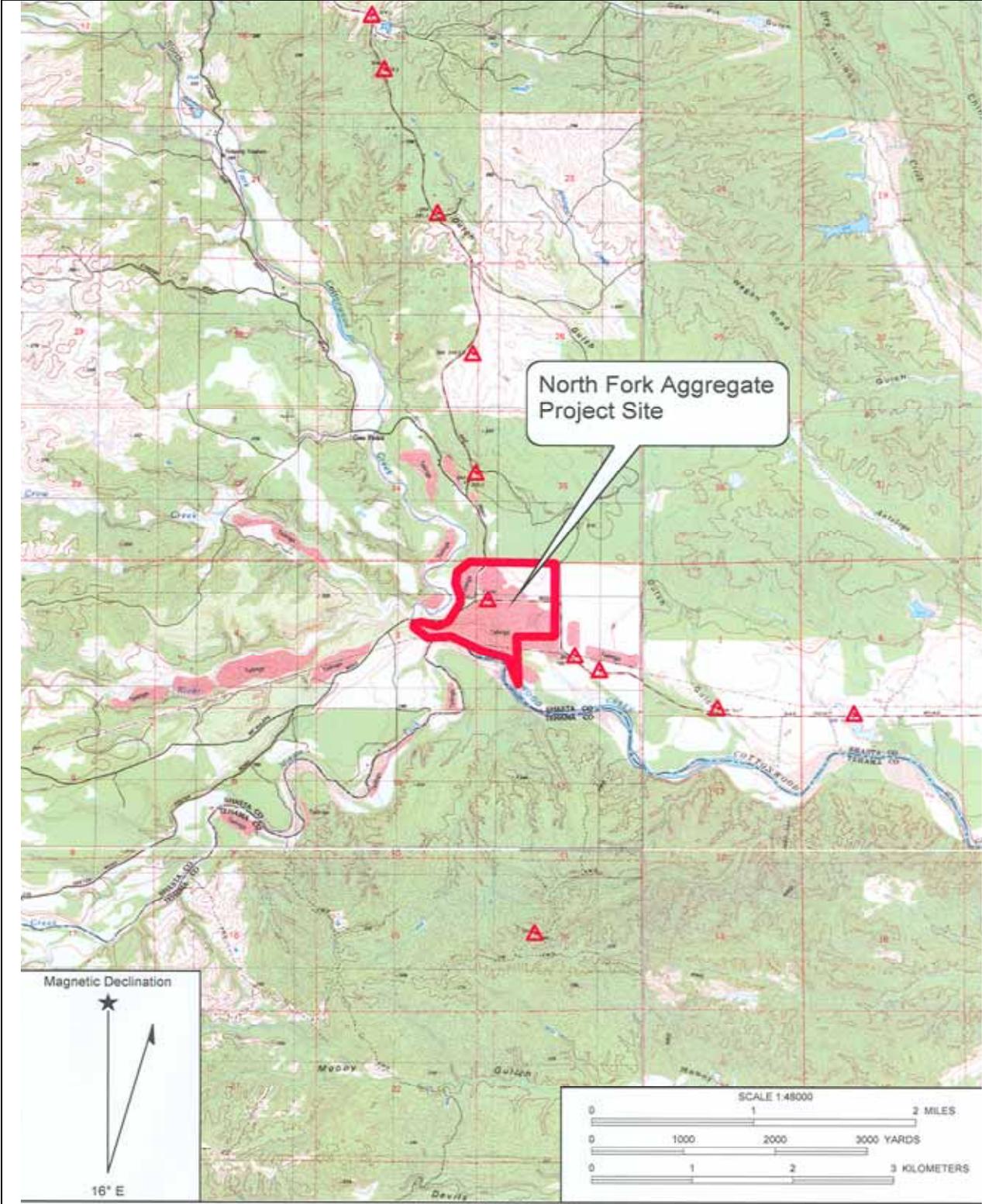
10. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
11. The Regional Board will review this Order periodically and will revise requirements when necessary.

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 14 September 2007.

ORIGINAL SIGNED BY

PAMELA C. CREEDON, Executive Officer

KK: sae



Attachment "A"
North Fork Aggregate
40° 23' 52" North 122° 31' 01" West

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
MONITORING AND REPORTING PROGRAM NO. R5-2007-0120
FOR
NORTH FORK AGGREGATE
IGO
SHASTA COUNTY

The Discharger shall not implement any changes to this Program unless and until the Regional Board or Executive Officer issues a revised Monitoring and Reporting Program.

SETTLING PONDS MONITORING

Discharger's closed-loop process water treatment and recycling system includes a segmented settling pond. Freeboard shall be measured in each segment of the pond. Mercury samples shall be collected from the pond segment receiving process water directly from the discharge pipe (as opposed to receiving process water as the result of overflow from another segment). The samples shall be collected near the process water discharge point into the pond at a depth approximately midway between the pond surface and pond bottom. The sample shall be collected when the Discharger is actively discharging to the settling pond.

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sampling Frequency</u>
Freeboard	Feet, 0.1 Feet	Weekly
Total Mercury	ng/L ¹	April and December
Electrical Conductivity	umhos/cm	April and December

¹ ng/L, nanograms per liter, detection limit < 1.0 ng/L, using *Ultra-Clean Aqueous Sample collection and Preservation Techniques (FGS-008 and EPA Method 1669)*.

REPORTING

In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly the compliance with waste discharge requirements.

Monthly monitoring reports shall be submitted to the Regional Board by the **first day of the second month** following data collection.

The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the Regional Board.

Upon written request of the Regional Board, the Discharger shall submit a report to the Regional Board by 30 January of each year. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the Discharger shall discuss the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with the waste discharge requirements. The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by:

ORIGINAL SIGNED BY

PAMELA C. CREEDON, Executive Officer

14 September 2007

KK: sae

INFORMATION SHEET

ORDER NO. R5-2007-0120
WILLIAM AND ROBIN RICH
NORTH FORK AGGREGATE
SHASTA COUNTY

North Fork Aggregates operates a sand and gravel extraction facility in former gold mine tailings at the confluence of the North Fork Cottonwood Creek with the Middle Fork Cottonwood Creek. North Fork Aggregate began processing mined material in 2002. The site is covered under Shasta County Reclamation Plan No. 02-001 and Shasta County use permit No. 02-017.

Surface water drainage is to the North Fork of Cottonwood Creek and Cottonwood Creek. Extracted raw aggregate is conveyed to an area where the material is washed and screened. Some of the larger material may be crushed on site to increase saleable product. Wash water is recycled through a segmented, unlined settling pond located on the site. The mine and processing facility are on land owned by William and Robin Rich. Process water discharged to the wash pond is high in suspended solids (e.g., silts). Once the solids have settled, the clarified process water is conveyed from the settling pond to the processing plant for reuse. The operator has not proposed using flocculants to enhance the settling process. Settled material will periodically be removed from the pond segments and stockpiled for use in land reclamation. As the source material may vary in quality, these Waste Discharge Requirements allow for the expansion of the settling ponds and for the Discharger to propose the use of a flocculating agent to be approved by Regional Board staff. Food grade flocculating agents have been approved at similar sites.

The site is in a former gold mining region where sluice boxes and mercury were used to extract gold from mined material. Significant amounts of mercury were often lost during this process, suggesting that residual mercury may exist at the site. This Order requires that the settling pond be tested for mercury on a regular basis. If mercury is detected at concentrations exceeding those stipulated in this Order, the Discharger will be required to collect additional water and sediment samples from the settling ponds, have them tested for mercury and provide a report of results. Based on the report findings, additional action may or may not be necessary. Because the pond segment receiving the process water is assumed to be well mixed, only one sampling location is specified for monitoring. In addition, sampling of the pond water should be representative of the leachability of any mercury in the fines collected in the settling ponds and the suitability of the fines to be used for reclamation.

KK: sae