CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
ORDER NO. R5-2007-0177
WASTE DISCHARGE REQUIREMENTS
FOR
TULLIS, INC. AND SHASTA RANCH ESTATES, LLC
SHASTA RANCH AGGREGATE
ANDERSON
SHASTA COUNTY

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

1. Tullis, Inc., submitted a Report of Waste Discharge, dated March 2006 and materials completing the application on 5 June 2006, for the operation of a sand and gravel extraction and processing plant. Regional Board staff deemed the report complete on 13 June 2006. The facility is located along the southwestern bank of the Sacramento River northeast of Balls Ferry Road between Riverland Drive and Blue Jay Road. The facility is approximately 2.5 miles southeast of the City of Anderson as shown on Attachment A, a part of this Order. The land on which the mining and processing occurs (Assessor's Parcel Numbers 091-040-002, 091-050-002, and 091-080-002) is owned by Shasta Ranch Estates, LLC. Tullis, Inc. and Shasta Ranch Estates, LLC are hereafter referred to as "Discharger". The latitude and longitude of the approximate center of the facility is 40° 26' 28.6" North and 122° 13' 17.4" West.

2. The Discharger obtained Use Permit No. 05-010 for the facility from Shasta County in 2005.

3. The project site encompasses approximately 947 acres, of which 268 acres will be mined for aggregate material. The sand and gravel processing facility would occupy approximately 10 acres. The mined aggregate (gravel) would be crushed, screened, washed, stockpiled, and loaded for off-site transport. Approximately 3.43 million cubic yards of overburden and 6.06 million cubic yards of soil and gravel would be excavated. The project would operate for approximately 30 years until the year 2037. There are three phases and each phase would operate consecutively for 8 to 10 years. Upon completion of all mining activities, the areas of disturbance would be reclaimed to farmland, ponds and open space.

4. The project is located along a stretch of the Sacramento River that was intensively mined for gold in the mid- to late-1800s. No mining activities have occurred on the project site since the early 1900s when ranching and farming replaced mining activities. Beginning in the 1960s, a portion of the site was used for disposal of effluent from an off-site paper mill. The paper mill has since closed.

   Kimberly Clark acquired the ranch site in 1964. Operations, including the off-site mill

and the ranch, were purchased by Simpson Paper Company in 1972, and subsequently by the Shasta Paper Company in 1998. The ranch site was purchased in foreclosure in 2004 by Shasta Ranch, LLC.

Between 1964 and 1971, Kimberly Clark disposed of primary sludge generated from initial wastewater treatment at the paper mill in two unlined trenches located just south of the transmission lines and west of the Sacramento River. Beginning in 1976, and continuing through 2002, wastewater effluent from the mill was used to irrigate fields at the ranch that generally comprise the proposed Phase 3 extraction area.

Lime from the paper mill was stored in the southeast portion of the site and was spread on irrigated portions of the site including most of the fields within the proposed Phase 2 and Phase 3 gravel extraction areas.

5. The Shasta Ranch mining plan describes three distinct mining phases with the operation in each phase taking approximately 8-10 years to complete. Mining operations will use a variety of machinery to transport overburden to a storage (or surge) pile and for mining the underlying aggregate. Hydraulic excavators will be used for the excavation of the mining pit areas below the groundwater table. Diesel powered loaders and trucks will be used for moving materials on the project site from the excavators to the processing plant and for excavating material above groundwater. The processing plant will be centrally located in relation to the mining phases on the project site.

   Except for the first mining phase, the excavation pits will be reclaimed as ponds. Overburden or native material would be used to develop the side slopes of the ponds and levees to ensure successful revegetation. The Phase 1 mining excavation will be refilled with overburden and reclaimed for use as farmland. Backfilling of Phase 1 will be done in phases, as mining in the Phase 1 pit proceeds and during the removal of overburden from the Phase 2 pit site after Phase 1 mining is complete.

6. Approximately 50,000 gallons per day of water will be used for washing the aggregate and for dust suppression in the project site. The water used on the site for these purposes will be pumped from the small pond located on the project site north of Phase 1. Water will also be recycled from the wash-water settling pond and used for either dust suppression or wash-water. Sediment will be excavated from the settling ponds for use as fill in Phase 1 and subsequent reclamation activities. The proposed settling basin is approximately 1-acre in size and 10 feet deep. The basin will collect used wash-water from the processing plant and allow it to settle. An adjustable stand pipe will collect the clarified surface water from the basin for resuse as process wash-water or for dust suppression. No wash or process water will leave the site. The Discharger has not proposed to use a flocculating agent in the washing operations. 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.

7. The site is located in a former gold mining region where sluice boxes and mercury were frequently 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. The project site is located in an alluvial floodplain that was once the original channel for the Sacramento River. This ancient channel has transformed and redirected over history. The portion of the property nearest the Sacramento River was created when mining deposits caused an eastward shift of the river channel. 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.

8. Paper mill wastewater and sludge disposed of on the site contained dioxin and related compounds. The Discharger conducted an investigation into the presence of dioxin and furan compounds remaining at the site in soil and groundwater. On 5 December 2006, the Regional Board notified the Discharger that, based on the investigation results, no further action to evaluate the presence of dioxin and furan compounds in soil and groundwater at the site was required at that time. The 5 December 2006 letter also noted that if the proposed aggregate mining operation proceeds, additional surface and water sampling for dioxins/furans during mining operations would be required when groundwater is encountered in each pond. This Order requires that the settling pond(s) and the excavation ponds be tested for dioxins and furans on a regular basis. If dioxin and/or furans are detected at concentrations at or above those specified in this order, the Discharger will be required to collect additional water and sediment samples for analysis. Based on the report findings, additional action may or may not be necessary.

9. 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 Discharger reports that a single 10,000-gallon aboveground storage tank will be located at the site along with no more than five 55-gallon drums of lubricants and transmission oil. The Aboveground Petroleum Storage Act applies to the site and the Discharger is required to comply with the act. Pacific Gas and Electric will provide electrical power at the site.

10. There is no discharge of domestic wastes at the site. A portable toilet supplier will provide sanitation services.

11. The Sacramento River runs along the northeastern boundary of the site and Anderson Creek runs along a portion of the southwest boundary of the site. The discharge is within the Enterprise Flat Hydrologic Area (No. 508.10) as depicted on interagency hydrologic maps prepared by the Department of Water Resources (DWR) in August 1986. Surface water drainage is to the Sacramento River and Anderson Creek which is tributary to the Sacramento River.

12. The average annual precipitation at the site is 39.34 inches, about 80 percent of which falls between November and March. Climate data is from the Redding station of the Western Regional Climate Center dated 1 January 1931 to 30 April 1979. The weather station is located approximately 5 miles northwest of the project site.

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 Anderson Creek. Based on the "tributary rule," the beneficial uses cited for Anderson Creek in this Order are based on Sacramento River beneficial uses.

15. The beneficial uses of the Sacramento River and Anderson Creek by tributary rule from the Sacramento River 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, wildlife habitat, and navigation.

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 Findings 7 and 8, above, if mercury or dioxin is detected at concentrations above the benchmark levels contained in this order, then the Discharger is required to further characterize the extent and threat of the pollutants. If the mining operation results in measurable degradation of surface or groundwater with respect to dioxin or mercury, then the Discharger will be required to improve BPTC measures, or provide evidence that the mining activity complies with Resolution 68-16 and other

Regional Water Board policies.

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 new groundwater-monitoring wells are not required, at this time. However, the Discharger is required to maintain existing monitoring wells on the site not within aggregate excavation pits. Monitoring wells may be abandoned with prior approval of the Regional Board's Executive Officer. 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 measurable surface or groundwater degradation.

19. The project is not expected to have an impact on total dissolved minerals or increase the electrical conductivity of the ground or surfaces waters of the site. Soils in the region generally have low salt content. In addition, the material being mined consists of alluvial deposits well washed by the Sacramento River. 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. R5-2007-0177 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 is the lead agency for the project under the California Environmental Quality Act (CEQA, Public Resources Code Section 21000, et. seq.). The County adopted an Environmental Impact Report with mitigation measures and findings for this project in accordance with CEQA. Shasta County also adopted a statement of overriding considerations for the project, Use Permit conditions, Reclamation Plan conditions and conditions in the Final Appeal Denial Resolution for this facility.

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 pond so freeboard can be readily assessed.

8. Freeboard shall never be less than two feet (measured vertically to the lowest point of overflow), except if lesser freeboard does not threaten the integrity of the pond, no overflow of the pond occurs, and lesser freeboard is due to direct precipitation or storm water runoff occurring as a result of annual precipitation with greater than a 100-year recurrence interval, or a storm event with an intensity greater than a 25-year, 24-hour storm event.

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.

11. Existing monitoring wells not located within the footprint of the aggregate excavation pits or the settling pond(s) shall be maintained. The Discharger shall obtain approval from the Regional Board's Executive Officer prior to the abandonment or destruction of any monitoring well.

C. Groundwater Limitations

1. 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 February 2008**, the Discharger shall submit a copy of its most recent Site Reclamation/Restoration Plan if it differs from the April 2005 Site Reclamation/Restoration Plan. As the reclamation plan is updated or revised, the Discharger shall immediately forward such revised plans to this office.

2. If, as a result of the monitoring conducted by Monitoring and Reporting Program No. R5-2007-0177, mercury is detected at concentrations equal to or greater than 50 nanograms per liter (ng/L) in a liquid sample from any settling pond containing water or active excavation pit containing groundwater, the Discharger shall submit a work plan within 90 days of the Discharger's receipt of the test results to characterize mercury in the water and sediment within the pond/pit. 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 mitigation plan evaluating alternatives to reduce mercury to acceptable levels. 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. If, as a result of the monitoring conducted by Monitoring and Reporting Program No. R5-2007-0177, 2,3,7,8-TCDD dioxin cogener concentrations is equal to or greater than 0.270 pico grams per liter (pg/L) in a liquid sample from any settling pond containing water or active excavation pit containing groundwater, the Discharger shall submit a work plan within 90 days of the Discharger's receipt of the test results to characterize dioxins/furans in the water and sediment within the pond/pit. 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 dioxin at concentrations that may adversely affect surface or groundwater quality as a result of the final reclamation of the site, then within 120 days, the Discharger shall submit a report evaluating alternatives to reduce the dioxins and furans to acceptable levels. 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.

4. 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.

5. The Discharger shall comply with Monitoring and Reporting Program No. R5-2007-0177, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

6. 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).

7. 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.

8. 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.

9. 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.

10. The requirements of all concerned governmental agencies having jurisdiction by law including, but not limited to, the issuance of appropriate permits shall be met.

11. 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.

12. 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.

13. 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 6 December 2007.

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PAMELA C. CREEDON, Executive Officer

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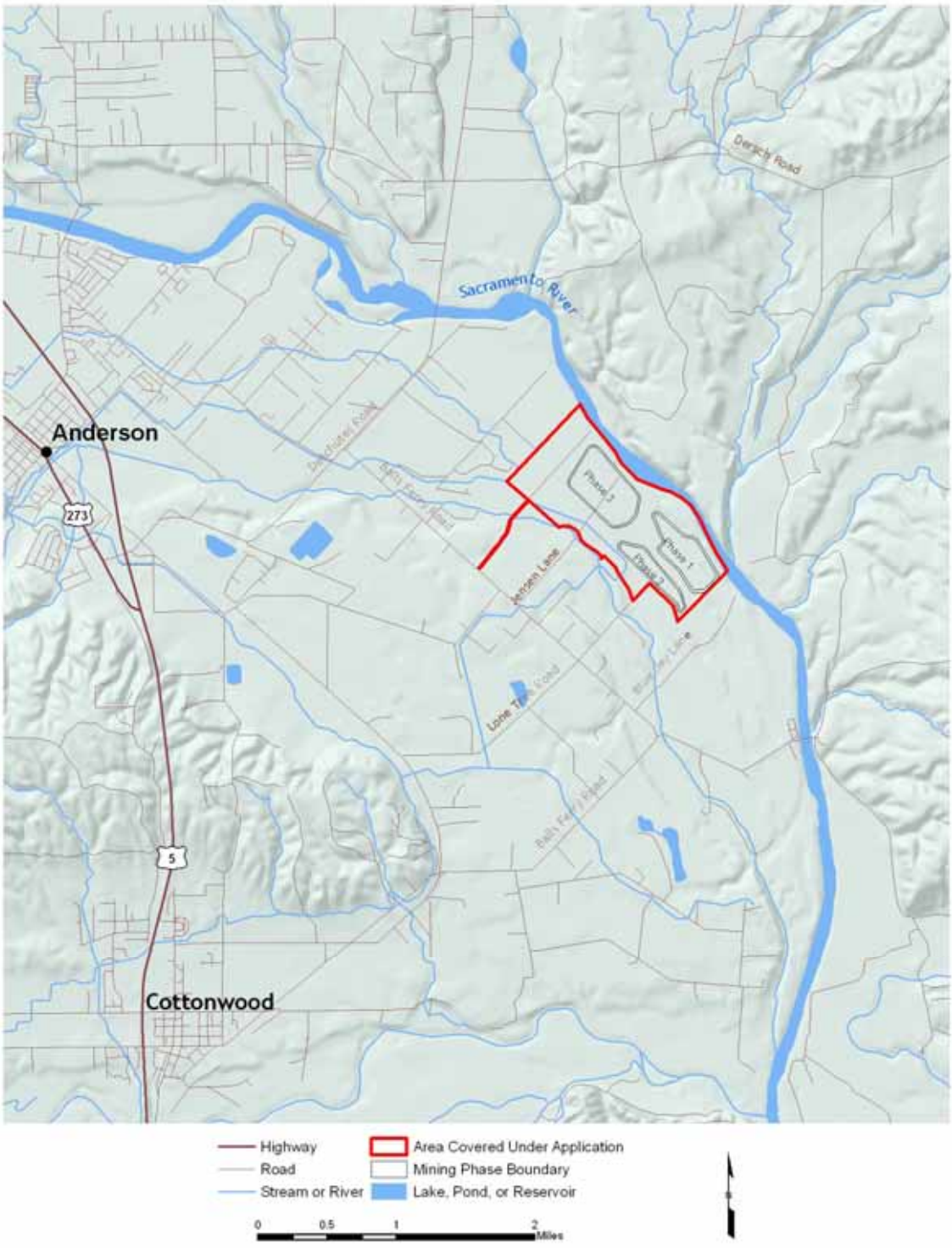
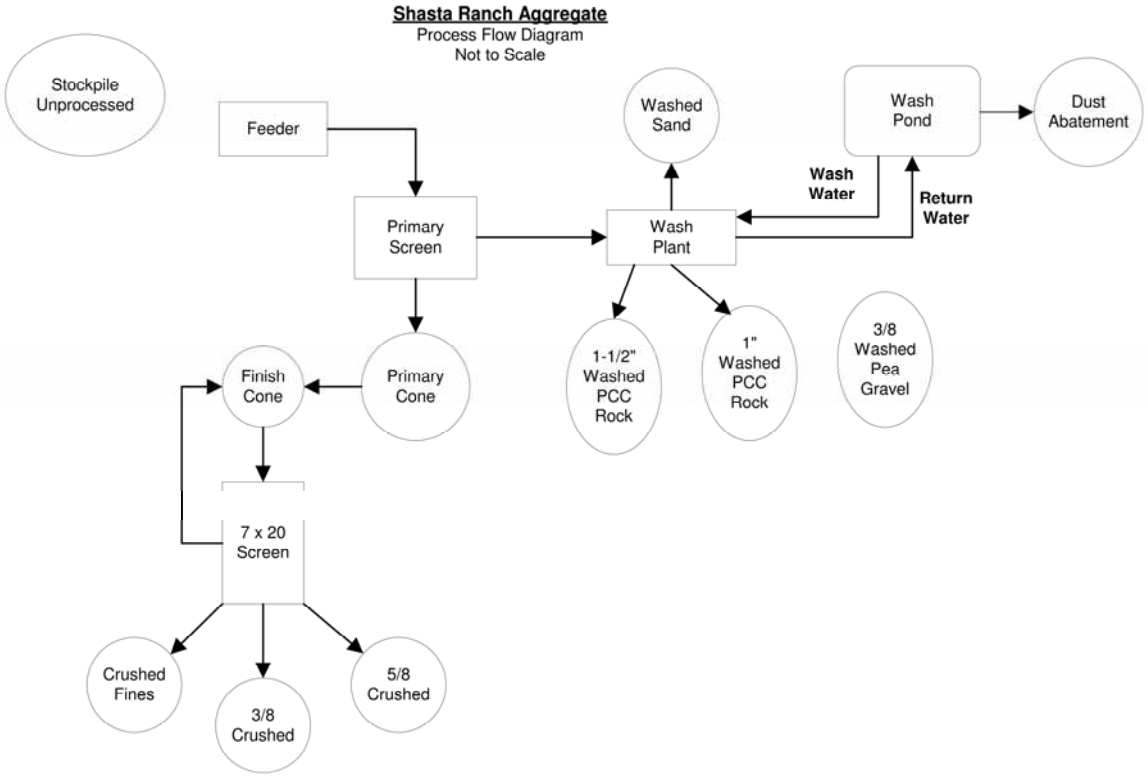


Attachment "A"
Shasta Ranch Aggregate
40º 26' 27" North 122º 13' 9" West



Attachment "B"
Shasta Ranch Aggregate
Process Flow Diagram

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
MONITORING AND REPORTING PROGRAM NO. R5-2007-0177
FOR
SHASTA RANCH AGGREGATE
ANDERSON
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 POND MONITORING

Discharger's closed-loop process water treatment and recycling system includes a settling pond. The pond water samples shall be collected according to the schedule below from the pond receiving process water directly from the discharge pipe (as opposed to receiving process water as the result of overflow from another pond should the system be modified to include multiple settling ponds). 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 ponds.

Constituent/Parameter	Units	Sampling Frequency
Freeboard[1]	Feet, 0.1 Feet	Weekly
Total Mercury	ng/L[2]	March and September
Dioxins and Furans	pg/L	March and September
Electrical Conductivity	umhos/cm	March and September

[1]If the settling pond is segmented or if a series of ponds are created, freeboard shall be measured and reported for each segment or pond.
[2]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).*

EXCAVATION PIT MONITORING

The mining and reclamation plan for the site calls for the excavation pits to extend below the groundwater table. Active excavations where groundwater has been encountered shall be sampled in accordance with the following table. Sampling is not required of excavation pits that have been reclaimed or that have not yet encountered groundwater. Samples shall be collected from a representative location at a depth midway between the water surface and the pit bottom.

Constituent/Parameter	Units	Sampling Frequency
Total Mercury	ng/L[1]	March and September
Dioxins and Furans	pg/L	March and September

[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:

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PAMELA C. CREEDON, Executive Officer
6 December 2007

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INFORMATION SHEET

ORDER NO. R5-2007-0177
TULLIS, INC. AND SHASTA RANCH ESTATES, LLC
SHASTA RANCH AGGREGATE
SHASTA COUNTY

Tullis, Inc., is proposing a sand and gravel mining facility adjacent to the Sacramento River east of Anderson in Shasta County. 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. Excess wash water is recycled through a settling pond located on the site. The mine and processing facility are on land owned by Shasta Ranch Estates, LLC. Process water discharged to the ponds will be 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 or sprayed on site for dust control. The operator has not proposed using flocculants to enhance the settling process. Settled material will periodically be removed from the ponds and used in land reclamation on the site. As the source material may vary in quality and there is no operational history, 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 mercury was likely 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 extraction pits extending below the groundwater table and the settling pond(s) 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 water and sediment samples from the settling pond(s) and or relevant extraction pit, 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(s) is assumed to be well mixed, only one sampling location in the settling pond receiving the process water 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.

The site is also the former disposal location for wastes from a paper mill. Dioxin, a by-product of paper production, has been detected on the site. This Order requires that extraction pits extending below the groundwater table and the settling ponds be tested for dioxin on a regular basis. If dioxin is detected at concentrations exceeding that stipulated in this Order, the Discharger will be required to collect water and sediment samples from the settling ponds and or extraction pits, have them tested for dioxin and provide a report of results. Based on the report findings, additional action may or may

not be necessary. Because water in the settling pond(s) and groundwater in the extraction pits are assumed to be well mixed, only one sampling location in the pond receiving the process water and one sampling location in the subject excavation pit are specified for monitoring. In addition, sampling of the pond water should be representative of the leachability of any dioxin in the fines collected in the settling ponds and the suitability of the fines to be used for reclamation.

Irrigation water containing residual dioxin compounds was historically applied to an area of the property where Phase 3 is proposed. Phase 1 and Phase 2 of the mining project are not in areas that received the irrigation. This order requires monitoring of pond water during mining activities to determine if mercury or dioxin compounds are present at concentrations that pose a threat to water quality. Each phase of mining is anticipated to last approximately 8 to 10 years. By the time Phase 3 operations are conducted, monitoring data will have provided additional information on any impacts the mining operation has on water quality. If necessary, the Regional Water Board can require mitigation measures and/or additional monitoring.

Surface water drainage is to the Sacramento River and to Anderson Creek, a tributary to the Sacramento River.

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