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


2. The Hughson Plant is at 1100 Lowe Road, near the city of Hughson in Sections 1 and 2, T4S, R10E, MDB&M as shown on Attachment A, which is attached hereto and made part of the Order by reference. The facility is on Assessor’s Parcel Number 018-07-09.

3. The land is owned by Harold J. Schmidt and the processing and aggregate washing equipment are owned and operated by Calaveras Materials, Inc. Calaveras Materials, Inc. and Harold J. Schmidt shall be hereafter referred to jointly as “Discharger”.

4. Order No. 94-089 (NPDES Permit No. CA 0083411), which prescribed requirements for surface water discharge of pit dewatering waste, was adopted by the Regional Board on 22 April 1994. The expired NPDES permit was rescinded at the request of the Discharger on 7 December 2001. The Discharger wishes to continue discharging gravel processing wash water to land, which was also allowed under the NPDES Permit.

**Existing Facility and Discharge**

5. The Hughson Plant is an existing aggregate mining and processing facility on a 140-acre site that discharges approximately 0.3 million gallons per day (mgd) of wastewater from sand and gravel washing operations to a settling/recycling pond system.

6. Aggregate is excavated on-site from either the East Mining/Pond Area or the West Mining/Pond Area or hauled to the facility from off-site excavation areas for processing. The on-site excavation and processing areas are shown on Attachment B, which is attached hereto and made part of the Order by reference.

7. Portions of the current and planned future mining areas were previously mined by others to shallower depths beginning in the 1940s. Currently, approximately 62 acres are actively mined and another 5-acre area will be mined in the future. Excavation is accomplished below the water table to depths of approximately 45 feet below the surrounding grade, and no pit dewatering has been performed since before the NPDES permit was rescinded.
8. The facility includes a scale house/office building and an equipment shop, as shown on Attachment C, which is attached hereto and made part of the Order by reference. Processing equipment consists of crushing, screening, and washing equipment. There is also an asphaltic concrete plant with a bag house for fines collection.

9. All aggregates are processed through a scalper screen where particles greater than 1.5 inches in size are separated and diverted to the crushing equipment. Crushed aggregate is used on demand to make asphaltic concrete. Aggregate pieces smaller than 1.5 inches are washed and stockpiled for sale as aggregate. The wash water with fines is discharged to the Sediment Settling Area, and decanted into the West Mining/Pond area.

10. An average of 0.3 million gallons per day (mgd) of industrial wastewater from aggregate and equipment washing operations is discharged to the Sediment Settling Area. Peak daily wastewater flows are approximately 0.5 mgd.

11. Decant from the Sediment Settling Area flows through a culvert at the western end into the West Mining/Ponding Area. The culvert is positioned several feet below grade, but portions of the ground surface around the perimeter of the Sediment Settling area appear to be lower. The Discharger confirmed that the water level is sometimes above the culvert inlet, possibly resulting in flow over the berm that separates the two ponds. However, the Discharger states that site topography ensures that all overflow will flow into the West Mining/Ponding Area.

12. Due to the hydraulic connectivity of the West Mining/Ponding Area with the water table and river, the water level in the West Mining/Ponding Area typically varies from 5 to 12 feet below the surrounding grade with no significant changes associated with the wastewater discharge or storm water contributions. The Discharger’s water balance confirms this.

13. No flocculants or other chemicals are added to the wastewater. The Discharger recovers gold from aggregate mined on-site using physical separation processes only. Based on analytical data from one sample provided in the RWD, the chemical character of the wastewater is summarized below.

<table>
<thead>
<tr>
<th>Constituent/Parameter</th>
<th>Units</th>
<th>Analytical Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Dissolved Solids</td>
<td>mg/L</td>
<td>360</td>
</tr>
<tr>
<td>pH</td>
<td>--</td>
<td>7.4</td>
</tr>
<tr>
<td>Total Alkalinity</td>
<td>mg/L</td>
<td>190</td>
</tr>
<tr>
<td>Total Hardness</td>
<td>mg/L</td>
<td>175</td>
</tr>
<tr>
<td>Sodium</td>
<td>mg/L</td>
<td>41</td>
</tr>
</tbody>
</table>
Because chemicals are not used in the aggregate processing, the quality of the effluent is expected to be similar to that of the underlying groundwater.

14. Asphaltic concrete is produced by mixing crushed aggregate with asphalt oil. Hot-mix asphaltic concrete is either loaded directly onto trucks or stored in silos for up to five hours. Cold-mix asphaltic concrete is usually loaded directly onto trucks, but small quantities may be stockpiled on-site for brief periods.

15. Overburden removed from mining areas is stockpiled for future reclamation of excavation areas.

16. Domestic wastewater from the shop restroom is discharged to a septic system permitted by the Stanislaus County Department of Environmental Resources. The Discharger’s RWD states that no fuel or chemicals wastes are discharged to the septic system.

17. Fuels, asphalt oil, and used oil are stored in a series of above-ground and underground tanks, as shown on Attachment C. All other chemicals are stored and used indoors.

18. Storm water that falls on the site drains towards the West Mining/Pond Area. According to the RWD, storm water is completely contained within the site boundaries by the river bluff and earthen embankments constructed along the river.

**Site-Specific Conditions**

19. The topography of the facility site, exclusive of excavation areas, is relatively flat with an average elevation of 75 feet above mean sea level (MSL).

20. Shallow soils beneath the facility site are of the Grangeville and Hanford series and consist of medium and moderately coarse-textured soils derived from granitic rock.

21. Industrial and domestic water is supplied by three on-site wells at a rate of up to 2,000 gallons per minute over an 8-hour workday.

22. According to the RWD, the facility site drains towards the 54-acre West Mining/Pond Area. However, local drainage is to the Tuolumne River.
23. Tuolumne River discharge rates are controlled primarily by releases from Don Pedro Dam, approximately 23 miles upstream. In 1997, an emergency release of 70,000 cubic feet per second (cfs) caused 500-year flood conditions, which inundated the facility.

24. Current Flood Insurance Rate Maps indicate that the facility is within the 100-year flood zone, which corresponds to a river discharge rate of 44,000 cfs and a flood stage elevation of 75.4 feet. The RWD states that the State Reclamation Board is currently revising the flood elevation estimates for submittal to the Federal Emergency Management Agency (FEMA) based on the 1997 event, but it is not known when that work will be completed. Therefore, it is appropriate to require that the Discharger construct adequate flood protection based on the current 100-year flood plain elevation within a reasonable time frame and construct additional improvements as needed when the revised floodplain elevation is known.

25. The average annual precipitation is approximately 12.5 inches and the 100-year total annual precipitation is approximately 20 inches.

26. Reference evapotranspiration (ET₀) rates average approximately 57 inches per year.

27. Surrounding land uses are primarily agricultural.

**Groundwater Considerations**

28. Groundwater exists in an unconfined aquifer approximately 5 to 20 feet below the natural ground surface at the facility site. Due to hydraulic connectivity with the adjacent river, the water levels in the ponds and excavation areas fluctuate seasonally with the river level. Based on interpretation of Department of Water Resources groundwater contour maps, the Discharger believes that groundwater flow directions vary from northerly to westerly. No site-specific shallow groundwater quality data are available.

**Basin Plan, Beneficial Uses, and Regulatory Considerations**


30. Surface water drainage is to the Tuolumne River. The beneficial uses of the Tuolumne River are municipal and domestic supply; irrigation and stock watering; contact and non-contact recreation; warm and cold freshwater habitat; cold water migration; warm and cold water spawning habitat; and wildlife habitat.

31. The beneficial uses of underlying groundwater are municipal, industrial, and agricultural supply.
32. State Water Resources Control Board (State Board) Resolution No. 68-16 prohibits degradation of groundwater quality unless it has been shown that:

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

The Regional Board has considered antidegradation pursuant to State Board Resolution No. 68-16, and finds that the Discharger has not provided the required demonstration to be allowed to cause groundwater degradation, and therefore none is authorized.

33. Because no chemicals are used in processing the aggregate, the land disposal of wastewater as proposed should not degrade groundwater quality. Therefore, it is appropriate not to require groundwater monitoring at this time. If staff determines that the discharge has caused, or has the potential to cause, groundwater degradation, then the Discharger will be required to monitor groundwater quality, cease the discharge, change the method of disposal, and/or take other actions as necessary to comply with Resolution No. 68-16.

34. 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. ___ are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

35. The action to adopt waste discharge requirements for the facility is exempt from the provisions of the California Environmental Quality Act (CEQA), in accordance with Title 14, California Code of Regulations (CCR), Section 15301.
36. On 18 August 2000, the Stanislaus County Department of Planning and Community Development issued a Staff Approval for the expansion of the then-existing operation. The following conditions of approval related to water quality protection were attached:
   a. Maintain the excavation pit so that it does not become permanently or regularly connected to the Tuolumne River; and
   b. Prohibit discharge of storm water runoff or other drainage into the Tuolumne River.
   Based on information presented in the RWD, compliance with these conditions should adequately protect groundwater and surface water quality.

37. Regional Board records indicate that the Discharger has not filed a Notice of Intent to comply with 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. Therefore, it is appropriate to require that the Discharger file either a Notice of Intent or a Notice of Non-Applicability.

38. 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 waste discharge requirements,
   b. The discharge complies with the Basin Plan, 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.

Public Notice

39. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, have been considered in establishing the following conditions of discharge.

40. The Discharger and interested agencies and persons have been notified of the Regional Board’s 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.

41. All comments pertaining to the discharge have been heard and considered in a public meeting.

IT IS HEREBY ORDERED that, pursuant to Sections 13263 and 13267 of the California Water Code, Calaveras Materials, Inc. and Harold J. Schmidt, 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:
[Note: Other prohibitions, conditions, definitions, and some 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 any excavation or settling pond is prohibited.
3. Discharge of waste classified as hazardous, as defined in Sections 2521(a) of Title 23, CCR, Section 2510, et seq., (hereafter Chapter 15), or ‘designated’, as defined in Section 13173 of the California Water Code, is prohibited.
4. The discharge or deposition of waste from sources other than the sand and gravel processing operations owned by the Discharger is prohibited.
5. The addition of chemicals to the gravel processing operation is prohibited.
6. Chemical methods of gold recovery including amalgamation and cyanide leaching are prohibited.
7. Operation of, or discharge of waste from, a batch concrete plant is prohibited.
8. Surfacing of wastewater from the septic tank or septic tank leachfield is prohibited.

B. Discharge Specifications:

1. The average monthly discharge flow to the settling ponds shall not exceed 0.5 mgd.
2. The discharge shall remain within the designated settling ponds at all times. Wastewater shall not be discharged to areas not specifically defined as such in this Order.
3. The wastewater treatment ponds shall not have a pH of less than 6.5 or greater than 8.5.
4. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or a mass that causes violation of the Groundwater Limitations.
5. The Discharger shall operate all systems and equipment to maximize treatment of the wastewater and optimize the quality of the discharge.
6. All 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. The Discharger’s wastewater system shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

8. All stockpiled products and wastes shall be managed to prevent erosion of sediment to surface water drainage courses.

9. The freeboard in all ponds shall never be less than two feet as measured vertically from the water surface to the lowest point of overflow.

10. The wastewater ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with the historical rainfall patterns.

11. On or about 1 November of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications B.9 and B.10.

12. Newly constructed or rehabilitated levees or berms designed to hold back water shall be designed and constructed under the direct supervision of a California Registered Civil Engineer.

13. Neither the treatment nor the discharge shall cause a nuisance or condition of pollution as defined by the California Water Code, Section 13050.

14. The discharge shall not cause the degradation of any water supply.

15. The Discharger shall comply with all applicable sections of the Aboveground Petroleum Storage Tank Regulations (Section 25270, Health and Safety Code).

C. Effluent Limitations

1. The waste shall not have a pH of less than 6.5 or greater than 8.5.

D. Solids Disposal Requirements:

1. Collected screenings, sludge, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with 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.

2. Any proposed change in sludge use or disposal practice from a previously approved practice shall be reported to the Executive Officer in the next monthly monitoring report.
3. Disposal of septage shall comply with existing Federal, State, and local laws and regulations, including permitting requirements and technical standards included in 40 CFR 503.

E. Groundwater Limitations:

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

F. Provisions:

1. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. To demonstrate compliance with sections 415 and 3065 of Title 16, CCR, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

2. The following reports shall be submitted pursuant to Section 13267 of the California Water Code:
   a. By 30 March 2003, the Discharger shall submit either a Notice of Intent to comply with State Board Water Quality Order No. 97-03-DWQ (Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities) or a Notice of Non-Applicability.
   b. By 30 June 2003, the Discharger shall submit certification that a flow meter has been installed to measure flows from the processing plant to the Sediment Settling Area. The report shall state the type and location of the flow meter.
   c. By 30 June 2003, the Discharger shall submit a report documenting the topography and current 100-year flood plain elevation at the facility site. If the floodplain elevation is such that the existing bluffs and berms do not provide 100-year protection, then the report shall include a Flood Protection Workplan that describes the scope and schedule of site improvements necessary to comply with Discharge Specification B.7.
   d. By 30 November 2004, the Discharger shall submit a Flood Protection Certification Report to demonstrate that all necessary improvements identified in the Flood Protection Workplan have been completed. The report shall include as-built plans and earthwork sections depicting all flood protection berms/levees, which have been stamped and signed by a California registered Civil Engineer.
3. The Discharger shall comply with Monitoring and Reporting Program No. R5-2002-0227, which is a part of this Order, and any revisions thereto as ordered by the Executive Officer.

4. 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).”

5. 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.

6. The Discharger shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.

7. 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.

8. 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.

9. 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.

10. The Regional Board will review this Order periodically and 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 Regional Board, Central Valley Region, on 6 December 2002.

THOMAS R. PINKOS, Executive Officer

ALO: 12/6/02
This Monitoring and Reporting Program (MRP) describes requirements for monitoring industrial wastewater. 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 storm water and process water pond (including the Sediment Settling Area, East Mining/Ponding Area, and West Mining/Pond Area) shall be inspected weekly and monitored as follows:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Type of Sample</th>
<th>Sampling Frequency</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeboard</td>
<td>0.1 Feet</td>
<td>Measurement</td>
<td>Weekly</td>
<td>Monthly</td>
</tr>
</tbody>
</table>

**EFFLUENT MONITORING**

Wastewater effluent samples shall be collected at the inlet to the Sediment Settling Area. Grab samples are considered adequately composited to represent the effluent. At a minimum, the Discharger shall monitor the effluent wastewater as follows:

<table>
<thead>
<tr>
<th>Constituent/Parameter</th>
<th>Units</th>
<th>Type of Sample</th>
<th>Sampling Frequency</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow</td>
<td>gpd</td>
<td>Meter Observation</td>
<td>Daily</td>
<td>Monthly</td>
</tr>
<tr>
<td>pH</td>
<td>Std.</td>
<td>Grab</td>
<td>Monthly</td>
<td>Monthly</td>
</tr>
</tbody>
</table>
REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), 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. Quarterly Monitoring Reports

Quarterly reports shall be submitted to the Regional Board on the 1st day of the second month following the end of the calendar quarter (i.e. the January-March Quarterly Report is due by 1 May). At a minimum, the reports shall include:

1. Results of freeboard and effluent monitoring.

2. 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.

3. If requested by staff, copies of laboratory analytical report(s).

4. A calibration log verifying calibration of all monitoring instruments and devices used to comply with the prescribed monitoring program.

B. Annual Monitoring Reports

An Annual Report shall be prepared as the Fourth Quarter Monitoring Report. The Annual Report shall include all monitoring data required in the quarterly schedule. The Annual Report shall be submitted to the Regional Board by 1 February each year. In addition to the data normally presented, the Annual Report shall include the following:

1. If requested by staff, tabular and graphical summaries of all data collected during the year;

2. An evaluation of the performance of the wastewater treatment system, as well as a forecast of the flows anticipated in the next year;

3. 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;

4. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program; and
5. A Water Balance and Capacity Calculation Report that demonstrates adequate storage and disposal capacity to ensure full compliance with the WDRs. The water balance shall evaluate the ponds’ ability to provide sufficient capacity on a monthly basis, and shall consider evaporation, direct precipitation, storm water runoff contribution, percolation, and estimated rate of sedimentation. Rainfall amounts shall be based on the total annual precipitation based on a return period of 100 years, distributed monthly in accordance with historical rainfall patterns. Note that the established maximum daily percolation rate cannot exceed ten percent of the minimum saturated hydraulic conductivity and the evaporation rate cannot exceed 80 percent of the established pan evaporation rate for the area. For the purpose of this analysis, “full compliance” means maintaining two feet of freeboard in all ponds.

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.

THOMAS R. PINKOS, Executive Officer

6 December 2002

(Date)

ALO:12/6/02