

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2002-0138

WASTE DISCHARGE REQUIREMENTS
FOR
TEICHERT AGGREGATES
HALLWOOD FACILITY
YUBA COUNTY

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

1. Teichert Aggregates (hereafter Discharger) submitted a Report of Waste Discharge (ROWD) dated 7 March 2001, and previously submitted a *Reclamation Plan for Hallwood Site* (Facility) dated 28 October 1988 for an existing facility that extracts and processes aggregate and manufactures asphalt concrete.
2. The Discharger owns and operates the Facility on real property identified by Assessor's Parcel Numbers: 006-100-072; 006-100-073; 006-100-074; 006-100-075; 006-150-004; 006-150-007; 006-160-027; and 006-160-029.
3. The property is in Sections 24, 25, and 26 T16N, R5E, MDB&M, as shown on Attachment A, which is attached hereto and made part of this Order by reference. The Facility is approximately three miles east northeast of Marysville and south off Brown's Valley Road. The physical street address is 3311 Walnut Avenue.
4. The property has been mined since 1953. The Discharger has operated aggregate wash water settling basins in the past. In May 1999, the Discharger notified staff that the Facility was a dry process Facility. However, in April 2000 a ROWD was submitted, which described operations that generate wastewater. Subsequently WDRs Order No. 5-00-105 was adopted at the 15 June 2000, Regional Board meeting. In March of 2001 the Discharger determined that revisions to the WDRs were necessary and submitted another ROWD on 19 March 2001.
5. The Discharger has requested that revisions be made to the Waste Discharge Requirements Order No. 5-00-105 to accommodate desired operational changes. Total finished product sales will remain the same at 850,000 tons per year.
6. Two revisions have been requested. One increases the daily average flow from 1.2 to 3.0 million gallons per day (mgd). The second increases the designated disposal area from 0.5 to approximately 15 acres. The designated disposal area is described as having a maximum size of 15-acres of pond surface plus a 100-foot wide continuous land buffer surrounding the 15- acres. The designated disposal area is stationary and must maintain a minimum 100-foot separation between the designated disposal area and the Yuba River. Annual aggregate extraction, finished product production, and all other aspects of the operation previously reported and described herein will remain unchanged.

Facility and Discharge

7. The Discharger's aggregate extraction and processing operation covers approximately 720-acres. Extraction operations consist of excavation and transport of site alluvial deposits. The site's aggregate was previously mined for gold leaving behind dredger tailings called windrows.
8. Aggregate extraction operations will be conducted both above and below site groundwater levels. A dragline will be used to excavate up to 40-feet below the water table.
9. A conveyor transports excavated material to temporary aggregate stockpiles. Aggregate stockpiles allow a continuous feed of sand and gravel to the classifying/processing (washing) Facility during the operational hours. Stackers place the various sand and aggregate products into their respective stockpiles prior to sale. Expended wash water from the plant is pumped to the 15-acre settling pond contained in the designated disposal area.
10. The Discharger will produce approximately 850,000 tons of aggregate products of which 400,000 tons more or less will be washed products based on market demand. The Discharger proposes to use chemical additives in the wash water to help settle colloidal material. Since issues regarding chemical additives on water quality cannot be addressed without specific chemical information, chemical processing may commence at this site only after chemical additive details are provided and their use is approved in writing by the Executive Officer.
11. Portland Cement Concrete (PCC) will not be manufactured at this Facility. Wastes generated during the manufacture and transportation of PCC have the potential to be classified as designated waste and pose a threat to water quality. The Discharger has not submitted plans for construction or operation of a PCC plant; therefore this Order does not address the manufacture of PCC.
12. The Facility discharges 3.0 million gallons per day (mgd) of wastewater from sand and gravel washing operations to an on-site unlined settling/infiltration pond. The pond is approximately 15-acres in surface area as shown in Attachment A and B, which is attached hereto and made part of this Order by reference. A nearby water pond will be used as an industrial water supply pond. It is anticipated that most of the expended process water discharged to the wastewater pond will be recycled through near surface infiltration to the supply pond. Water from the industrial supply pond may also be used for dust control on the site roadways.
13. The Facility has limited operational staff and they use bottled water for domestic use.
14. Hazardous materials stored at the site are Ar-4000 asphaltic oil, motor oil, hydraulic fluid, transmission fluid, lube grease, gear lube, and similar products associated with a aggregate processing Facility and listed below. Best Management Practices will be followed in handling

these substances. There is no bulk storage of fuel on site. Asphalt cement oil is stored in one or more aboveground storage tank(s). Major equipment repair work is performed off site.

Material	Amount
Acetylene	834 f ³
Oxygen	1,491 f ³
Propane	30,000 gal
Diesel	None Stored
Asphaltic Cement	90,000 gal
Lubricating Oils and Grease	1,500 gal
Gasoline	None Stored
Antifreeze	110 gal
Waste Oil	110 gal
Waste Antifreeze	55 gal
Solvent	110 gal

Site-Specific Conditions

15. Historic dredging for gold in this area has significantly disturbed and redistributed the river sediments in a non-uniform manner. The Discharger has not requested on-site domestic wastewater disposal and the soil may not meet the consistency normally expected to support on-site systems, therefore this Order does not address on-site domestic wastewater disposal. The Discharger has a contract service provider to maintain portable self-contained domestic waste units on site.
16. The Facility is at an elevation of approximately 100 feet Mean Sea Level (msl). Surface water drainage is to the Yuba River. The Facility site is in the Lower Yuba River Hydrologic Subarea within the Marysville Hydrologic Unit (No. 515.30), as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

Groundwater Considerations

17. The Discharger operates within the area known as the Yuba Gold Fields. The Gold Fields surface sediments' ability to store and transmit groundwater has been significantly changed with the historic mining activity. The present day mining activity and disturbed sediments are separated from the well-established channel of the Yuba River. The U.S. Army Corps of Engineers identified the ephemeral ponds and channels created by the gold dredge activity as being away from the Yuba River Channel and above the high water mark. The Corps, on behalf of the United States, subsequently determined that the ponds and channels within the Yuba Gold Fields were not jurisdictional waters of the U.S. under the Clean Water Act (March, July, and November 1995 Corps letters to Cal Sierra, Western, and Teichert respectively and December 1998 letter to LASER).

18. The Corps exempts Goldfields ponds and channels from Clean Water Act jurisdiction under its industrial process exemption. Under this exemption, the Corps has interpreted the term “waters of the U.S.” to not include artificial lakes or ponds created by excavating dry land (51 Fed. Reg. 41217). The Regional Board has concurred with the Corps determination and has made a historical practice of issuing WDRs instead of NPDES permits for mining activities in the Yuba Gold Fields.
19. Gold Fields ponds and channels are man made and percolate to the groundwater. Under 40 CFR 122.2, EPA has drawn a distinction between natural and artificial ponds. As artificial, manmade ponds, the ponds within the designated disposal and excavation areas described in Finding Nos. 5, 6 and 8 and Specification B. 5 and B. 6 are not waters of the U.S. Additionally, under the waste treatment system exclusion of 40 CFR 122.2, the ponds within the designated disposal and excavation areas are not waters of the U.S.
20. USEPA has reviewed the Goldfields gold dredging operation and concluded that this operation does not involve a point source discharge to waters of the U.S. (Development Document for Proposed Effluent Limitations for Placer Mining, EPA 440/1-85/061-B, October 1985). Although this Discharger does not dredge for gold, it discharges into the same type of manmade dredger ponds as a gold dredge, and the Board finds that this discharge is not to waters of the U.S.
21. A majority of federal courts have concluded that groundwaters, even if hydraulically connected to surface waters, are not waters of the U.S. The Board finds that the underground waters within the Yuba Goldfields qualify as such groundwaters and are not waters of the U.S.

Groundwater Degradation

22. The conditional discharge as permitted herein is consistent with the antidegradation provisions of State Water Resources Control Board Resolution No. 68-16. Some degradation of groundwater immediately beneath the site is appropriate provided that no degradation occurs beyond the designated disposal or excavation areas, and that best practicable treatment and control is implemented, and that allowed degradation shall not result in an exceedance of applicable water quality objectives or unreasonably impact beneficial uses. Limited degradation of groundwater underlying the site within the designated disposal area is consistent with maximum benefit to the people of the State, because aggregate mining contributes to the economic benefit of Yuba County and the surrounding area. Assimilative capacity is available in the underlying groundwater, considering limited dilution, to allow for some degradation and not unreasonably threaten present and anticipated beneficial use of such water or result in groundwater that exceeds or threatens to exceed water quality objectives set forth in the Basin Plan. Such degradation will be limited to only the groundwater underlying the designated disposal and excavation areas, and monitoring is required to assure protection of water quality outside of these areas.

Treatment and Control Practices

23. The site described in Finding Nos. 1 through 13 provides best practicable treatment and control for the subject wastewater, and will assure that the discharge does not create a condition of pollution or of nuisance and that the highest water quality will be maintained. Settling ponds are used throughout the mining industry to treat turbidity and discoloration.
24. The materials used in the Discharger's operation are inert natural materials being subjected to a classification and separation process using site groundwater without any chemical addition. The unlined ponds allow for settling and filtering; therefore groundwater monitoring is not necessary.
25. In the period before the Discharger began operations, historic mining activities within the Yuba River watershed used mercury to amalgamate gold. Significant amounts of mercury were lost during this process, resulting in residual mercury within the Yuba River sediments. This Order requires mercury monitoring within the excavation and designated disposal areas.

Basin Plan, Beneficial Uses, and Regulatory Considerations

26. The Regional Board adopted a *Water Quality Control Plan, Fourth Edition, for the Sacramento and San Joaquin River Basins* (hereafter Basin Plan), which designates beneficial uses, establishes narrative and numerical water quality objectives, and contains implementation plans and policies for protecting all waters of the Basin. The Basin Plan includes plans and policies of the State Water Resources Control Board incorporated by reference, including the Antidegradation Policy, Resolution 68-16. Pursuant to the California Water Code (CWC), §13263(a), waste discharge requirements must implement the Basin Plan.
27. Surface water drainage and groundwater flow for the area is to numerous unnamed drainage ways and the Yuba River. The existing beneficial uses of the Yuba River are municipal, domestic, and agricultural supply; recreation; esthetic enjoyment; navigation; ground water recharge; contact recreation, canoeing and rafting, other non-contact recreation, warm and cold freshwater habitat, warm and cold water migration, warm and cold water spawning, and wildlife habitat.
28. The beneficial uses of the underlying groundwater are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply
29. The Basin Plan encourages reclamation.
30. This discharge is exempt from the requirements of *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq., (hereinafter Title 27). The exemption, pursuant to Section 20090(b), is based on the following:

- a. The Board is issuing waste discharge requirements, and
- b. The discharge complies with the Basin Plan, and
- c. The wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22, CCR as a designated or hazardous waste.

California Environmental Quality Act Considerations

31. On 19 July 2002, the Regional Board heard comments from the general public on a duly noticed Mitigated Negative Declaration regarding the modifying changes to the operation of the Hallwood Facility. After hearing comments the Regional Board adopted the Mitigated Negative Declaration.
32. Mitigation measures employed were changes in the monitoring program to accommodate the increased size in designated disposal area and the facility will use best available waste treatment technology, provide protection from 100-year flood, maintain 2-foot freeboard on all wastewater ponds and excavation areas, and provide 100-foot buffer for all wastewater ponds and excavation areas. Waste Discharge Requirements call for a monitoring program to monitor these measures and potentially affected water bodies to provide first line detection of any the effects of the mining activity and if needed for possible cleanup and/or final reclamation as determined by monitoring data, the formation of a financial assurance account may be required. In addition, existing interim and final site reclamation activities are designed mitigate the potential for mercury to become bioavailable to fish and wildlife. Final reclamation will require that the reclaimed sediment disposal or reuse site(s) be protected from the 1 in 100-year flood events to insure that sediments that may contain small amounts of mercury are not reintroduced into the surface water bodies or surface drainage courses.
33. The action to adopt waste discharge requirements for this project is exempt from the provisions of the California Environmental Quality Act (CEQA, Public Resources Code Section 21000, et. seq.) in accordance with Section 15301, Title 14, California Code of Regulations, Existing Facilities.

Public Notice

34. The Board considered all the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, in establishing the following conditions of discharge.
35. The 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 views and recommendations.
36. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Order No. 5-00-105 is rescinded and pursuant to California Water Code (CWC) sections 13263 and 13267, Teichert Aggregates, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the CWC 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, which are part of this Order. This attachment and its individual paragraphs are referred to as "Standard Provisions".]

A. Discharge Prohibitions:

1. As defined in the Clean Water Act (33 U.S.C. 1251 et seq.) and implementing regulations, the direct, point source discharge of pollutants or wastes to surface waters or surface water drainage courses outside the designated disposal area described in Discharge Specification B.5 and the excavation area described in Discharge Specification B.6 is prohibited.
2. By-pass around, or overflow from, the designated disposal area as described in Discharge Specification B.5 and the excavation area described in Discharge Specification B.6 of untreated or partially treated waste is prohibited.
3. Discharge of waste classified as 'hazardous,' as defined in Chapter 15, Sections 2521(a) of Title 23, CCR, Section 2510, et seq., (hereinafter Chapter 15), or 'designated,' as defined in Section 13173 of the California Water Code, is prohibited.
4. Discharge of domestic waste at the Hallwood Facility is prohibited.
5. The addition of chemicals to the wash water used for gravel processing is prohibited.
6. The manufacturing of concrete using Portland cement at the facility is prohibited.
7. The discharge or deposit of waste at this site from sources other than from the sand and gravel or asphalt concrete operations is prohibited.

B. Discharge Specifications:

1. The monthly average discharge flow to the pond shall not exceed 3.0 mgd.
2. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the activity area.

3. The discharge shall not cause any surface water to have a pH less than 6.5 or greater than 8.5, including surface water within the designated disposal and excavation areas.
4. All wash water 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.
5. The designated disposal area is limited to a maximum size of 15 acres of pond surface plus a 100-foot wide continuous land buffer surrounding the 15 acres. The designated disposal area is stationary and located as shown in Attachment A and B. The land buffer shall not have any channels, swales, or culverts that could possibly, under 100 year storm weather conditions, convey surface water to the Yuba River, surrounding channels, lakes, or ponds. The point of compliance for all Prohibitions, Specifications, and Limitations shall be at the outer edge of the designated disposal area.

As described in Provision F.6, the Discharger may implement an alternative engineering measure for a portion of the 100 foot land buffer, if the Discharger has proposed to the Regional Board, and the Executive Officer has approved in writing, other alternative engineering measures whose ability to filter and contain sediments associated with the Discharger's permitted operations can comply with this Order and are protective of water quality. If the alternate engineering measure is approved, the point of compliance is at the outer edge of the alternate engineering measure
6. "Excavation Areas" are defined as any area in which the Discharger is extracting aggregate from a depth of greater than three feet below the water table surface plus a 100 foot wide continuous land buffer surrounding each pond. The land buffer shall not have any channels, swales, or culverts that could possibly, under 100 year storm weather conditions, convey surface water to the Yuba River, surrounding channels, lakes, or ponds. The point of compliance for all Discharge Prohibitions, Specifications, and Limitations is at the outer edge of the excavation area.
7. All stockpiled products shall be managed to prevent erosion of sediment to surface water drainage courses.
8. Newly constructed or rehabilitated berms or levees (excluding filter barriers between ponds within the designated disposal area) shall be designed and constructed under the direct supervision of a California Registered Civil Engineer or Engineering Geologist.

9. All wastewater ponds, including the excavation area ponds, shall be designed, constructed, operated and maintained to prevent inundation or washout due to floods with a return period of 100 years.
10. Pond system shall have sufficient capacity to accommodate allowable wastewater flow design seasonal precipitation, and ancillary inflow and infiltration to prevent inundation or washout during floods, storms or a wet season using a return period of 100 years.
11. Freeboard shall never be less than two feet in any pond, as measured vertically from the water surface to the lowest point of overflow.
12. On or about October 1 of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications B. 10 and 11.
13. The use of process wastewater for dust control shall not cause a discharge of wastewater to surface water or surface water drainage courses.
14. The discharge shall not alter the apparent color of the Yuba River or any waterbody (ponds and/or channels) outside of the designated disposal or excavation areas.
15. The discharge shall not cause an increase in turbidity above background levels in any waterbody (ponds and/or channels) outside of the designated disposal or excavation areas or the Yuba River.
16. All berms or levees shall be so constructed and maintained to prevent sloughing that causes turbidity in excess of Discharge Specification Nos. 14 and 15.
17. The discharge shall not cause concentrations of any materials that are deleterious to animal, aquatic, human or plant life in any waterbody (ponds and/or channels) outside of the designated disposal or excavation areas or the Yuba River.
18. The discharge shall remain within the designated disposal and excavation areas at all times.
19. The Discharger shall comply with all applicable sections of the Aboveground Petroleum Storage Tank Regulations (Section 25270, Health and Safety Code).

C. Solids Disposal:

Collected solids removed from liquid wastes shall be disposed of or reclaimed in a manner that is consistent with Title 27 of the CCR and approved by the Executive Officer.

D. Groundwater Limitations:

The discharge, in combination with other sources, shall not cause groundwater passing beyond the outer edge of the designated disposal or excavation areas to contain waste constituents in concentrations statistically greater than background water quality.

E. Surface Water Limitations:

1. The discharge, in combination with other sources, shall not cause surface water beyond the outer edge of the designated disposal or excavation areas to contain waste constituents in concentrations statistically greater than background water quality.
2. Using the Nephelometric Turbidity Unit as a standard of measurement, no aspect of the Facility shall cause turbidity increases of surrounding waterbodies or tributaries to Yuba River to be in excess of the following:
 - a. One (1.0) NTU - if background turbidity is between 0 and 5 NTU;
 - b. Twenty (20.0) percent - if background turbidity is between 5 and 50 NTU;
 - c. Ten (10.0) NTU - if background turbidity is between 50 and 100 NTU; and
 - d. Ten (10.0) percent - if background turbidity is greater than 100 NTU.

F. Provisions:

All Discharger reports specified below shall be submitted pursuant to Section 13267 of the California Water Code. Technical reports submitted by or for the Discharger shall be prepared and stamped by the appropriate registered professional required by the California Business and Professions Code. The Discharger shall certify all reports required by this Order per the *Standard Provisions* General Reporting Requirements B.3.

1. By **1 August 2002**, the Discharger shall submit a report and map defining all sampling locations required by Monitoring and Reporting Program No. R5-2002-0138.
2. By **1 September 2002**, the Discharger shall submit a technical report showing the asphalt plant construction details. The operations and materials management plan for the plant and any site modifications necessary to protect water quality from the asphalt concrete manufacturing operations shall be included.
3. By **15 August 2002**, the Discharger shall submit a copy of its most recent Site Reclamation/Restoration Plan if different from the 28 October 1988 *TEICHERT AGGREGATES, Reclamation Plan for Hallwood Site Yuba, California*. As the reclamation plan is updated or revised, the Discharger shall immediately forward such plan to this office.

4. The Discharger shall submit a technical report for approval prior to commencement of chemical addition to the wash water. The technical report shall describe the chemical to be added, how the chemical will be added, monitoring necessary to determine residual, and evaluate possible water quality impacts. The Executive Officer must approve the technical report in writing prior to introducing the chemical into the wash water.
5. If, as a result of the monitoring conducted by MRP No. R5-2002-0138, mercury is detected at concentrations equal to or greater than 50 nanograms per liter (ng/l) in the pond water, then within **90 days** the Discharger shall submit a workplan to characterize mercury in the water and sediment within the designated disposal area and/or excavation area. Within **120 days** of approval by the Executive Officer of the workplan the Discharger shall submit a report describing the results. If such report demonstrates the presence of mercury at concentrations that may adversely affect the Yuba River 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.

If a water quality objective different than 50 ng/l is promulgated, then this permit may be reopened and the Board may reevaluate the need for additional characterization of mercury concentrations in the water and sediment within the designated disposal areas and excavation areas and control measures.

6. The Discharger shall, **120 days** prior to proposed implementation of control measures to be substituted for the 100 foot buffer, outlined in Discharge Specification B. 5 and B. 6, submit a report on the proposed alternative engineering measure. The alternative measure is not acceptable or implemented until the Executive Officer approves the alternative measure in writing.
7. By **1 October 2002**, the Discharger shall submit a technical report, which describes the freeboard measurement locations for all ponds. The freeboard measurement location shall be consistent with Discharge Specification B.11.
8. By **1 October 2002**, the Discharger shall submit a Soluble Metals Technical Report, which determines the concentration of soluble metals in the Marysville Plant wastewater ponds. The sample data must be of sufficient quality to determine if the waste is a designated waste. The report shall specify if the wastewater in the ponds should be classified as a designated waste and must include the rationale for the classification. If the concentration of soluble metals exceeds water quality standards, then the Discharger shall submit a technical report proposing a groundwater-monitoring network for the ponds.

By **1 October 2002**, the Discharger shall submit a Waste Classification Technical Report that shows the waste characterization for the waste ore from gold separation, waste concrete stockpile, and waste asphalt stockpile. The Waste Classification Technical Report shall contain (a) a description of the waste pile sampling methods, equipment, and procedures, (b) a description of analytical methods and detection limits, (c) locations of all proposed background soil monitoring sites, (d) rationale for the selection of proposed stockpile monitoring sites, and (e) a chemical characterization of each waste stockpile.

And the chemical characterization shall at a minimum include total dissolved solids, pH, petroleum oil (asphalt stockpiles), standard minerals, Title 22 metals, and Title 22 WET test for metals using de-ionized water extract procedure. The sample data must be of sufficient quality to determine if the waste is a designated waste. The technical report shall specify if the waste piles should be classified as a designated waste and must include the rationale for the classification.

9. If the Waste Classification Technical Report shows that the waste piles have the potential to impact groundwater, within 120 days, the Discharger shall submit and immediately implement a Waste Stockpile Workplan showing facility modifications necessary to prevent any pollutants generated from the waste piles from adversely impacting groundwater or surface water. The workplan shall clearly demonstrate how the proposed facility modifications will meet compliance with all Discharge Prohibitions, Specifications, and Limitations of this Order.

The Waste Stockpile Workplan must contain a schedule with specific dates for completing the project. The schedule must include proposed dates for each step of the process (e.g., hiring an engineer, completing preliminary plans, completing final plans, executing contract for major components, complying with CEQA, commencing construction, completing construction, etc.) All construction described in the Waste Stockpile Workplan shall be completed within 60 days.

10. By **1 October 2002**, the Discharger shall submit an Operations and Maintenance Plan, including notification procedures and actions to be taken when (a) the wastewater in the ponds fail to meet specified requirements for freeboard, pH, or creates a condition of pollution or nuisance, (b) weed abatement measures and vector control practices, and (c) a berm inspection and maintenance program. This plan shall also include the procedures that will be followed during the event of an unauthorized discharge to surface water, surface water drainage courses or wetlands.
11. The Discharger shall comply with the Monitoring and Reporting Program No. R5-2002-0138, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

12. 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)."
13. 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.
14. The Discharger shall immediately notify the Board by telephone whenever (a) a violation of this Order occurs or (b) whenever there is an adverse water quality condition resulting from the mining operations; written confirmation shall follow within two (2) weeks.
15. The Discharger shall report promptly to the Board any material change or proposed change in the character, location, or volume of the discharge.
16. 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.
17. The Discharger shall keep a copy of this Order, monitoring records, and operator observation logs at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
18. The Board will review this Order periodically and will revise requirements when necessary.

I, THOMAS R. PINKOS, Acting 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 19 July 2002.

THOMAS R. PINKOS, Acting Executive Officer

GWL

07/19/02

gwl\H:\ h:\word\wdr_yuba\Hallwood_wdr5a.doc

WASTE DISCHARGE REQUIREMENTS NO. R5-2002-0138
TEICHERT AGGREGATES
HALLWOOD FACILITY
YUBA COUNTY

Teichert Aggregates operates an existing operation to extract and process sand and gravel within the Yuba Gold Fields. The operation is about three miles northeast of the City of Marysville. The Yuba Gold Fields are coarse alluvial deposits bordering the Yuba River as it enters the Sacramento Valley floor. Most of the alluvium of the Yuba Gold Fields has been disturbed by historical and on-going placer mining.

The extraction operation consists of the excavation and transport of near surface alluvial deposit from gold dredge tailings. Extraction operations will be conducted either above or below site groundwater levels. The Discharger will produce 850,000 tons of aggregate per year of which washed products will be determined by market demand. Nearly 3.0 million gallons per day (mgd) of wastewater from sand and gravel washing operations will be expended to the wastewater pond. The wastewater may contain chemical additives approved in writing by the Executive Officer, and will be disposed of in an on-site settling/infiltration pond. The site will also have a hot mix batch plant to make asphaltic concrete (AC) products. There will be no manufacturing of Portland Cement Concrete (PCC) or storage of PCC waste material on the property. The Discharger will submit plans to operate the hot mix batch plant including plant materials usage, storage, and recycling materials management.

The ponds are known as the "Designated Disposal Area," as shown on Attachment B (a recent aerial photograph). The Designated Disposal area is 15 acres of pond surface surrounded by a 100-foot land buffer. The land buffer may not contain any channels, swales, or culverts, which could convey surface water to the Yuba River or surrounding waterbodies. The addition of this land buffer will ensure that each wastewater pond is a distinct entity, which cannot discharge to surface waters.

The point of compliance for all the Prohibitions, Specifications, and Limitations is at the outer edge of the 100-foot land buffer. Limited degradation of the groundwater immediately beneath the wastewater pond is allowed; however, by the time the groundwater reaches the end of the 100-foot land buffer, it must meet background conditions. This limited degradation is consistent with the anti-degradation policy (State Board Resolution No. 68-16) because the extent is limited, it is in the best interest of the people of the State because these industries contribute to the economic benefit of Yuba County, the settling ponds provide best practicable treatment for the waste, and beneficial uses of the surface waters and groundwaters are not unreasonably impacted.

Due to the unique characteristics of the Yuba Gold Fields, the WDRs do not require groundwater monitoring at the edge of the designated disposal areas. Instead, the Discharger is required to monitor any surface waterbodies within a 500-foot radius of the designated disposal area. Within the Gold Fields, groundwater is very shallow, and it is assumed that any waterbodies are in direct connection with the groundwater. The WDRs also specifically protect these waterbodies by stating that the

discharge shall not change their color, cause an increase in turbidity, or allow the presence of any material that is deleterious to animal, aquatic, human, or plant life.

The WDRs also include a second type of designated disposal area, an "excavation area". This is defined as any area in which aggregate is being removed from a depth of greater than three feet below the water table, surrounded by a 100-foot land buffer. The WDRs also regulate these areas, because if a Discharger is using a dragline or some other type of equipment to excavate below the water table, then sediment and re-suspended mercury may be discharged back into the surface water within the pond being excavated. This discharge of waste cannot impact water quality. Just as for the designated disposal areas, all Prohibitions, Limitations, and Specifications apply at the outer edge of the 100-foot buffer. Limited groundwater degradation is allowed within the excavation area. The MRP requires sampling of any surface waterbodies within 500 feet of the excavation area ponds in the same manner as for any surface waterbodies within 500 feet of a designated disposal area.

The scale house will utilize a spray bar to help control dust on customer vehicles. Water from the supply pond will be pumped into the water truck to be used for dust control as well. The Facility has limited operational staff and they use bottled water for domestic use. The Discharger has a contract service provider to maintain portable self-contained domestic waste units on site.

Because the extraction/processing operation is conducted in the vicinity of the Yuba River, the public has expressed concern that the discharge and/or extraction operation may adversely affect turbidity levels in the Yuba River. Therefore, the Monitoring and Reporting Program requires monthly turbidity measurements in the Yuba River in order to assure that the operation will not impact the River. In addition, the MRP requires that all ponds within the Designated Disposal Area and excavation area be monitored for mercury. This is required because the action of mining and/or washing aggregate material releases sediment and re-suspends mercury within the water column of the ponds created by draglining (i.e., excavation below the water table) as well as the aggregate washwater ponds. Limited sampling has shown that the water within the washwater ponds contains mercury in the nanograms-per-liter (ng/l) range.

Staff have two major concerns regarding the Yuba Gold Fields mining operations and mercury. First, it is imperative that the mercury does not re-enter the Yuba River. These WDRs require that all wastewater ponds be protected from a 100-year flood, and that an engineer provide documentation showing that such protection is present. If the ponds are not currently protected, then the Discharger must provide plans and a time schedule for the actions necessary for 100-year flood protection. The WDRs also require that all wastewater be contained within the ponds and not allowed to enter surface waters. These measures are required to ensure that wastewater containing mercury does not enter the River.

The second concern regards the methylation of mercury and its impacts on the food chain. Scientists are still studying the chemistry of the movement of mercury from the water column, into sediment, and then into the food chain. However, we do know that mercury tends to partition into the sediment, instead of the water column. It is expected that the majority of the mercury will be in the sediment that

has settled to the bottom of the ponds. Under anaerobic conditions, naturally occurring bacteria will methylate the mercury, allowing it to bioaccumulate in aquatic organisms. Staff have reviewed the Reclamation Plans for several of the Dischargers. These Plans show that the mining activities will leave large, deep lakes that may then to be reclaimed as parks and/or wildlife habitat. We are concerned that the residual mercury released during the mining process will remain in these deep lakes, become methylated, and cause unacceptable mercury levels in fish and wildlife.

The Monitoring and Reporting Program is designed to address these concerns. The Discharger must sample the wastewater and excavation ponds for total mercury on a twice-yearly basis. Frequent sampling is warranted because the material in the Gold Fields is not homogenous, and pockets of mercury may be encountered. Samples must be collected from the water column, at a time when the Discharger is actively working in the excavation pond or actively discharging washwater to a wastewater pond. Because water samples are easier to collect and cheaper to analyze, water samples are being used as an indicator of whether there is the potential for the sediment of the ponds to contain mercury at levels that cause concern.

The Provisions section of the WDRs states that if mercury is found in the water column of any pond at over 50 ng/l, then the Discharger must characterize the water and sediment within the washwater and excavation ponds. If mercury is present at levels that could cause a condition of pollution or nuisance; be deleterious to animal, aquatic, human, or plant life; or cause bioaccumulation after final site reclamation, then the Discharger must work with the Board to reduce mercury concentrations to acceptable levels. Depending on the levels of mercury found, the final reclamation plan, and the concerns for potential bioaccumulation, the Executive Officer may require that the Discharger create a financial assurance account (as described in Title 27 of the California Code of Regulations) for mitigation of the bioaccumulative effects of the mercury. This financial assurance account is necessary because mining companies usually reclaim a site and then turn it over to a public entity. It is required to ensure that the bioaccumulation questions and concerns are addressed before this happens, and that any necessary plans and financing for mitigation are in place.

Plant storm water is contained on-site. Surface water drainage is to the Yuba River.

gwl\H: \h:\word\wdr_yuba\Hallwood_inf4.doc

05/15/02

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2002-0138

FOR
TEICHERT AGGREGATES
HALLWOOD FACILITY
YUBA COUNTY

This monitoring and reporting program (MRP) incorporates requirements for monitoring the general Facility, designated disposal area, excavation ponds, adjacent waterbodies, and the Yuba River, and 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. Prior to implementation of sampling activities, Regional Board staff shall approve specific sample station locations. Sample collection stations shall be established such that the samples collected are representative of the nature and volume of the material(s) sampled.

All samples collected should be representative of the volume and nature of the discharge or matrix of material sampled. The person collecting the sample shall be identified along with 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 test temperature, pH, EC, 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. Instruments are serviced and/or calibrated by the manufacturer at their respective recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

DESIGNATED DISPOSAL AREA MONITORING

The 15-acre aggregate wastewater disposal pond shall be sampled as described below. For the mercury samples, columnar (vertical) and areal (horizontal) samples are required. The Discharger shall select three locations within the pond and shall collect a surface and a depth sample at each of these locations for mercury samples. Constituents for the Total and Dissolved Metals/Minerals, General Chemistry, and Ion Balance testing are identified in Attachment C. General Chemistry and Ion Balance sampling are to be conducted during chemical additions to the wash water. All samples shall be collected during the times when the Discharger is actively discharging and/or excavating in these ponds.

Sampling Reporting

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Frequency</u>	<u>Frequency</u>
Daily Flow	Million Gallons per Day	Continuous	Monthly
Freeboard	Feet, 0.1 Feet	Weekly	Monthly
pH	pH units	Monthly	Monthly
		Sampling	Reporting
<u>Constituent/Parameter</u>	<u>Units</u>	<u>Frequency</u>	<u>Frequency</u>
Electrical Conductivity	μ mhos/cm	Monthly	Monthly
General Chemistry ¹	as Required	Monthly	Monthly
Ion Balance ¹	as Required	Monthly	Monthly
Dissolved Metals/Minerals ¹	μ g/l	Semi-Annual	January, July monthly rpt
Total Metals/Minerals ¹	μ g/l	Semi-Annual	January, July monthly rpt
Total Mercury ²	ng/l	Semi-Annual	January, July monthly rpt
TPH ³	μ g/l	Semi-Annual	January, July monthly rpt

¹ See Attachment C for list of metal/mineral, general chemistry, and ion constituents

² ng/l, nanograms per liter or parts per trillion (ppt), detection limit ≤ 5.0 ng/l, using *Ultra-Clean Aqueous Sample Collection and Preservation Techniques (FGS-008 and EPA Method 1669)*.

³ Total Petroleum Hydrocarbons, detection limit ≤ 50 μ g/l micrograms per liter (ppb)(*EPA Method 8015 Modified for diesel and oil, and grease*)

EXCAVATION AREA MONITORING

Any area where aggregate excavation is greater than 3 feet below the water table shall be sampled as described below. All samples shall be collected during the times when the Discharger is actively discharging and/or excavating in these ponds.

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
pH	pH units	Monthly	Monthly
Electrical Conductivity	μ mhos/cm	Monthly	Monthly
Total Mercury ¹	ng/l ¹	Semi-Annual	January, July monthly rpt
TPH ²	μ g/l	Semi-Annual	January, July monthly rpt

¹ & ng/l, nanograms per liter or parts per trillion (ppt), detection limit ≤ 5.0 ng/l, using *Ultra-Clean Aqueous Sample Collection and Preservation Techniques (FGS-008 and EPA Method 1669)*.

² Total Petroleum Hydrocarbons, detection limit ≤ 50 μ g/l micrograms per liter (ppb)(*EPA Method 8015 Modified for diesel and oil, and grease*)

WATERBODY MONITORING

The Discharger shall collect grab samples from the Yuba River at the following stations:

<u>Station</u>	<u>Description</u>
R-1	1000 feet up-river from the up-river limit of the normal projection of the ponds and mining operation to the Yuba River.
R-2	2000 feet down-river from the down-river limit of the normal projection of the ponds and mining operation to the Yuba River.

In addition the Discharger shall collect grab samples from all waterbodies (ponds and/or channels) within 500 feet of the designated disposal area and any excavation area ponds. However, if another Discharger's wastewater ponds are within this 500 foot area, then those ponds do not need to be sampled as a result of this Order. If any of these waterbodies are on land outside of the Discharger's control, then the Discharger shall either obtain permission to access the waterbody(ies) or shall submit a report detailing how it proposes to comply with this monitoring requirement. These other waterbodies shall be identified as follows:

<u>Station</u>	<u>Description</u>
P-(Others)	Others (enumerated on the site map for positive identification) waterbodies within 500 feet of the designated disposal area and any excavation area ponds to be determined by area survey.

Grab samples shall be collected from all of the above waterbody stations and shall be monitored for the following constituents:

<u>Constituents</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Turbidity	NTU	Monthly	Monthly
pH	pH units	Monthly	Monthly
Electrical Conductivity	μ mhos/cm	Monthly	Monthly

In conducting the surface water sampling, a log shall be kept of the surface water conditions at Stations R-1 & R-2 and all other waterbody monitoring sites (i.e., P-(Others)). Attention shall be given to the presence or absence of floating or suspended matter, bottom deposits, discoloration, and aquatic life.

Notes on surface water conditions shall be summarized in the monthly monitoring report. The Discharger shall periodically evaluate the location of R-1 & R-2 to ensure that R-1 is up-river and R-2 is down-river of the Discharger's operations.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., influent, effluent, 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 to the Regional Board.

A. Monthly Reports

All sample data collected during the month shall be reported in the monthly monitoring report. Monthly Reports shall be submitted to the Regional Board by the first day of the second month following the month of sampling (i.e., the January monthly report is due by **1 March**). At a minimum, the reports shall include the following:

1. A scaled map showing relevant structures and features of the facility, the locations of surface water monitoring and all other sampling stations (required by Provision F.1.);
2. The results of all designated disposal area monitoring, excavation area monitoring, surface waterbodies monitoring, and observations logs;
3. A comparison of the monitoring data to the discharge specifications, provisions requirements, and surface water limitations and an explanation of any violation of these requirements;
4. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program; and
5. For the January and July monthly reports, a copy of the laboratory analytical report(s) for the mercury sampling.

B. Annual Monitoring Report

An Annual Monitoring Report shall be submitted by **1 February of each year**, and may be combined with the December monthly monitoring report. At a minimum, the Annual Monitoring Report shall include the following:

1. A written summary of the all significant actions taken during the year;;
2. A tabular summary of the all data reported in the Monthly Monitoring Reports;
3. If requested by staff, tabular and graphical summaries of all monitoring data obtained during the previous year;

4. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements; and
5. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

Based on results of the above monitoring program after a minimum of two years, the Discharger may request a reduction in the constituents monitored, sample frequency, and/or locations monitored. If such reductions are warranted, this MRP may be revised by the Executive Officer.

All Discharger reporting specified herein shall be submitted pursuant to Section 13267 of the California Water Code. Technical reports submitted by or for the Discharger shall be prepared and stamped by the appropriate registered professional required by the California Business and Professions Code.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted 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. Pursuant to Standard Provisions, General Reporting requirements B.3, the transmittal letter shall contain the following statement by the Discharger, or the Discharger's authorized agent:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of the those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

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

THOMAS R. PINKOS, Acting Executive Officer

19 July 2002

Date