

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGIONAL

ORDER NO. R5-2005-0115

WASTE DISCHARGE REQUIREMENTS
FOR
GRANITE CONSTRUCTION COMPANY
KEITHLY RANCH/HIGHWAY 175 QUARRY
LAKE COUNTY

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

1. Granite Construction Company (Discharger) submitted a Report of Waste Discharge (RWD) on 14 December 2004 and RWD Supplemental Information dated 2 June 2005 for an existing aggregate processing plant.
2. The properties that are mined, proposed to be mined, and contain the waste disposal ponds, are owned and operated by Granite Construction Company.
3. The Discharger operates a rock quarry and aggregate processing plant on 1,670 acres of land in Section 13, T13N, R10W, MDB&M (Assessors Parcel Numbers 007-0030-11, 49, 50, 51, 52, 53, 54, 55) and Section 14, T13N, R10W, MDB&M (Assessors Parcel Numbers 007-005-1, 10, 26, 27, 28, 29, 30) in Lake County. The facility is located at 4220 State Highway 175 in Lakeport, and is shown in Attachment A, which is attached hereto and made part of this Order by reference.

Sand and Gravel Operations

4. The Discharger currently mines up to 400,000 tons of volcanic rock each year. The rock is mined in a quarry by drilling and blasting. Mine overburden is stripped and stockpiled for re-spreading over the mined area. Aggregate processing is done at the plant with primary size reduction of the rock at the quarry site. A site plan is included as Attachment B, which is attached hereto and made part of this Order by reference.
5. The mining and reclamation process as described in the July 2004 Reclamation Plan 97-1 will consist of four phases projected over the next 35 years as summarized below:

<u>Phase</u>	<u>Acres</u>	<u>Time to Complete (Years)</u>	<u>Annual Production Estimate (Tons)¹</u>	<u>Annual Wash Water Estimate (Gallons)²</u>
I	17.3	5.5 – 14	0.4 - 1 million	14 –36 million
II	17.1	5.5 – 14	0.4 - 1 million	14 –36 million
III	30.7	8.5 – 21	0.4 - 1 million	14 –36 million
IV	32.9	14 –35	0.4 - 1 million	14 –36 million

¹ 1-million tons is the maximum possible annual production level for the life of the quarry

² Estimate based on 20% washed product at 600 gallons per minute wash water flow rate, 200 tons per hour washed production capability.

6. The mined rock is transported to a moveable primary crusher/feeder that is located within the active quarry area. The material discharged from the crusher is transported to the primary screen and horizontal crusher and then separated by a large vibrating screen, which isolates the large material for reduction in a secondary cone crusher. Smaller aggregate is either screened out as base material or conveyed for further screening and reduction in tertiary crushers. The material is then conveyed to the dry finished product screens for asphalt materials or to the washed finished product screens to produce concrete aggregates and other washed materials. Smaller fractions of the aggregate are washed in a sand screw tank to remove clays and mineral fines for use as sand for concrete. A cyclone recovery system on the wash plant is used to capture approximately 20 percent of the fine material that is normally discharged to the settling pond. A process flow diagram is included as Attachment C, which is attached hereto and made part of this Order by reference.
7. Wash water from the aggregate processing plant is conveyed via a 10-inch PVC pipe to a settling pond with a volume of approximately 1 million gallons at two-feet of freeboard. The settling pond consists of a long series of narrow ponds that are interconnected to form one continuous pond. The ponds average approximately 12 feet deep, with an average width of about 25 feet and a length of about 550 feet. Following the settling of the suspended solids, the effluent wash water is recirculated back to the plant via an 8-inch PVC pipe. The wash water ponds are generally maintained at a constant level for optimal performance of the pumps and sedimentation processes. The wash water is recirculated between the pond and the aggregate processing plant at approximately 10 percent water loss during the washing process. This Order allows the settling ponds to be constructed anywhere within the Designated Disposal Area identified on Attachment B as long as the Discharger is in compliance with this Order and any requirements imposed by other agencies.
8. The RWD states that the daily average volume of wash water that is recirculated between the pond and the aggregate processing plant is approximately 300,000 gallons per day (gpd) with peak wash water volumes of 400,000 gpd, typically occurring between April and October of each year. These volumes are based on: (a) the current pumping rate to the aggregate processing area of approximately 600 gallons per minute (gpm), (b) the current return pumping rate to the pond at approximately 540 gpm, (c) 8 to 10 hours per day of processing, and (d) processing up to 400,000 tons of aggregate per year.
9. The Discharger has completed water balances for the current aggregate production rate of 400,000 tons/year and a maximum allowable production rate of 1 million tons/year. The water balances show that as aggregate production increases, additional makeup water must be added to the settling pond in order to maintain two-feet of pond freeboard. The water balances were based on current wash water flows to the settling pond of 600 gpm and an estimated flow of 1,500 gpm if the production rate was increased to 1 million tons/year. In addition, the water balances were based on design seasonal precipitation and ancillary inflow and infiltration using a return period of 100 years.
10. In order to enhance the settling of the fines (silts), the Discharger injects a non-toxic chemical flocculant into the wastewater. The flocculant is a long chain polymer that is able to attach to the

fine solid particles causing them to join together to form larger particles. The flocculant is mixed with the wash water at a rate of 3.5 gallons per hour during the wash plant production.

11. An industrial well located on-site is used to supply makeup water to storage tanks located near the wash water pond. From the storage tanks, the water drains via gravity through a 4-inch line into the ponds. This well is not equipped with a flow meter and/or run time meters.
12. Other wash water flows from overspray, leaks, etc. are captured in a small storage pond in the southeastern corner of the plant pad. Wash water collected in this pond is pumped via a 2-inch flexible hose to the settling ponds for recycling to the aggregate plant.
13. The Discharger obtained a sample of the wastewater from the settling pond in October 2004. Selected analytical results are presented below, and are contrasted with limits used to implement the applicable water quality objectives for protection of the beneficial uses of the underlying groundwater.

<u>Constituent</u>	<u>Units</u>	<u>Wash Water</u>		<u>Water Quality</u>
		<u>Pond</u>	<u>Limit</u> ¹	
Aluminum	µg/L	NA	200	
Barium	µg/L	68	1,000	
Boron	µg/L	NA	700	
Cadmium	µg/L	NA	0.07	
Chromium, hexavalent	µg/L	<10	21	
Chromium, dissolved	µg/L	<50	50	
Copper, dissolved	µg/L	<100	170	
Lead, dissolved	µg/L	<50	2	
Mercury, dissolved	µg/L	<1	1.2	
Zinc, dissolved	µg/L	<100	2,000	
Iron	µg/L	NA	300	
Manganese	µg/L	NA	50	
Magnesium	µg/L	26,000	NA	
Nickel	µg/L	NA	12	
Potassium	µg/L	6,700	NA	
Sodium	µg/L	28,000	20,000	
Chloride	µg/L	46,000	106,000	
Sulfate as SO ₄	µg/L	47,000	250,000	
Total dissolved solids	mg/L	270	450	
pH (std. units)	std. units	8.2	6.5 to 8.4	

NA - Not available

¹Or the natural background concentration in groundwater, whichever is higher.

14. With the exception of sodium, these data presented in Finding No. 13 indicate that the aggregate processing wastewater does not contain constituents at concentrations exceeding water quality objectives.

15. The Discharger indicates that sediments (silts, and clays) are removed from the settling pond every two months and are stockpiled onsite, just north of the processing plant. These sediments will be used as engineered fill to reclaim previously excavated areas.

Site-Specific Conditions

16. Soils underlying the site generally consist of reddish brown sandy clay and sandy silt with gravel underlain by bedrock material. Poorly sorted greywacke sandstone typically underlies the settling pond.
17. The RWD states that no gold or other precious metals have been mined at the site. However, because mercury may occur naturally in deposits within this area, this Order contains monitoring requirements for mercury.
18. Source water for the aggregate wash plant is provided from an industrial well located near the facility. The well is constructed with 8-inch casing at a depth of approximately 300 feet, and is rated at 600 gallons per minute.
19. Groundwater beneath the quarry ranges in depth from approximately 70 to 130 feet below ground surface (bgs) with perched water conditions encountered at depths as shallow as 36 feet bgs. Beneath the settling pond, groundwater is estimated to be approximately 50 feet bgs.
20. No groundwater monitoring wells are located on the site.
21. The Federal Emergency Management Agency's Flood Insurance Rate Map shows that the wash water settling pond and the aggregate processing plant are located outside the 100-year floodplain.
22. The average 100-year annual precipitation for this area is approximately 61.88 inches, based on the total average rainfall reported from the California Department of Water Resources Clearlake Highlands Station.
23. Evapotranspiration rates for the area range from 0.70 to 7.10 inches per month, with the highest rate occurring in July.
24. The facility lies within the Lakeport Hydrologic Unit Area No. 513.55, as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.
25. The RWD indicates that storm water diversion channels will be constructed to divert surface water runoff from each of the overburden stockpiles, and storm water retention basins will be used to capture some of the storm water runoff.
26. The RWD states that the fueling of trucks and heavy equipment is conducted onsite using mobile equipment. No active and/or abandoned fuel tanks are located at the facility.

27. The RWD indicates that the petroleum/chemical storage at the facility currently consists of: (a) single 55-gallon drums of gear oil located east of the aggregate processing plant, (b) a 200-gallon plastic tote of foam dust suppressant located adjacent to the cone crusher, and (c) a 200-gallon plastic tote of flocculant stored adjacent to the aggregate wash plant.
28. The Discharger operates a portable asphalt plant in the area northwest of aggregate processing plant. The plant heats and dries the aggregate in a rotary dryer fueled by diesel, liquid propane gas, natural gas and other alternatives fuels. Exhaust gases and suspended dust are blown through sealed ductwork to a bag house pollution collection system. The process dust is then removed and recycled back into the asphalt product. No wastewater is associated with this operation. The asphalt plant was constructed following Lake County Community Development Department approving minor modifications to Use Permit No. 97-2 on 22 April 2005.
29. The RWD states that the Discharger has plans to construct and operate a concrete batch plant in approximately 5 to 10 years as plant pad preparation and site development occurs.

Basin Plan, Beneficial Uses, and Regulatory Considerations

30. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board (State Board). Pursuant to Section 13263(a) of the California Water Code, waste discharge requirements must implement the Basin Plan.
31. Surface water drainage is to Manning Creek, which is a tributary to Clear Lake.
32. The beneficial uses of Clear Lake, as stated in the Basin Plan, are municipal and domestic supply; agricultural supply; industrial service supply; water contact recreation; noncontact water recreation; warm freshwater habitat, cold freshwater habitat; spawning, reproduction, and/or early development; and wildlife habitat.
33. The beneficial uses of underlying groundwater are municipal, industrial, and agricultural supply.
34. State Board Resolution No. 68-16 (the Antidegradation Policy) does not allow degradation of groundwater quality unless it has been demonstrated 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 or control of the discharge to minimize degradation.

35. The Regional Board has considered antidegradation pursuant to State Board Resolution No. 68-16 and finds that that the Discharger has not provided the required demonstration to be allowed to cause groundwater degradation. Therefore, none is authorized by this Order.
36. Based on the limited effluent monitoring data provided by the Discharger, the land disposal of aggregate wash water as proposed should not degrade groundwater quality, and therefore groundwater monitoring wells are not required at this time. However, the Discharger is required to continue monitoring the aggregate plant effluent, and if concentrations exceed water quality objectives, then staff will reevaluate the need for groundwater monitoring. If effluent monitoring shows that the discharge 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.
37. The action to update waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), in accordance Title 14, California Code of Regulations (CCR), Section 15301.
38. The Discharger has obtained coverage under the State Board's Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System (NPDES), General Permit No. CAS 000001, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated with Industrial Activities.
39. Section 13267(b) of California Water Code provides 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 waste 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 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 report 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 technical reports required by this Order and the attached "Monitoring and Reporting Program No. R5-2005-0115" are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges waste subject to this Order.

40. 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 Regional Board is issuing waste discharge requirements,

- b. The discharge complies with the Basin Plan, and
 - c. The waste material does not need to be managed according to Chapter 11, Division 4.5, Title 22, of the CCR as a designated or hazardous waste.
41. Pursuant to California Water Code Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge

Public Notice

42. All the above and supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
43. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
44. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that, pursuant to Sections 13263 and 13267 of the California Water Code, Granite Construction Company, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted there under, shall comply with the following:

[Note: Other prohibitions, conditions, definitions, and methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.]

A. Discharge Prohibitions:

1. The discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. The discharge of domestic waste, asphaltic concrete waste, concrete waste, or concrete wash water to any process wastewater settling pond is prohibited.
3. Discharge of waste classified as hazardous, as defined in Sections 2521(a) of Title 23, CCR, Division 3, Chapter 15, Section 2510, et seq., (hereafter Chapter 15), or 'designated', as defined in Section 13173 of the California Water Code, is prohibited.
4. Use of chemical gold recovery techniques (including amalgamation, cyanide leaching, or any other chemical method) is prohibited.
5. Surfacing of wastewater from the septic tank or leaching system is prohibited.

6. The discharge of industrial waste to septic systems is prohibited.
7. The operation of a concrete batch plant is prohibited until the Discharger has obtained coverage for such discharge under a separate Regional Board adopted Order.

B. Discharge Specifications:

1. The monthly average flow of aggregate wash water shall not exceed 300,000 gallons per day. If the Discharger wishes to increase the monthly average flow then the Discharger shall submit the technical report required by Provision E.2.g of this Order. Upon approval by the Executive Officer, flow to the settling pond may be increased.
2. Neither the treatment nor the discharge shall cause a condition of pollution or nuisance as defined by the California Water Code, Section 13050.
3. The discharge shall remain within the designated disposal area (APN 007-0030-29) at all times.
4. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
5. The 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.
6. All stockpiled sediments, wastes and products shall be managed to prevent erosion of sediment to surface water drainage courses.
7. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas.
8. As a means of discerning compliance with Discharge Specification No. 7, the dissolved oxygen content in the upper zone (1 foot) of the wastewater settling ponds shall not be less than 1.0 mg/L.
9. Newly constructed or rehabilitated levees or berms that hold back water shall be designed and constructed under the direct supervision of a California Registered Civil Engineer or Certified Engineering Geologist.

10. The freeboard in each wastewater pond shall never be less than two feet as measured vertically from the water surface to the lowest point of overflow along the pond berm.
11. The wastewater ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the wet season. 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.
12. Before **1 October** of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications Nos. 10 and 11.
13. Storm water discharges at the site shall comply with the regulations contained in the State Water Resources Control Board (SWRCB) Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System (NPDES), General Permit No. CAS000001, Waste Discharge Requirements (WDRs) for Discharges to Storm Water Associated with Industrial Activities (excluding construction activities).
14. Before **15 October** of each year, all necessary runoff diversion channels and culverts shall be in a condition to transport waters originating outside the quarry.

C. Effluent Limitations:

Discharge of wash water or any process wastewater to the aggregate washwater pond in excess of the following limits is prohibited:

<u>Constituent or Parameter</u>	<u>Limit</u>
pH	6.5-8.4 Standard Units

D. Groundwater Limitations:

The discharge shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than natural background water quality.

E. 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. 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 and shall be prepared as described in Provision E.1:
 - a. By **1 November 2005**, the Discharger shall submit a copy of its most recent Site Reclamation/Restoration Plan. As the reclamation plans are updated or revised, the Discharger shall immediately forward such plans to this office.
 - b. By **1 November 2005**, the Discharger shall submit a report and map defining all sampling locations and freeboard measuring points required by Monitoring and Reporting Program (MRP) No. R5-2005-0115.
 - c. By **1 November 2005**, the Discharger shall submit a Flow Measurement Verification Report. If the Discharger elects to report flows based on pump run times, then the report shall completely document the calibration of effluent and recycling system pumps, correlate actual flows to pump run time estimates generated from the manufacturer's pump curves, and provide a calculation correction (as appropriate) to be applied to convert from pump run time to gallons for each system. Calibration test data, manufacturer's pump curves, and calculations shall be included in the report. Alternatively, the report may document the installation of flow meter(s).
 - d. By **1 February 2006**, the Discharger shall submit an Operations and Maintenance Plan, including (a) notification procedures and actions to be taken when the wastewater in the ponds fail to meet specified requirements for freeboard or pH, or create 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 describe the procedures that will be implemented during the event of an unauthorized discharge to surface water or surface water drainage courses.
 - e. If, as a result of the monitoring conducted by MRP No. R5-2005-0115, mercury is detected at concentrations equal to or greater than 50 nanograms per liter (ng/l) in any settling pond water, then within **90 days** the Discharger shall submit a workplan to characterize mercury in the water and sediment within the designated areas. 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 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.

If a water quality objective different than 50 ng/L is promulgated, then this permit may be reopened and staff may reevaluate the need for characterization of mercury concentrations in the water and sediment within the designated areas.

- f. At least **180 days** prior to operation of a concrete batch plant, the Discharger shall submit a RWD for coverage under a Site Specific Order.
 - g. At least **90 days prior** to the Discharger's proposal to increase the monthly average dry weather flow to the settling pond, the Discharger shall submit a technical report, including a water balance that demonstrates adequate containment and pumping capacity for proposed flows, design seasonal precipitation, and ancillary inflow and infiltration using the 100-year return period total annual precipitation. The technical report must be approved by the Executive Officer prior to increasing the flows.
3. The Discharger shall comply with the Monitoring and Reporting Program No. R5-2005-0115, 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 of work needed 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 may revise requirements when necessary.

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2005-0115
GRANITE CONSTRUCTION COMPANY
KEITHLY RANCH/HIGHWAY 175 QUARRY
LAKE COUNTY

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I, THOMAS R. PINKOS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 5 August 2005.

THOMAS R. PINKOS, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2005-0115

FOR
GRANITE CONSTRUCTION COMPANY
KEITHLY RANCH/HIGHWAY 175 QUARRY
LAKE COUNTY

This monitoring and reporting program (MRP) incorporates requirements for monitoring the aggregate wash water settling ponds. This MRP is issued pursuant to Water Code 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 the proper use and maintenance of the instruments;
2. The instruments are field 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 this MRP.

POND MONITORING

The aggregate wash water settling pond and the small storage pond at the southeast corner of the plant shall be inspected weekly and monitored as follows:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Freeboard ¹	0.1 Feet	Measurement	Weekly	Monthly
Berm Condition ²	N/A	Observation	Weekly	Monthly

¹Freeboard shall be measured from the lowest point of overflow.

²Evidence of leakage or overflow shall be noted.

EFFLUENT MONITORING

Samples shall be collected from the aggregate wash water settling pond. At a minimum, the Discharger shall monitor the wastewater as follows:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Inflow	gpd	Flow Meter or Pump Run Times	Daily	Monthly

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
pH	pH units	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Dissolved Metals ^{1,2}	µg/L	Grab	Semi-Annual	Semi-Annual ⁴
Total Recoverable Mercury (non-filtered) ³	ng/L	Grab	Semi-Annual	Semi-Annual ⁴

¹At a minimum, the following metals shall be included: aluminum, antimony, arsenic, total chromium, hexavalent chromium, copper, iron, lead, manganese, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. Analytical methods shall be selected to provide detection limits below the limiting Water Quality Goal for each constituent.

²Samples shall be filtered through a 0.45 micron filter prior to preservation.

³The total recoverable mercury detection limit shall be no more than 5 ng/L

⁴Include in the January and July monthly reports.

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. Monthly Monitoring Reports

Monthly Monitoring Reports shall be submitted to the Regional Board on the **1st day of the second month following sampling** (i.e. the January Report is due by 1 March). At a minimum, the Monthly Monitoring Report shall include:

1. Results of the pond monitoring, and effluent monitoring.
2. A map depicting the locations of all active wash water ponds, storm water ponds, slurry deposition areas, and the locations where freeboard is measured.
3. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format.
4. If requested by staff, copies of laboratory analytical report(s).
5. A calibration log verifying calibration of all monitoring instruments and devices used to comply with the prescribed monitoring program.
6. A description of the type and amount of chemical coagulants used in the wastewater to enhance the settling of the fines.

7. The January and July monthly reports shall include the semi-annual monitoring results for aggregate washwater pond.

B. Annual Monitoring Report

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

1. If requested by staff, tabular and graphical summaries of all monitoring data collected during the year;
2. 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.
3. A Water Balance and Capacity Calculation Report that presents calculation of the current capacity of the wastewater pond system and evaluation of the wastewater storage system's ability to adequately contain all rainfall and industrial wastewater discharged to the pond. 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.
4. If the Discharger elects to use pump run times instead of a flow meter to measure daily wash water inflows, a calibration log verifying actual pump flows.

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

5 August 2005
(Date)

INFORMATION SHEET

ORDER NO. R5-2005-0115
GRANITE CONSTRUCTION COMPANY
KEITHLY RANCH/HIGHWAY 175 QUARRY
LAKE COUNTY

Granite Construction Company (Discharger) owns a rock quarry and aggregate processing plant on 1,670 acres of land south of Lakeport, in Lake County. Rock mined from the quarry is removed via drilling and blasting, and then is crushed, washed, classified, and stockpiled according to size. The Discharger currently mines up to 400,000 tons of rock each year from the quarry and the maximum annual production of the quarry is 1 million tons of rock. The mine overburden is stripped and stockpiled for re-spreading over the mined area. The mined rock is transported to a moveable primary crusher/feeder within the active quarry area. From the quarry, the crushed rock is transported to the aggregate processing plant where it is further crushed, washed, classified, and stockpiled according to size.

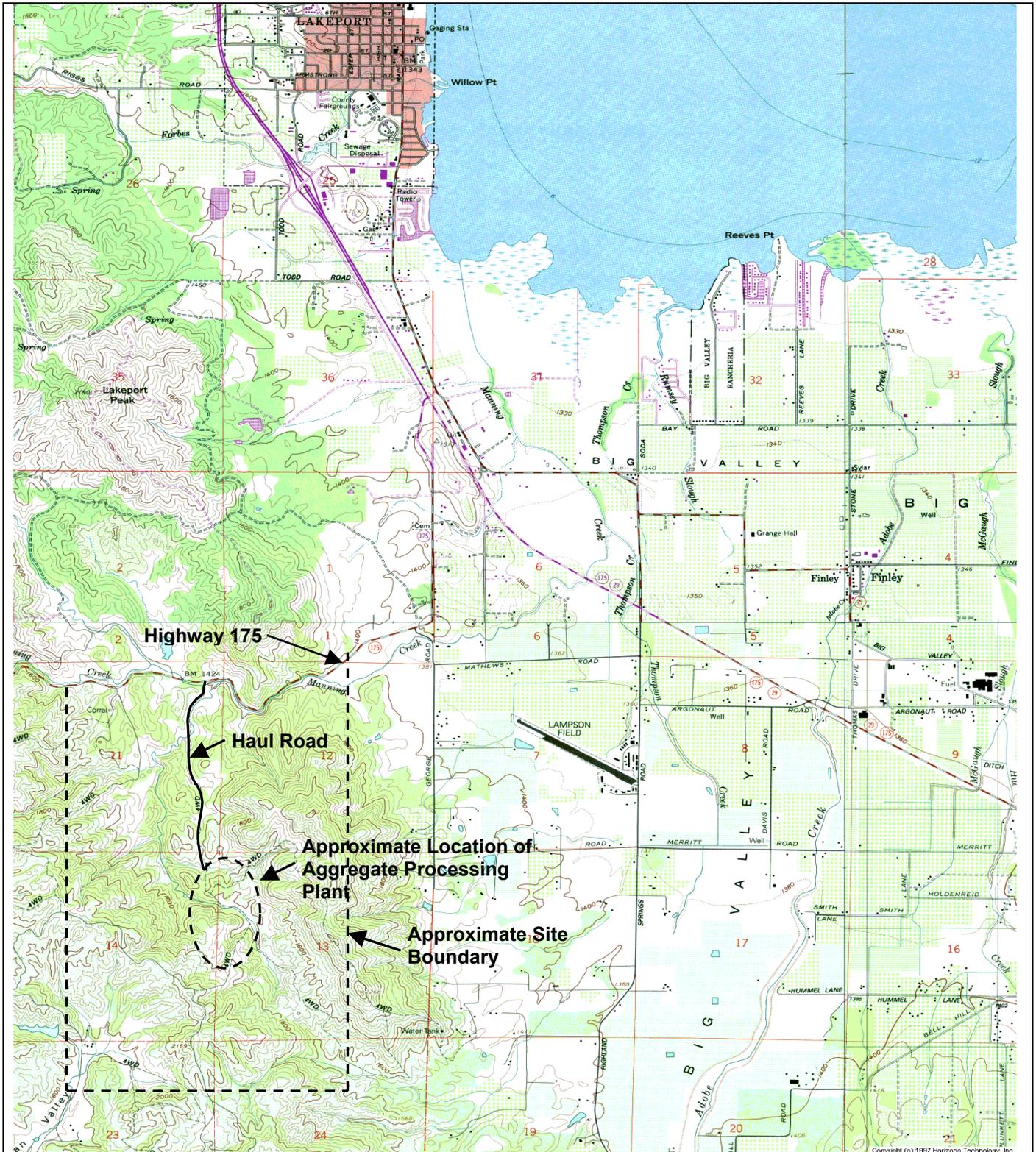
Source water for the aggregate processing plant is obtained from an on-site well. Between 300,000 and 400,000 gallons per day (gpd) of wash water from the aggregate processing plant is discharged into a 1 million gallon settling pond, located outside the 100-year flood plain. The wash water is recirculated between the pond and the aggregate processing plant.

The Discharger also operates a portable asphalt batch plant in the area northwest of aggregate processing plant. The plant heats and dries the aggregate in a rotary dryer. Exhaust gases and suspended dust are blown through sealed ductwork to a bag house pollution collection system. The process dust is then removed and recycled back into the asphalt product. No wastewater is associated with this operation.

Historical gold mining has not occurred in the area. However because naturally occurring mercury is known to the area, this Order requires the Discharger to monitor mercury concentrations in its discharge. If mercury is detected at concentrations equal to or greater than 50 nanograms per liter (ng/l) in any settling pond water, then the Discharger shall submit a workplan to further characterize mercury in the water and sediment within the designated disposal areas and the dredging area. The 50 ng/L limit is the California Toxics Rule criterion to protect human health from consumption of water and aquatic organisms from inland surface waters.

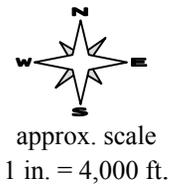
Surface water drainage is to Manning Creek, which is a tributary to Clear Lake

GJC: 18-Aug-05

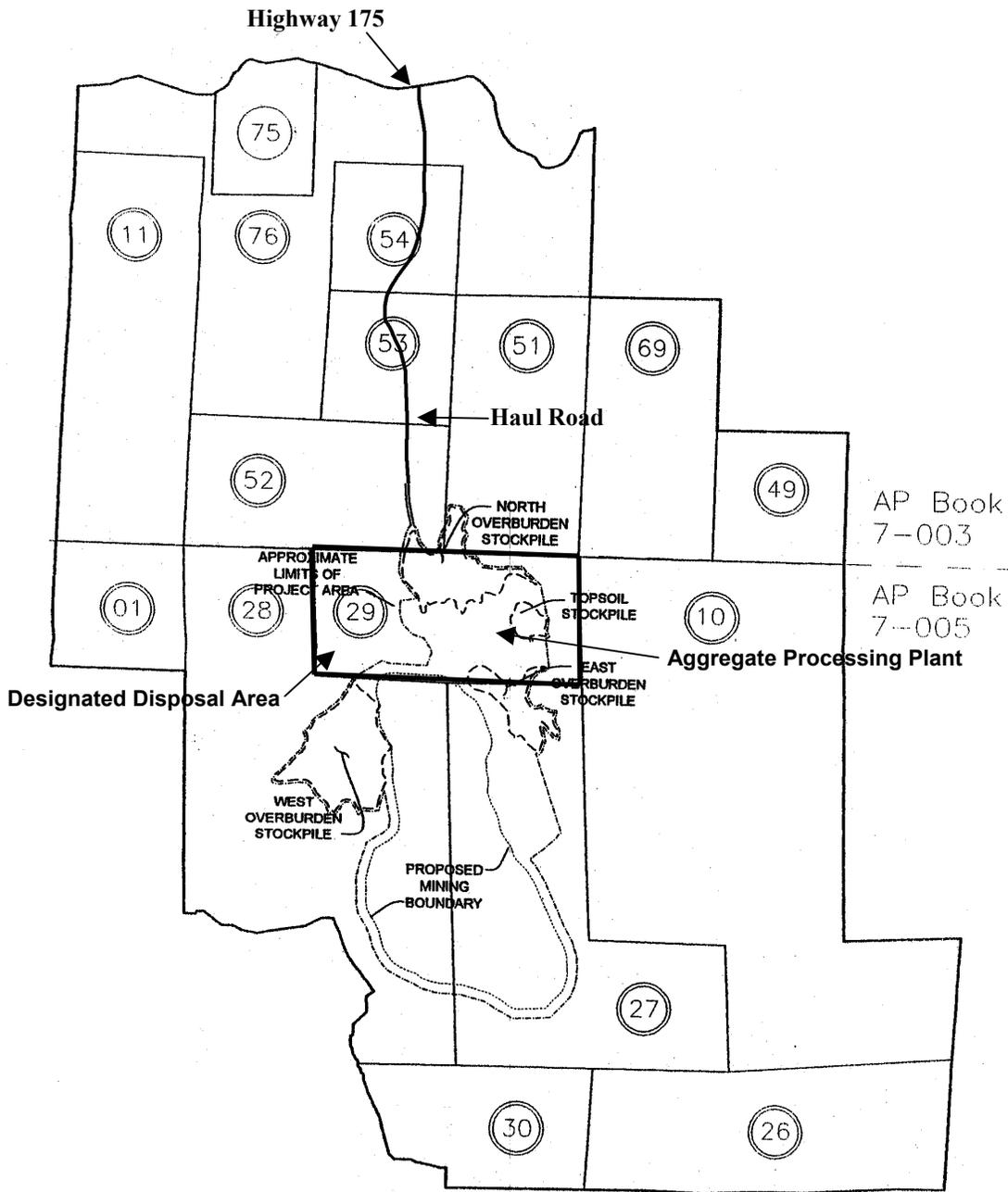


Drawing Reference:
 U.S.G.S
 TOPOGRAPHIC MAP
 LAKEPORT 7.5
 MINUTE QUAD

SITE LOCATION MAP
 Keithly Ranch/Highway 175 Quarry
 Lake County



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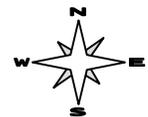


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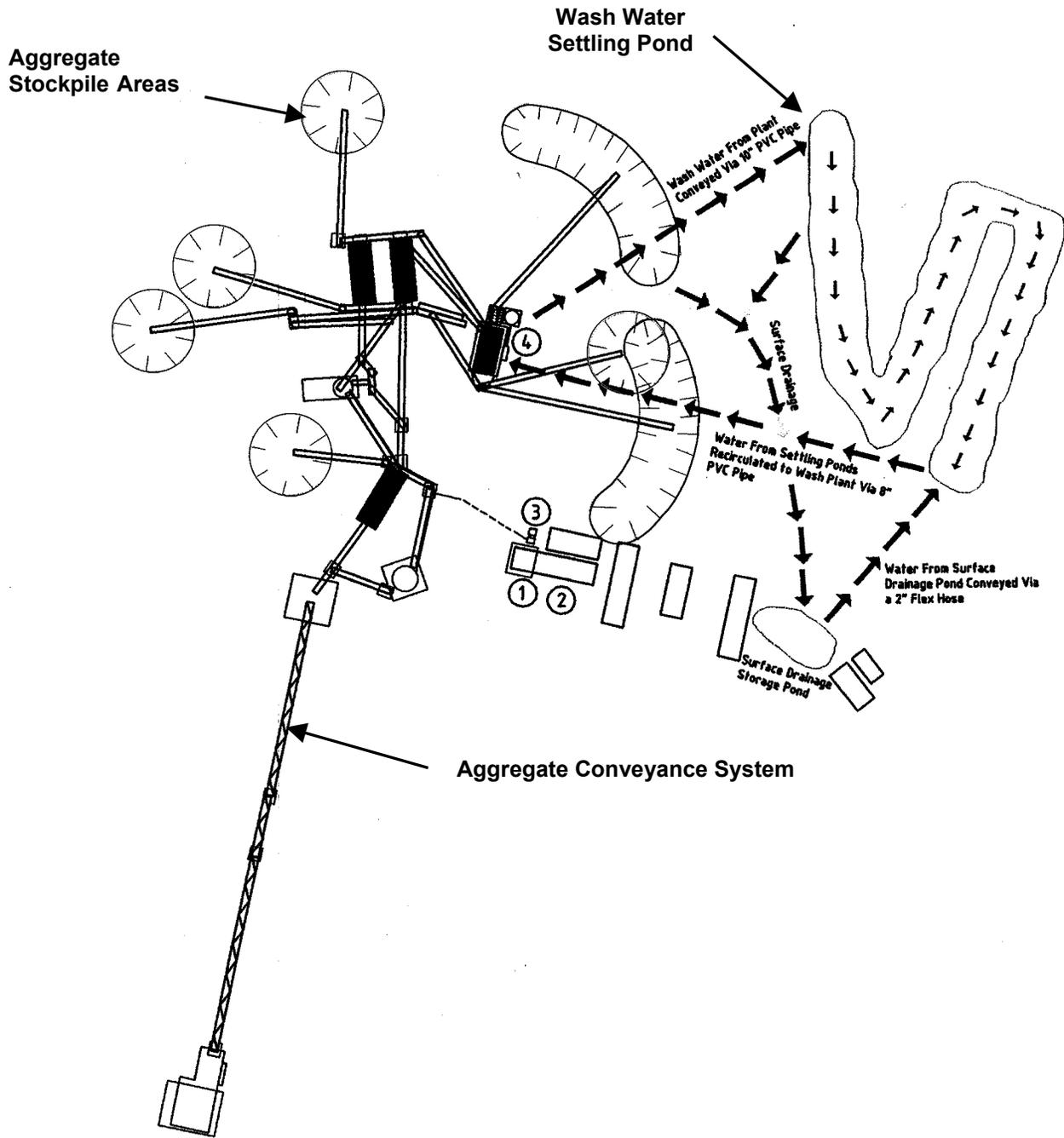
Granite Construction Company

SITE PLAN

KEITHLY RANCH
HIGHWAY 175 QUARRY
LAKE COUNTY

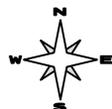


approx. scale
1 in. = 3,000 ft.



**AGGREGATE PROCESSING PLANT
PROCESS FLOW DIAGRAM**

Keithly Ranch/Highway 175 Quarry
Lake County
Approximate Scale: 1 inch =125 feet



<u>Map Number</u>	<u>Description</u>
1	Gear Oil Storage Area (55 gal.)
2	Cone Oil Storage Area (55 gal.)
3	Foam Dust Suppressant Storage Area (200 gal.)
4	Flocculant Storage Area (200 gal.)