ATTACHMENT G – COMMENTS

Graniterock.

February 16, 2005

Matt Keeling
California Regional Water Quality Control Board
Central Coast Region
ATTN: Monitoring and Reporting Review Section
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

RE: Graniterock A.R. Wilson Quarry Draft Permit Comment Permit NO CA0005274

National Quality Award 1992 Winner

Dear Matt,

Per our February 15, 2004 phone conversation regarding Soda Lake expansion and draft discharge Permit conditions, this letter will confirm our conversations and provide additional clarification. The Draft Permit Discharge Prohibitions F. indicates the Discharge of wastewater to groundwater from the process water circuit via percolation or migration from Soda Lake is prohibited. A strict reading of this condition could be extended to prohibit mitigation measures described in the Soda Lake Draft EIR and discussed in the July 27, 2004 response to waiver request. Specifically the under drain system that is designed to ensure that the small flow of poor quality groundwater in the Soda Lake Basin (currently 0.07 acre-feet per year) will continue. Not only is this a preferred mitigation reviewed and recognized by the Board, it will likely result in the enhancement and improved water quality water of the Soda Lake Basin resulting from the percolating from the quarry fines slurry and increased rainwater percolation. The increase in better quality ground water flow is expected to reach 1.4 acre-feet per year by project completion. Although the increase is very small when considering the total basin water balance (representing one tenth of one percent of the total water balance) and the Board has indicated that the proposed system does not warrant oversight by waiver or individual requirement, we would like to ensure that the draft Condition F is not confused and is removed from the Order. More specific details of the system are in the DEIR and are well outlined in the Board's July 27, 2004 letter.

Please note other comments to the Draft Permit will follow; however we wanted to allow time to properly resolve this condition.

If you have any questions, or require further information please do not hesitate to contact me, (831) 768 2094.

Aaron Johnston-Karas

GRANITE ROCK COMPANY

Aaron Johnston-Karas
Environmental Services, Manager

Graniterock

MATERIAL SUPPLIER / ENGINEERING CONTRACTOR • **LICENSE # 22**

FACSIMILE

DATE: March 17, 2005

FROM: Tina Lau
Environmental Services
GRANITE ROCK COMPANY
P.O. Box 50001
Watsonville, California 95077
831-768-2009-Direct
831-786-2993-Facsimile
tlau@graniterock.com

05 MAR 21 PM

TO: **Matt Keeling**
SWRCB

RE: Comments re Draft Order No. 2005-0044, NPDES No. CA0005274

Fax #: **(805) 788-3542**
TOTAL PAGES: **31 (including cover)**

Dear Matt,

Please find Graniterock's comments regarding the Draft Waste Discharge Order No. 2005-0044. A hard copy will follow in the mail.

Please do not hesitate to contact me at (831) 768-2009 or at TLau@Graniterock.com if any of the pages are unreadable, or if you have any questions. Thank you.

Sincerely,

Tina Lau

GRANITE ROCK COMPANY. INC.
ARTHUR R. WILSON QUARRY
ORDER NO. R3-2005-0044
NPDES NO. CA0005274

03/17/05 Public Comments

Graniterock.

March 17, 2005

State Water Resources Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401

05 MAR 21 PM

National Quality Award 1992 Winner

Dear Matt Keeling:

We submit the following comments regarding proposed waste discharge requirements. Please also refer to the letter dated February 16, 2005, included as **Attachment A**.

Summary:

Generally, Graniterock finds the order workable. However, we find the application of the same discharge conditions from another, dissimilar facility inappropriate and inconsistent with water objectives. Mainly if left unchanged, Discharge Prohibition H.1 would necessitate an increase in our discharge frequency and undo our substantial efforts to reduce discharge. Further, we are uncertain how actions resulting from compliance with Discharge Prohibition H.1 would affect the characteristics of the discharge.

1. Re Section II.A: Background.

   Graniterock proposes to complete the record by inserting the following sentence following the last sentence of the paragraph: "Please note that Graniterock also submitted a Report of Waste Discharge for the Soda Lake Expansion Facility in September 2003. This report of Waste Discharge was delayed for consideration along with this Order per the request of the Board."

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2. Re Section II.B: Facility Description

Discharge frequency is also dependent on the amount and frequency of rainfall, and this should be noted in the facility description. Please change the paragraph to read:

"The Discharger owns and operates a granite quarry and processing facility. The facility's process water system uses well water as makeup and discharges infrequently due to significant storage within the process water circuit (Quarry Storage Reservoir and Soda Lake) ~~and~~, solids removal/settling capability at the Fines Treatment Plant, and the historic rainfall conditions. Wastewater is discharged from Discharge Point 001 to a water of the United States within the Pajaro River Hydrologic Unit. Discharge is the result of intense and/or closely spaced rain events. Attachment B provides a topographic map of the area around the facility. Attachment C provides a wastewater flow schematic of the facility."

3. Re Section II.G: Water Quality-Based Effluent Limitations.

While the Order states "This Order establishes water quality based effluent limitations for pH, aluminum, arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, zinc, and acute toxicity," there are no effluent limitations included in the draft order for aluminum, arsenic, barium, chromium, copper, lead, nickel, selenium, silver, and zinc. Please revise this paragraph to reflect the finding that limits are not necessary.

4. Re Section III.A

We believe that there was a typographical error and the intent of this condition is to prohibit "waste waters", not "waste." Please replace the word "waste" with "waste water."

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5. Re Section III.F

Please refer to the letter to the Board dated July 15, 2004 (included as **Attachment B),** and the Board's response letter dated July 27, 2004 (included as **Attachment C),** and letter dated February 16, 2005, included as **Attachment A**

6. Re Section III.G

We suggest that this condition be deleted or replaced with the radionuclide receiving water limitation, which is more clear and measurable.

7. Re Section III.H.1

Our analysis indicates that a discharge of 9 MGD would have a nearly negligible effect (an increase of 0.12 inch) on the river level at a river stage of 25; this is a 0.15% increase in the river volume. At river stage 32 (the flood level stage), a discharge of 9 MGD would have no discernible effect on the river level, and would increase the river flow by a mere 0.07%. We do not believe the discharge will have a perceptible affect on downstream flooding.

It is unclear what measurable conditions would have to exist in determining the contribution of our discharge to the flood conditions of the Pajaro River. For example, technically one molecule of water could be contributing to flood conditions; certainly this is not the intent of the Board in its creation of this condition. We request that this condition be removed, as we would like to avoid any misunderstanding based on semantics and a lack of relevant data.

8. Re Section III.H.3

Graniterock has several concerns about this condition, and do not believe this condition has any measurable benefits to water quality; in fact, we predict that

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compliance with this condition would increase our discharge occurrences and potentially alter the effluent characteristics. We seek to fully understand and comply with the intent of the condition, but do not feel that compliance is possible. We offer our findings and discussions below.

Section IV.A.8 states that this discharge prohibition is intended to address "potential concerns regarding downstream flooding," however the Board does not detail what specific concerns, and fails to provide an adequate analysis of how this water quality objective may meet those potential concerns. It is unclear which water quality objectives this condition addresses or supports and how this condition will meet those water quality objectives in a measurable and quantified manner.

In addition, per telephone conversations with the Board staff, it is Graniterock's understanding that this discharge prohibition was derived from a previously permitted Pajaro River discharge for the South County Regional Wastewater Authority (SCRWA), under Order No. R3-2004-0099. While Graniterock recognizes the need for consistency among the Orders within the Pajaro River basin, it should be noted that, unlike Graniterock, SCRWA has the ability to control the timing and frequency of its discharges by discharging wastewater into groundwater via several percolation ponds. In fact, it states in SCRWA's Effluent Management Plan, which was submitted to the Board, that "even during extreme wet seasons, the waste water treatment plant is expected to have excess storage capacity in the percolation ponds to avoid emergency, uncontrolled discharge situations."[1] Graniterock discharges if our recycled water system could not safely contain the water during unusual storm conditions, and we do not have the excess alternative storage and disposal systems needed to control such discharges once our system is at capacity.

[1] *Effluent Management Plan, South County Regional Wastewater Authority*, Final Report May 2004, prepared by MWH.

Graniterock has worked hard to reduce the frequency of discharges by installing a system of pumps and piping that diverts storm water runoff away from the recycled water system, thus increasing the system's ability to contain recycled process water. Historically, Graniterock has kept its discharge infrequent because our recycled water system is maximized during a typical rainy season; having the option to discharge allows the facility to delay actual discharge until necessary. In order to comply with this draft condition, Graniterock would need to accurately anticipate rain events and discharge a very large amount of water from the reservoir to ensure there is capacity. Since science is still unable to reliably predict the rainfall intensity and stream flow condition of each upcoming season, we would have to conservatively discharge more frequently. We do not believe this is consistent with the intent of the NPDES program, and this will undo many of our past voluntary and expensive efforts to reduce discharge frequency.

Not only would the discharge frequency be increased by this condition, the discharge chemistry could be affected as well. Historically, discharge is composed mainly of rainwater and storm water runoff. However, if this condition is retained, we would be required to discharge prior to large storm events to ensure storage capacity, which would mean the discharge would be less characteristic of rain water chemistry and more characteristic of make up water and our recycled water. This causes us additional concern because our make up water is the Orchard Well, which has been shown to not comply with the proposed limits of this permit, specifically mercury, TDS, chloride, sulfate, boron, and sodium. In addition, the effects of the discharge would be greater if we were forced to discharge prior to a river stage of 24 feet. For example, at a river stage of 18, 0.40% of the flow would be comprised of the discharge (assuming a 9 MGD discharge), while at river stage 24, the proportion of the effluent drops to 0.15%.

In addition, seeking compliance with this condition requires us to rely on data that may not be, and has not always been, reliable. For example, from January of 1984

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to December of 2004, the Chittenden hourly flow gauge has been out service for approximately 23% of the time, and the Chittenden hourly river stage gauge has been unavailable 23.5% of the time. Further, the Chittenden data sometimes do not correlate with each other. Additionally, the average daily river stage does not always correspond to the average daily flow of that period, according to the available data and rating chart from the Department of Water Resources. Based on the potentially inaccurate and unpredictable data source, we do not feel that compliance with this condition can be achieved and this condition should be removed.

Finally, consideration should be given to when we typically would discharge. In most situations, our discharge would occur after the peak of the river's flow because we first store, then discharge when necessary. This means the maximum flood conditions of the river would occur at a different time than we would likely discharge, and our discharge would not be adding to the peak impact of any flood event.

9. Re Section IV.A.1.a

Graniterock assumes that an average monthly limit is for a 30-day average and does not represent calendar month averages. Please clarify this section.

Below please find comments for specific constituents in the draft permit:

TSS: The Board cites that there are no guidelines for TSS in effluent for a granite quarry and processing industry, and relied instead on Best Professional Judgment in developing this limit. While we recognize that Best Professional Judgments are an acceptable standard, we suggest using the more established Storm Water Permit Benchmark Water Quality Guidelines in place of the draft value. We believe this is more consistent with other NPDES Orders.

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Turbidity: Given the high quality of our discharge, and the historically turbid nature of the Pajaro River, in which the max turbidity is 3,650 NTU and the mean value is 266 NTU (CCAMP), our limit should be evaluated on an upstream and downstream comparison and not at the discharge. We believe this is more consistent with the Basin Plan objectives.

Mercury: This limit appears to be based on the CTR limit, which is a limit for dissolved mercury. However, we have been directed by the Board to sample total mercury, and we maintain that these results should not be used to determine compliance with the new standards that are based on dissolved mercury.

The Board states that bioaccumulation/biomagnification is a driving concern for mercury limits. It is our understanding that dissolved or total mercury would not provide an accurate assessment of the mercury available for bioaccumulation. Methylmercury has been cited as the species of mercury of foremost concern to human health, as it is the species which bioaccumulates in aquatic life tissues (Conway & al, 2003[2]; Ganguli & al, 2000[3]). Following the Board's reasoning under the discussion of the dilution credits and mixing zone, which indicated that the concern with mercury is its ability to bioaccumlate, it follows that methylmercury should be the pollutant of concern instead of dissolved mercury, and certainly not total mercury.

That being the case, high levels of methylmercury have been associated with low dissolved oxygen in natural aquatic ecosystems (Conway & al, 2003). In addition, lowered methylation rates have been associated with sulfate-reducing bacteria, which thrive in anoxic conditions (Morel et al, 1998[4]). It has been

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[2] *Mercury speciation in the San Francisco Bay Estuary*; Conway & al, Marine Chemistry 80 (2003) 199-225

[3] *Mercury Speciation in Drainage from the New Idria Mercury Mine, CA*; Ganguli & al, Environ. Sci. Technol. 2000, 34, 4773-4779

[4] *The Chemical Cycle and Bioaccumulation of Mercury*; Annu. Rev. Ecol. Syst. 1998, 29:543-66

found, in fact, that the key factor determining the concentration of mercury in the biota is the methylmercury concentration in water, which is controlled by the relative efficiency of the methylation and demethylation processes. Anoxic waters and sediments are an important source of methylmercury, apparently as the result of the methylating activity of sulfate reducing bacteria. (Morel et al, 1998)[5]. Dissolved oxygen rates in our water system are relatively high and, when coupled with the sulfate levels in the water, supports the assertion that the methylization rates of mercury in the water would be fairly low, resulting in lower toxicity that might be shown if toxicity is assumed from total mercury measurements. We believe this to show that there is no cause to have mercury limits. If necessary we could sample for methylmercury, but should not be held to the existing mercury limit that is not directly connected the goal of limiting bioaccumulation and is subject to false results by including mercury that is in sediment and not available for bioaccumulation. Mercury, being positively charged, adsorbs to clay and sediment particles that are negatively charged. Mercury has shown a "rapid, almost irreversible adsorption onto particles in aquatic systems" (Le Roux et al 2000[6]), leaving it unavailable for uptake into the environment.

Acute Toxicity: We support the Board's assessment of historical discharges and sampling data, and its decision to remove the chronic toxicity testing. However, we do not believe that the 100% survival condition is supported by the Basin Plan and is inconsistent with other Orders in the Pajaro River Basin issued by the Board; other Orders by the Board have allowed toxicity of 1 TU.

We suggest that this condition be consistent with the Basin Plan's goal, in which "survival of aquatic life in surface waters subjected to a waste discharge or other

[5] *The Chemical Cycle and Bioaccumulation of Mercury;* Francois M. Morel, Anne M. L. Kraepiel, Marc Amyot; Annu. Rev. Ecol. Syst. 1998. 29: 543-66
[6] *Partitioning of mercury onto suspended sediments in estuaries*; Le Roux et al, 2000

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controllable water quality conditions shall not be less than that for the same water body in areas unaffected by the waste discharge or, when necessary, for other control water..."[7] As such, we request that the limit for the percent survival in effluent be changed to be equal to or greater than the percent survival of the Pajaro River upstream from the discharge point, i.e. the toxicity of the Pajaro River should be the standard against which our discharge toxicity is measured. While this will require more sampling, we feel that it will better illustrate the quality of our discharge in comparison to the river and will provide more accurate data to assess support of the Basin Plan's goals. This is also consistent with the receiving water limitations below.

10. Re Section V.1.A.1

Graniterock does not use color (i.e. dyes, etc) in its processes, and does not believe there is a basis for a coloration limit. We propose to remove this condition, or modify this condition to reference turbidity, not coloration, in analyzing discharge effects.

11. Re Section V.1.A.2

We request the following change: "Waters shall not contain taste or odor-producing substances originating from the effluent in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses."

[7] Central Coast Water Quality Control Plan (Basin Plan), 1994

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12. Re Section V.1.A.3

We request the following change: "Waters shall not contain floating material originating from the effluent, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses."

13. Re Section V.1.A.4

We request the following change: "Waters shall not contain suspended material originating from the effluent in concentrations that causes nuisance or adversely affects beneficial uses."

14. Re Section V.1.A.5

We request the following change: "Waters shall not contain settleable material originating from the effluent in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses."

15. Re Section V.1.A.6

We request the following change: "Waters shall not contain oils, greases, waxes, or other similar materials originating from the effluent in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses."

16. Re Section V.1.A.7

We request the following change: "Waters shall not contain biostimulatory substances originating from the effluent in concentrations that promote aquatic

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growths to the extent that such growths cause nuisance or adversely affect beneficial uses."

17. Re Section V.1.A.8

We request the following change: "The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered by the effluent in such a manner as to cause nuisance or adversely affect beneficial uses."

18. Re Section V.1.A.12

Graniterock recognizes the need to protect the cold freshwater habitat beneficial use, however we believe that the hourly temperature reading requirement is excessive and unnecessary for ensuring this goal. It is our understanding that this condition was taken from a previously permitted Pajaro River discharge for SCRWA under Order No. R3-2004-0099. However, it must be noted that the effluent discharge from the wastewater treatment plant is of a higher temperature than Graniterock's discharge; as reported in the Biological Resources Evaluation, their average effluent temperature is 68 °F. As discussed with Jim Gasser from SCRWA, this elevated temperature is mainly due to heated intake waters. For example, wastewater from homes and industries enter the sewer at relatively high temperatures. In contrast, Graniterock Company's discharge is not at an elevated temperature, and our recycled water system does not add significant heat to the effluent, as the water prior to discharge is in exposed, ambient conditions.

In addition, this condition was developed from studies that used temperature gauges that, as described in the Biological Resources Evaluation, have a margin of error of +/- 0.4 °F. Further, field measurements of the Pajaro River temperature

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at the Chittenden Station have shown that daily temperature fluctuations often exceeded 10°F[8]. Given the potential for error, it would be nearly impossible to accurately measure compliance when the limit prohibits any observable increase in background temperature.

We suggest that compliance with these temperature limitations be evaluated based on temperature readings at the time of discharge, and that the limits be modified to reflect the inherent errors within equipment. Further, we have significant concerns with the safety of our employees in obtaining temperature readings, and request that the condition be waived in unsafe conditions.

19. Re Section V.1.A.13

It is Graniterock's understanding that this condition will be measured by the Monitoring and Sampling Plan included with this order.

20. Re Section V.1.A.14

Graniterock's review of the CTR, the Basin Plan, and other water quality documents, including Attachment F and the Monitoring and Sampling Plan of this order, do not support or explain a need for this limit. In addition, we are concerned that this condition fails to recognize that Soda Lake is habitat to frogs and other aquatic animals, and ammonia is the major excretory product of aquatic animals. (Horne & Goldman, 1994). Since unionized ammonia is listed in the Basin Plan as a *toxicity* water quality objective, it is our understanding it is the toxicity of the unionized portion of ammonia that is of concern, not ammonia itself. As such, we believe that the toxicity limits and monitoring requirements already established in this draft order more than adequately support this water

[8] *Biological Resources Evaluation, South County Regional Wastewater Authority*. Final Report May 2004 prepared by MWH, Environmental Science Associates, and Merritt-Smith Consulting.

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quality objective, and we request that the redundant unionized ammonia condition be removed.

21. Re Section V.1.A.15

Graniterock does not utilize pesticides in any of its wash water processes, and therefore should not be required to further verify the absence of pesticides. We request that the sentences after the first sentence be removed, or replaced with: "There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life which can be attributed to the discharge."

22. Re Section V.1.A.16

While Graniterock agrees that these substances shall not be in our water, there are no mechanisms that put phenols, PCBs, or phthalate esters in our discharge. The two previous sampling events have characterized the effluent in terms of the CTR/Title 22 constituents, and the results show that phenols, PCBs, and phthalate esters are not present in the effluent or the receiving water. We respectfully request that these costly and unnecessary sampling requirements be removed from our Order because they do not help further any water quality goal.

23. Re Section V.1.A.16

We request the following change: "Receiving waters shall not contain concentrations of chemical constituents originating from the effluent in excess of the primary maximum contaminant levels (MCLs) specified for drinking water in Table 64431-A (Primary MCLs for Inorganic Chemicals) and Table 64444-A (Primary MCLs for Organic Chemicals) of Title 22 California Code of Regulations, Division 4, Chapter 15.

24. Re Section V.1.A.19

It is our understanding that farming in this watershed uses groundwater and therefore this requirement does not seem necessary.

25. Re Section V.1.A.20

It is our understanding that farming in this watershed uses groundwater and therefore this requirement does not seem necessary.

26. Re Section V.1.A.21

Graniterock believes that mineral constituents have been sufficiently addressed in the Monitoring and Sampling Plan included with this order, and request that this condition be removed or clarified.

27. Re Section V.1.A.23

We request the following change: "Receiving waters shall not contain concentrations of chemical constituents known to be deleterious to fish or wildlife in excess of the levels presented in Section III, Table 3-5 of the Basin Plan that originate from the effluent.

28. Re Section V.1.A.24

It is our understanding that compliance with this condition, if necessary, will be assessed with the CTR Metal sampling.

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29. Re Section VI.C.1

Please include the following: "Minor changes and amendments may be approved by the Executive Officer without reopening the permit."

30. Re Section VI.C.3

Graniterock believes that under periods of construction activity, such as the Soda Lake Expansion Project, such activity and associated storm water runoff is best regulated by the Construction General Storm Water Permit. We request that this condition be modified to reflect this option.

31. Re Section VI.C.3

By definition, it is not reasonable to use a single sample for the assessment of an extended average water quality goal. If we were to assign a water quality value for a discharge that does not exist, we would be falsely representing an impact (if any) to the environment. This is not consistent with the Basin Plan, the CTR, or other water quality objective documents in that it arbitrarily replaces 4-day averages, and the water quality objectives determined by such, with unsupported water quality objectives that are not representative of environmental quality. Below we present two alternative methods that can be used to evaluate water quality goals.

1. When discharge does not continue for duration necessary to obtain samples to assess extended averages, we can assume that the periods of no discharge would result in no release of pollutants to the environment, and non-detect or DNQ values exist. Thus, these non-detect or DNQ, in conjunction with any samples obtained for that period, would be used to assess the extended average. This is also consistent with Compliance Determination Item B.

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2. Alternatively, we suggest that whene discharge is not long enough to determine a 4-day or monthly average, and a sample result suggests there could be an exceedance, samples will be collected from non-discharged water from Quarry Storage Reservoir and can be used for the purposes of verifying compliance. However, because this water is not discharged it cannot be used for assessment of non-compliance. If a sample result suggests there could not be an exceedance, then that result will be used to assess compliance.

These alternatives are consistent with the definition of monthly averages as outlined in 40 CFR 122.2.

32. Re Attachment E, Monitoring and Reporting Program, CTR Priority Pollutants and Title 22 Pollutants testing for Effluent and Receiving Water

Graniterock does not believe there is a need to sample for all CTR and Title 22 Pollutants in the effluent. The two previous sampling events have more than adequately characterized the effluent and the receiving water in terms of the CTR/Title 22 constituents, and the results show that almost all of these constituents are not present in the effluent or the receiving water. Sampling the entire CTR/Title 22 list of constituents is unnecessarily costly and would not provide useful information to support the Basin's water quality objectives. We therefore propose to remove the CTR/Title 22 monitoring from the draft effluent and receiving water monitoring requirements, and instead focus the monitoring on those constituents that were indicated to be present in the second sample from the Quarry Storage Reservoir. Please refer to **Attachment D** for a list of constituents we recommend to be included in the monitoring plan in lieu of the entire CTR/Title 22 list. We further propose that monitoring requirements for individual constituents be removed if future sample results show a constituent to be absent from the effluent.

Graniterock

We thank the board for their assistance in preparation of this order and look forward to working with board in these matters. If you have any questions or require additional information, please do not hesitate to contact me at (831) 768-2094 or by e-mail at ajohnstonkaras@graniterock.com.

Sincerely,

Aaron Johnston-Karas

Environmental Manager
GRANITE ROCK COMPANY

ATTACHMENT A

FILE COPY

Graniterock.

February 16, 2005

Matt Keeling
California Regional Water Quality Control Board
Central Coast Region
ATTN: Monitoring and Reporting Review Section
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

RE: Graniterock A.R. Wilson Quarry Draft Permit Comment Permit NO CA0005274

Malcolm Baldrige National Quality Award 1992 Winner

Dear Matt,

Per our February 15, 2004 phone conversation regarding Soda Lake expansion and draft discharge Permit conditions, this letter will confirm our conversations and provide additional clarification. The Draft Permit Discharge Prohibitions F. indicates the Discharge of wastewater to groundwater from the process water circuit via percolation or migration from Soda Lake is prohibited. A strict reading of this condition could be extended to prohibit mitigation measures described in the Soda Lake Draft EIR and discussed in the July 27, 2004 response to waiver request. Specifically the under drain system that is designed to ensure that the small flow of poor quality groundwater in the Soda Lake Basin (currently 0.07 acre-feet per year) will continue. Not only is this a preferred mitigation reviewed and recognized by the Board, it will likely result in the enhancement and improved water quality water of the Soda Lake Basin resulting from the percolating from the quarry fines slurry and increased rainwater percolation. The increase in better quality ground water flow is expected to reach 1.4 acre-feet per year by project completion. Although the increase is very small when considering the total basin water balance (representing one tenth of one percent of the total water balance) and the Board has indicated that the proposed system does not warrant oversight by waiver or individual requirement, we would like to ensure that the draft Condition F is not confused and is removed from the Order. More specific details of the system are in the DEIR and are well outlined in the Board's July 27, 2004 letter.

Please note other comments to the Draft Permit will follow; however we wanted to allow time to properly resolve this condition.

If you have any questions, or require further information please do not hesitate to contact me, (831) 768 2094.

Aaron Johnston-Karas

GRANITE ROCK COMPANY

Aaron Johnston-Karas
Environmental Services, Manager

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www.graniterock.com

ATTACHMENT B

July 15, 2004

State Water Resources Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California

Dear Matt Keeling:

Graniterock submits this request for Waiver of Waste Discharge Requirements under Section A, General Waiver Conditions, of Resolution R3-2002-0115 for the groundwater collection and bypass around the Soda Lake expansion project, and in response to your letter dated February 9, 2004. Please find enclosed a facility site map and a check for $800.00.

Graniterock intends to expand its Soda Lake facility, as indicated in the DEIR and as acknowledged in your letter dated February 9, 2004. This waiver request is for the portion of the project that collects and transports groundwater so that down gradient conditions are not impacted.

Graniterock intends to install a groundwater bypass system designed to mitigate the impacts on down-gradient portions of groundwater, which has been indicated as the preferred method by the Board. The groundwater bypass system will collect groundwater upstream from the levee through perforated pipes. The system will channel the collected groundwater underneath the levee through solid pipes, and then reintroduce the groundwater downstream from the levee through perforated pipes. This will ensure that

up-gradient groundwater will bypass the project, and that existing beneficial uses of the groundwater remain unaffected. The groundwater in this area is localized (groundwater does not enter the sub-basin from other areas), and is generated by runoff that infiltrates into alluvial deposits along the toe of the slopes surrounding the Soda Lake area. Collected groundwater will be reintroduced down gradient of the expanded Soda Lake area so that the groundwater flow is not disrupted for down gradient benefits, although as indicated in the DEIR these flows are only a few AF per year at best. This system will also mitigate the impacts associated with potential groundwater flow reduction in the area from the project (Soda Lake DEIR, 2004).

The installation of the groundwater bypass system will require dewatering activities. Graniterock will be installing dewatering wells at the groundwater collection and reintroduction areas (please see attached facility site map) during excavation and trenching work. The water from the dewatering wells will discharge into the existing Soda Lake, where the water will be introduced into the A.R. Wilson recycled water system. There will be no off-site discharges.

Graniterock requests a Waiver of Waste Discharge Requirements for the installation and operation of the groundwater bypass system, including the installation of the dewatering wells.

Section A: General Waiver Conditions

1. *The discharge quality must ensure that beneficial uses of the receiving groundwater will not be impaired.*

   Because the groundwater management system intercepts the groundwater up gradient from the project and reintroduces the groundwater down gradient from the project, the existing beneficial uses of the groundwater remain unaffected. The dewatering wells will discharge to the Soda Lake facility and there are no anticipated impairments to receiving groundwater.

2. *Discharge of wastes classified as "hazardous," as defined in California Code of Regulations, Title 23, Section 2521, or "designated," as defined in California Water Code Section 13173, is prohibited.*

   The groundwater bypass system will not introduce any wastes, and there will be no discharge of wastes classified as "hazardous" as defined in the California Code of Regulations, Title 23, Section 2521, or "designated," as defined in California Water Code Section 13173

3. *Discharge (including overflow, bypass, seepage, and over spray) to surface waters or surface water drainage courses is prohibited.*

   There will be no discharge to surface waters from the groundwater management system. Discharges from the dewatering wells will be directed to the Soda Lake facility, as described in WDR 00-007.

4. *Discharge, either directly or indirectly, to areas not identified in the report of waste discharge or equivalent document is prohibited except Section C discharges*

   There will be no discharge to areas not identified in this request or in attachments. The Soda Lake facility is included in the Waste Discharge Requirements Order Number 00-007.

5. *If the report of waste discharge or equivalent document describes a treatment facility, bypass of the treatment facility and discharge of untreated or partially treated wastes to the disposal area are prohibited except Section C discharges.*

   No treatment facility is included in this request.

6. *Discharges not specifically described in the report of waste discharge or equivalent document are prohibited except Section C discharges.*

   There will be no discharges not described in this request or in attachments.

7. *Creation of a condition of pollution, contamination, or nuisance, as defined by California Water Code Section 13050 is prohibited.*

   No such condition is anticipated.

8. *Discharge of radioactive substances, and chemical and biological warfare agents is prohibited. Discharge of wastes containing substances in concentrations toxic to human, plant, animal, or aquatic life is prohibited.*

   There will be no discharges of radioactive substances, of chemical and biological warfare agents, or of toxic substances.

Because the normal groundwater will be not contact the Soda Lake facility, there will be no significant threat to water quality associated with the groundwater diversion as planned in the groundwater management system. Please note that the system is separate from the WDR and construction storm water activities. We look forward to working with you on this project.

Sincerely,

Graniterock

Aaron Johnston-Karas

Aaron Johnston-Karas
Environmental Services Manager

ATTACHMENT C

California Regional Water Quality Control Board
Central Coast Region

Terry Tamminen
Secretary for Environmental Protection

Internet Address: http://www.swrcb.ca.gov/rwqcb3
895 Aerovista Place, Suite 101, San Luis Obispo, California 93401
Phone (805) 549-3147 • FAX (805) 543-0397

Arnold Schwarzenegger
Governor

July 27, 2004

Mr. Aaron Johnston-Karas
Graniterock Company
P.O. Box 50001
Watsonville, CA 95077-5001

Dear Mr. Johnston-Karas:

GRANITEROCK COMPANY, ARTHUR WILSON QUARRY – SODA LAKE FACILITY EXPANSION, SAN BENITO COUNTY; REPONSE TO WAIVER REQUEST

Regional Board staff reviewed your July 15, 2004, request for waiver of waste discharge requirements under Resolution No. R3-2002-0115 (General Waiver for Specific Types of Discharges) for the Soda Lake Facility expansion project groundwater collection and bypass (underdrain) system. Based on review of this submittal and additional documents[1] we understand the following:

- The proposed expansion of the Soda Lake Facility will increase the fine-grained rock material (fines) settling basin disposal area from about 150 acres to approximately 240 acres. As proposed, grading of approximately 1.43 million cubic yards of earth for embankment construction will be placed over approximately five years. The changes will provide an additional 50 years of storage capacity needed for placement of an additional 14 million cubic yards of fines.

- Basal sand and gravel layers at the top of the Purisima Formation bedrock (gray marine clay, mudstone, shale and cemented sandstone) currently allow the migration of groundwater to the area below the proposed embankment and the Pajaro River. Construction of the proposed embankment will require excavation of the basal sand and gravel to the top of the Purisima Formation to prevent groundwater underflow beneath the embankment foundation.

- Mitigation measures are required to facilitate the natural flow of groundwater to downgradient areas and minimize groundwater buildup within the settling basin behind the proposed embankment system. An underdrain system designed to collect groundwater from the basal sand and gravel upgradient of the settling basin embankment, convey it around the embankment, and discharge it to the basal sand and gravel downgradient of the settling basin was the chosen mitigation measure.

- The Soda Lake basin is a relatively small and closed watershed with no significant natural inflows of surface water or groundwater from outside the basin. Groundwater within the Soda Lake basin is of

[1] *Notice of Preparation for the Soda Lake Facility Expansion Project Draft Environmental Impact Report (EIR), Santa Cruz County Planning Department, March 11, 2003*

Hydrologic Analysis Report (REVISED), Soda Lake Basin, Santa Cruz County, California EMKO Environmental, Inc., April 10, 2003.

Draft Environmental Impact Report for the Soda Lake Facility Expansion Project (ISCH. 2003032048), Parsons, February 2004

relatively poor quality as characterized by high total dissolved solids (TDS) concentrations associated with the marine deposits within the formation. Groundwater collected from the downgradient edge of the project area and south of Highway 129 is of relatively better quality, with the exception of nitrate, and appears to be under the influence of the Pajaro River.

- Comparison of water quality data and water balance estimates indicate improvements in groundwater quality may occur within the basin during project operation due to the mixing of the existing low quality groundwater with better quality water percolating from the quarry fines slurry. An increase in the net annual accumulation of percolated rainwater within the basin is also expected to improve groundwater quality after project completion.

- The estimated groundwater underflow out of the Soda Lake basin is currently about 0.07 acre-feet per year (AF/yr). Estimated increases in underflow due to the proposed settling basin combined with the underdrain system flow will likely increase groundwater discharge to downgradient areas within the groundwater basin. Active project well-point and post-project groundwater flow conditions are estimated to reach 0.7 AF/yr and 1.4 AF/yr, respectively. The total increase in groundwater underflow represents about one tenth of one percent of the total water balance within the Soda Lake basin. The estimated increase in hydraulic head and groundwater flow will be attributable to the percolation of a portion of the quarry fines slurry water and the increased retention of percolated rainwater water. A majority of the quarry fines slurry water will be decanted from the settling/disposal basin and be pumped back to Arthur Wilson Quarry for reuse.

Considering this information, the proposed underdrain system does not warrant our oversight by either the General Waiver or individual waste discharge requirements. Consequently, we have no objection to the proposed underdrain system given the following comments:

- The underdrain should be designed and maintained to facilitate natural groundwater flows from the Soda Lake basin and mitigate impacts on downgradient portions of the groundwater basin and the Pajaro River.

- Per Mitigation Measure GW-1 in the Draft EIR the applicant shall prepare (for review and approval by Santa Cruz County) and implement a long-term operation and maintenance plan to maintain the hydrologic balance of the site including specific inspection and maintenance activities for the underdrain system.

This letter does not imply our approval of the underdrain system or endorsement of the data relative to the hydrologic and structural stability of the proposed underdrain and embankments. It is the responsibility of the site owner/operator to ensure the proposed Soda Lake facility is designed, constructed and operated in a manner protective of human health and the environment. Issuance of this letter does not preclude future oversight or enforcement by our agency in the event significant threats or impacts to water quality become evident at a later date.

We have enclosed your waste discharge requirements/waiver application fee check for $800.

If you have questions regarding this matter, please contact Matthew Keeling at [illegible] or mkeeling@rb3.swrcb.ca.gov

Sincerely,

for Michael LeBrun

Roger W. Briggs
Executive Officer

Paper File: Discharger, Granite Rock, Arthur Wilson Quarry
Electronic File: S:\NPDES\NPDES Facilities\San Benito Co\Arthur Wilson Quarry\Soda Lake Facility\Waiver rqst resp 072604.doc
Task Code: 102-01

Enclosure (addressee only): Waste discharge requirements/waiver [illegible]
from Graniterock

cc.

Mr. Benjamin Licari
Graniterock Company
P.O. Box 50001
Watsonville, CA 95077-5001

Ms. Claudia Slater
Santa Cruz County Planning Department
701 Ocean Street, Fourth Floor
Santa Cruz, CA 95060

ATTACHMENT D

Attachment D

Graniterock Company
Draft Order R3-2005-0044
Revised CTR/Title 22 Constituent List for Effluent and Receiving Water Monitoring

1. alpha-BHC
2. Aluminum (total)
3. Ammonia (N)
4. Antimony (total)
5. Arsenic (total)
6. Barium (total)
7. Beryllium (total)
8. Boron (total)
9. Cadmium (total)
10. Chloride
11. Chromium (total)
12. Copper (total)
13. delta-BHC
14. Iron (total)
15. Lead (total)
16. Manganese (total)
17. MBAS
18. Mercury (total) by EPA 1631
19. Nickel (total)
20. Nitrate (N)
21. OCDD
22. Selenium (total)
23. Sulfate (SO4)
24. Sulfide
25. TDS
26. tributylin
27. Zinc (total)