

**STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

SUPPLEMENTAL SHEET FOR REGULAR MEETING OF DECEMBER 9, 2010
Prepared on December 3, 2010

ITEM NUMBER: 11

SUBJECT: National Pollutant Discharge Elimination System Permit No. CA0005274 for Granite Rock Company, Inc. Arthur Wilson Quarry, San Benito County, Order No. R3-2010-0025

SUMMARY

Water Board staff received comments on October 28, 2010, from the County of Santa Cruz Department of Public Works regarding the subject permit. These comments were not included in Attachment G of the tentative subject Order. Following are the comments presented by the county and Water Board staff's responses.

COMMENTS & RESPONSES

COMMENT NO. 1: A more detailed hydrologic study should be provided that substantiates the claim that Granite Rock's discharge will not cause or exacerbate flooding of the Pajaro River. It would be instructive to have such a report made available prior to the Public Hearing scheduled for December 9, 2010.

RESPONSE NO. 1: Water Board staff conducted a thorough investigation in 2005 regarding potential downstream flooding if additional flows were allowed into the Pajaro River during a time when conditions are above flood warning stages. Based on upstream and downstream hydrogeologic conditions from the Chittenden gauging station, Water Board staff presented substantiation to the county in response to the county's petition of the 2005 permit that confirms staff's position that discharge prohibitions III.F through III.H in the subject Order adequately address potential nuisance conditions based on Pajaro River flows.

Water Board staff encourages the county to perform a more thorough assessment of the downstream levee conditions, which may in fact lead to updated flood levels at the Chittenden gauging station. Conclusions of that study could assist Water Board staff in reevaluating the information contained in the draft Order.

STAFF ACTION NO. 1: No change.

COMMENT NO. 2: Perhaps the Readiness Branch of the USACE should be made aware of this application, and USACE review of the permit application should be solicited. Possibly, the USACE already has, or can be requested to provide HEC-RAS, or similar water surface elevation modeling of the river that would answer the question, "what is the gauge height at Chittenden below which levee failure is not threatened?"

RESPONSE NO. 2: Water Board staff has added the USACE Readiness Branch to the list of interested parties for all Granite Rock Arthur Wilson Order renewals. We understand that the county has already forwarded a copy of the draft permit to the USACE Readiness Branch. Water Board staff welcomes any studies and comments by the USACE Readiness Branch and will review them thoroughly.

STAFF ACTION NO. 2: No change.

File: S:\NPDES\NPDES Facilities\San Benito Co\Arthur Wilson Quarry\R3-2010-0025\Final Order\Supplemental WDR R3-2010-0025.doc

Date

County of Santa Cruz



DEPARTMENT OF PUBLIC WORKS

701 OCEAN STREET, ROOM 410, SANTA CRUZ, CA 95060-4070
(831) 454-2160 FAX (831) 454-2385 TDD (831) 454-2123

JOHN J. PRESLEIGH
DIRECTOR OF PUBLIC WORKS

October 27, 2010

ROGER BRIGGS, EXECUTIVE DIRECTOR
California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

SUBJECT: ORDER NO. R3-2010-0025 DRAFT WASTE DISCHARGE REQUIREMENTS
FOR GRANITEROCK ARTHUR WILSON QUARRY, SAN BENITO COUNTY,
PAJARO RIVER, NPDES PERMIT NO. CA0005274

Dear Mr. Briggs:

This letter is in response to Public Notice Draft Waste Discharge Requirements Order No. R3-2010-0025 (Comments due: October 28, 2010; Hearing date: December 9, 2010), wherein the Graniterock Company (Discharger) has applied to the California Regional Water Quality Control Board (RWQCB) to renew a National Pollutant Discharge Elimination System (NDPES) permit to discharge treated wastewater and storm water from the Arthur R. Wilson Quarry into the Pajaro River. The proposed discharge appears to enter the Pajaro River approximately six miles upstream of the levees.

Previous Protests:

The County of Santa Cruz Department of Public Works has previously protested this order in the attached letters written to your agency on May 10, 2005, and May 11, 2010 (Attachments 1 and 2). Additionally, the Monterey County Water Resources Agency has previously protested this order in the attached letters written on May 12, 2005, and May 13, 2010 (Attachments 3 and 4). All previous and current letters protest the timing of the proposed discharge, occurring at a gauge height of 31.4 feet (at the Chittenden guage), which is only 0.6 feet below the level of the 1995 flood. The lower 12 miles of the Pajaro River is vastly under-protected from flooding with an antiquated levee that provides a current flood protection level equivalent to only an 8-year storm.

RWQCB Response Letter Report dated August 4, 2005:

The RWQCB's conditions of approval for the permit primarily focus on dilution of the discharge for water quality compliance. As such, the discharge is planned to occur during winter storms at the time of the river's maximum flow. The RWQCB's letter (Attachment 5) states that the Discharger desires to store its effluent on-site until river flows are at their highest winter stage, so that the effluent can meet dilution standards for sulfate, total dissolved solids, sodium, chloride, boron, and mercury. According to this letter, this saves the Discharger "monitoring costs associated with more frequent water sampling of both effluent and receiving water."

In contrast, in order to attain similar dilution concentrations, more frequent discharges with less volume could occur at lower flood stages. This would require greater groundwater pumping from the blend well and more frequent sampling of the effluent and receiving water. The application states that the Discharger favors releases closer to the End Time (31.4 feet at Chittenden) in order to maximize effluent dilution and minimize costs. Hence, the downstream Counties of Santa Cruz and Monterey are potentially being asked to subsidize the Dischargers' water quality dilution costs, at the expense of flood protection.

Flood Danger:

The following table lists the flow rates and gauge heights for the timing of the proposed discharge.

Flood Levels and Proposed Discharge Timing for Pajaro River Gauge at Chittenden

Level	Million Gallons per Day (MGD)	Cubic Feet per Second (CFS)	Chittenden Gauge Height (Feet)
<i>Proposed Discharge-Release</i>	<i>9</i>	<i>14</i>	
Stage: Flood Watch/ALERT Alarm	5,300	8,200	23
Proposed Discharge: Start Time	6,004	9,289	24
Stage: Flood Warning	6,786	10,500	25
Levees Submerged: 3 feet freeboard	9,372	14,500	28
Levees Submerged: 2 feet freeboard	10,147	15,700	29.5
Proposed Discharge: End Time	13,000	20,113	31.4
Levees Submerged: 0.5 feet freeboard	13,767	21,300	32
Stage: Flood	13,767	21,300	32
Flood: March 1995	13,767	21,610	32.1
Flood: December 1955	15,512	24,000	32.5
Flood: April 1958	15,188	23,500	33.1
Flood: February 1998	18,614	28,800	34.5 est.

The above table shows that the proposed discharge's End Time occurs at less than 1 foot of freeboard. Also, the End Time is only 1.1 feet below the 1955 flood, and only 0.7 feet below the 1995 flood.

For the discharge's Start Time (6,004 MGD), a release of 9 MGD equals 0.2 percent of flow. The RWQCB letter dated August 4, 2005, cites this as equivalent to a water surface raise of 0.2 inches. At flood levels, water surface rises measured in increments as small as inches can be significant, especially as any new increment adds pressure to the levee structure.

The flood of March 1995 caused one death and over \$95 million dollars in total economic loss to the adjacent area. The flood of 1955 caused eight deaths and similar economic damages. Although the proposed discharge adds less than 1 percent to the flow, it occurs during the river's highest flows. It is uncertain whether providing for expedient dilution is advisable at the time of the river's maximum flood threat. Perhaps it warrants further study to question the worth of possibly incurring greater dilution costs at lower flood risk levels.

Further Analysis Recommended:

The RWQCB's Response to Comments in Order No. 0025 conclude that the proposed discharge will not contribute to flooding. It is arguable that this assertion should be founded on conclusive hydrologic analysis. A more detailed hydrologic study should be provided that substantiates the claim of "no impact." It would be instructive to have such a report made available prior to the Public Hearing scheduled for December 9, 2010.

Two questions could possibly be pursued more fully in order to confirm the safety of the timing for the proposed discharge. First, does the discharge add negligible flow to flood levels? Second, what would be a safe flood level for discharges to be made? For instance, a safer discharge End Time might be at a lower water surface elevation. A hydrologic study could be conducted to determine what is the maximum river level that does not threaten the levee.

Over-topping the levee can be a primary cause for levee failure and flooding. However, any level of freeboard below over-topping might have the potential to cause levee undermining, such as through subsurface piping and erosion. Hence, it might be useful to determine through modeling what is a safe water surface elevation adjacent to the levees before their structural integrity is threatened. It might be that no additional discharges should be allowed to occur above that safe level. Perhaps that safe level is not the proposed End Time of between 1 to 2 feet of freeboard.

Given the importance of what is at stake, we feel it is reasonable to request an independent hydrologic study to determine the maximum Chittenden gauge height that does not threaten the levee. The analysis should be conducted by an engineering authority that is well versed in the hydraulic behavior of the Pajaro River.

Nexus with U.S. Army Corps of Engineers:

The U.S. Army Corps of Engineers (USACE) Readiness Branch governs the safety of the levee through the federal program titled Inspection of Completed Works. Potentially, the USACE has legal interest in reviewing proposed releases into the Pajaro River that are being considered for permit approval. Therefore, perhaps the Readiness Branch of the USACE should be made aware of this application, and USACE review of the permit application should be solicited. Possibly, the USACE already has, or can be requested to provide HEC-RAS, or similar water surface elevation modeling of the river that would answer the question, "what is the gauge height at Chittenden below which levee failure is not threatened?" The USACE might be able to determine allowable flow rates and gauge height levels for upstream releases during floods.

Conclusions:

Section III, Discharge Prohibitions, Item F of the RWQCB's Order, provides that the "discharge shall not cause or contribute to downstream flooding within the Pajaro River." It is our concern that approving a discharge during Flood Warning Stage potentially violates Item F. If the RWQCB approves the permit as is, then potentially both the RWQCB and Graniterock could be included in liability for economic damage and loss of life resulting from potential flood events.

As Director of the County of Santa Cruz Department of Public Works, and as District Engineer for the County of Santa Cruz Flood Control and Water Conservation District, I recommend deferring the approval of this permit as-is. Further, I ask that the proposed discharge's Start and End Times be based on an independent hydrologic analysis of safe water surface elevations for this added flow. Additionally, this permit application should be reviewed by the USACE Readiness Branch.

The downstream Counties in charge of levee maintenance need to be assured that this dilution proposal is safe either at the Pajaro River's highest flood levels, as proposed, or at a lower level to be determined by further study or by confirmation from the USACE. This letter is being copied, in particular, to the following two agencies that have a primary interest in levee flood protection: Duke Roberts, Chief of Readiness Branch, U.S. Army Corps of Engineers and Mark Cowin, Director of the California State Department of Water Resources.

The County of Santa Cruz needs independent confirmation that the proposed discharge and dilution plan, as-is, poses no threat to levee safety. Without authoritative hydrologic/hydraulic confirmation, the County of Santa Cruz is not assured that this additional release is prudent during peak winter storms.

If you need further information or assistance, please contact Bruce Laclergue, Flood Control Program Manager, at (831) 454-2160.

Yours Truly,



JOHN J. PRESLEIGH
Director of Public Works

JMW:lh

Attachments

Copy to: Duke Roberts, U.S. Army Corps of Engineers, Readiness Branch
Mark Cowin, CA Department of Water Resources
Curtis Weeks, Monterey County Water Resources Agency
David Koch, City of Watsonville, Department of Public Works
Tony Campos, Board of Supervisors
Zone 7 Board of Directors
Susan Mauriello, Santa Cruz County Administrative Officer
Dana McRae, Santa Cruz County Counsel



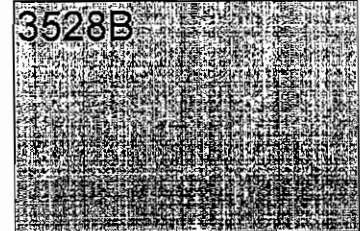
County of Santa Cruz

DEPARTMENT OF PUBLIC WORKS

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THOMAS L. BOLICH
DIRECTOR OF PUBLIC WORKS

May 10, 2005



ROGER BRIGGS, EXECUTIVE DIRECTOR
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

SUBJECT: SUPPLEMENTAL AMENDMENT TO ITEM 22, DISCHARGE PROHIBITION
III.H, ARTHUR WILSON QUARRY

Dear Mr. Briggs:

I received notice yesterday in reference to your meeting this Friday, May 13, 2005, of a proposed change to item 22 wherein Regional Board staff is considering allowing Granite Rock Company, Inc., Arthur Wilson Quarry (Order No. R3-2005-0044) to make discharges into the Pajaro River at stages above flood warning level. This proposed change would allow the discharge of facility process water from the Granite Rock Company Quarry Storage Reservoir into the Pajaro River at river stage elevations (measured at Chittenden) above flood warning level. Prior conditions prohibited discharges into the river when the stage was above flood warning level.

As the flood control manager for the County of Santa Cruz I must use the strongest cautionary language possible to ask that you reconsider this proposed increase in the allowable Pajaro River flow discharge window. With this letter I am copying our Flood Control District Board Chairman, County Administrative Officer, the Director of Public Works, and County Counsel of your proposed actions.

To my knowledge, we have received no prior notice of this proposed change and no one from the Regional Water Quality Control Board staff has approached the County to discuss this proposed change. The levees in the Pajaro River Flood Control project area below Chittenden are over 50 years old. Unless the Regional Board and the Quarry assume full liability in potential damages from such a decision, it is my firm opinion that it is inadvisable to encourage the release of additional discharges into the Pajaro River when the river stage is already above flood warning level.

I have commitments on Friday which preclude my attendance at your Friday meeting in Watsonville where the matter is to be discussed and would request the item get rescheduled to another date.

ATTACHMENT 1

ROGER BRIGGS, EXECUTIVE DIRECTOR

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Your assistance in cooperating with this request is greatly appreciated.

Yours truly,

THOMAS L. BOLICH
Director of Public Works

By:



Bruce Laclergue
Senior Civil Engineer
Flood Control Program Manager

BLC:ma

Copy to: Tony Campos, Chairman, Zone 7 Board of Directors
Susan Mauriello, County Administrative Officer
Dana McRae, County Counsel
Thomas L. Bolich, Director of Public Works

MONTEREY COUNTY

WATER RESOURCES AGENCY

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CURTIS V. WEEKS
GENERAL MANAGER



STREET ADDRESS
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May 12, 2005

Mr. Roger Briggs, Executive Director
California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

Subject: Order No. R3-2005-0044 – Supplemental Amendment to Item 22,
Discharge Prohibition III.H, Arthur Wilson Quarry

Dear Mr. Briggs,

Our Agency has become aware that Regional Board staff is considering allowing Granite Rock Company, Inc., Arthur Wilson Quarry (Order No. R3-2005-0044) to make discharges into the Pajaro River at stages above flood warning level. As we understand it, this proposed change would allow discharge of facility process water into the Pajaro River at river stage elevations (measured at Chittenden) above flood warning level. Prior conditions prohibited discharges into the river when stage was above that level.

As you may be aware, Monterey County, Santa Cruz County, and the State of California were deemed to have substantial liability for flood damage from 1995 floods. For that reason alone we strongly oppose even a de minimis discharge that could exacerbate dangerous water levels, volumes or velocities. The levees in the Pajaro River Flood Control project area below Chittenden are over 50 years old. Under these circumstances, we would expect the Regional Board and Granite Rock to assume full liability in potential damages arising from such a decision.

In addition to prohibiting any discharge at or above flood warning levels, our Agency would recommend that any order approved by your Board also incorporate a requirement that down stream public agencies be notified prior to proposed releases scheduled when Chittenden stage levels are within two feet of flood warning stage.


ATTACHMENT 3

Mr. Roger Briggs, Executive Director
May 12, 2005
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Our appropriate staff have commitments which preclude attendance at your Friday meeting in Watsonville where the matter is to be discussed. We, therefore, would request that the item get rescheduled to another date.

Your assistance in cooperating with this request is greatly appreciated.

Sincerely,



Curtis V. Weeks
General Manager

Copy to: WB "Butch" Lindley, Chair, Monterey County Board of Supervisors
Lew C. Bauman, Chief Administrative Office, Monterey County
Charles McKee, Monterey County Counsel
Ron Lundquist, Interim Director of Public Works, Monterey County
Susan Mauriello, Chief Administrative Office, Santa Cruz County of Monterey
Tom Bolich, Director of Public Works, Santa Cruz County
Reb Monaco, Supervisor, San Benito County
John Gregg, District Manager, San Benito County Water District
Ana Ventura Phares, Mayor, City of Watsonville
Carlos Palacios, City Manager, City of Watsonville
Liz Kniss, Chair, Santa Clara County Board of Supervisors
Peter Kutras Jr., Santa Clara County Executive
Senator Abel Maldonado, 15th District, State Senate
Assemblyman Simon Salinas, 28th District, State Assembly
Assemblyman John Laird, 27th District