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Sent: Wednesday, January 12, 2011 2:35 PM
Attach: Bruce Bunting.vcf; COMMENTS TO NPDES 1 12 11 (2).PDF
Subject: COMMENTS TO NPDES 1 12 11 (2).PDF

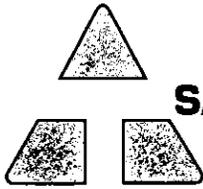
Dear Sir

Attached are the Santa Fe Aggregates(Kaweah River Rock Plant) comments to NPDES Tentative Order #CA0082201.

If there are any questions you can contact me by e-mail or phone at any time.

Sincerely

Bruce Bunting



SANTA FE AGGREGATES, INC.

Kaweah River Rock Plant
Santa Fe Aggregates
P.O. Box 515
Woodlake, CA 93286

Clay L. Rodgers, Assistant Executive Officer
Central Valley Regional Water Quality Control Board
1685 E Street
Fresno, CA 93706

Re: Tentative Waste Discharge Requirements for Santa Fe Aggregates, Inc. Kaweah River Rock Sand and Gravel Plant (NPDES No. CA0082201), circulated September 15, 2010 ("Draft Permit")

Dear Mr. Rodgers:

This letter conveys comments on behalf of Santa Fe Aggregates, Inc. on the Draft Permit for the Kaweah River Rock Sand and Gravel Plant (the "Facility"). We look forward to resolution of these issues through your review of the comments and discussion of any questions or further information needed on any of the subjects covered here.

We very much appreciate the time you and your staff have taken to meet with us on October 25, 2010 and January 5, 2011 to discuss the permit, Facility operations, and past monitoring data. Based on these meetings, we anticipate a smooth and cooperative process to address the comments provided below.

The Facility has been in operation since at least the 1960s. The pit area is approximately 80 acres. The active mining area within the pit, however, is only about 10 acres to 15 acres. Mining has been completed in the remaining 65 acres to 70 acres within the pit and these areas are completely revegetated. The discharge to the St. Johns River consists exclusively of groundwater from the mining pit and storm water runoff from the small active mining area. Process water and stormwater from the process area are not discharged from the site.

The discharge from Effluent Point 001 (referred to as E-1) is relatively stable over time. The average monthly flow rate over the past five years has ranged from approximately 0.2 cubic feet per second (cfs) to 2.4 cfs, with a long-term average of 0.9 cfs. Over the last five years, the average monthly flow rate in the St. Johns River has been 288 cfs, with peak flows (up to 1200 cfs) consistently occurring during the peak irrigation season, and occasionally during periods of dam releases during the storm season. The St. Johns River is managed as an irrigation conduit by the Kaweah Delta Water Conservation District to meet the needs of its downstream

customers. As discussed in more detail below, dramatic flow fluctuations in the St. Johns River overshadow any influence of the Facility's discharge.

The discharge from the Facility has been very stable, and the Facility's compliance record has been exemplary. The Draft Permit has, nonetheless, proposed dramatic increase in monitoring requirements. After detailed review of the data for the site, we believe that in several instances monitoring should instead be streamlined, as explained below. We appreciate the Regional Board's attention to our requests for revision to the Draft Permit in this regard.

A. Compliance Summary Revisions Requested

The Compliance Summary states that the Facility "sporadically caused or threatened to cause potential violations" of the pH receiving water limit C.8 and the turbidity receiving water limit C.18. Review of the effluent and receiving water data for the Facility reveals that the discharge did not cause or threaten to cause exceedance of these receiving water limits. We therefore request that the Regional Board delete reference to any such potential violations, for the reasons set forth below.

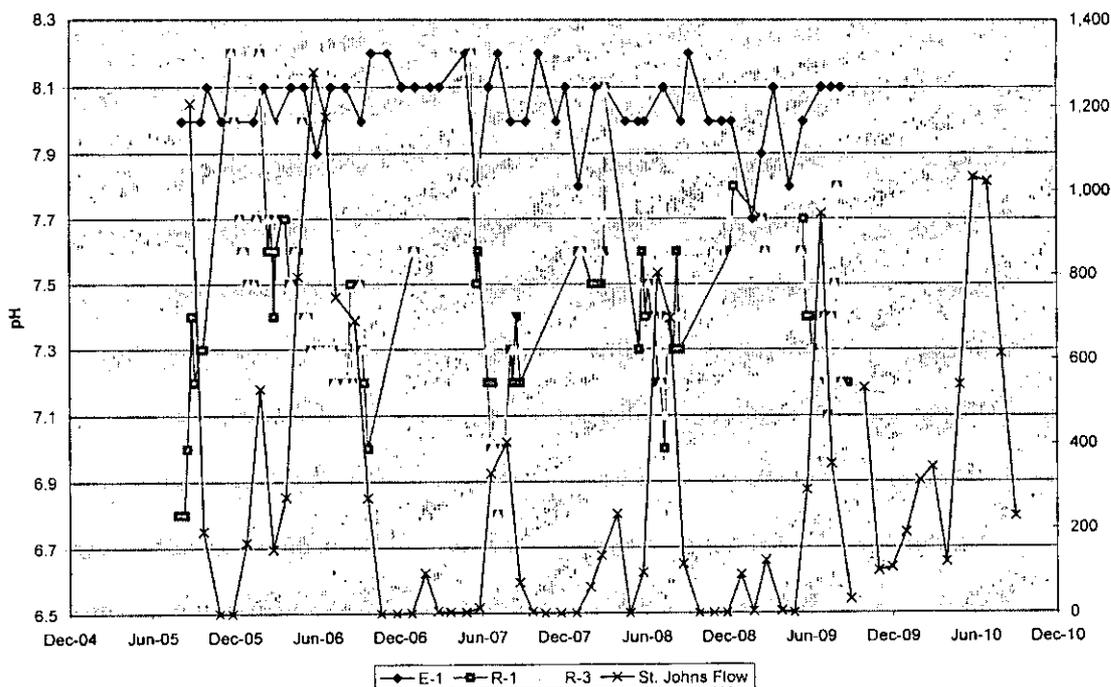
We also note that the three exceedances of the daily flow limit cited in the Compliance Summary occurred over 1,825 days, i.e. there was compliance with that limit 99.8% of the time. The rare exceedances were very minor in volume, and in all cases occurred during exceptionally heavy rainfall events. The monthly average flows have consistently been well below the limit.

pH Receiving Water Limit

The condition specified in the permit is that the discharge not cause the pH of the water in the St. Johns River to fall below 6.5, exceed 8.3, or change at anytime more than 0.3 units from normal ambient pH. The chart entitled "KRRC pH", below, shows the pH data from R-1 and R-3, and the pH data from the effluent, E-1. In addition, the flow rate in the St. Johns River at McKay Point is shown on the chart.

The data presented on the KRRC pH chart show that the pH at both R-1 and R-3 has varied from 6.8 to 8.2, within the permit limits. The pH at E-1 has been more consistent, only varying from 7.7 to 8.2, with most of the measurements between 8.0 and 8.1. The data also clearly demonstrate that there is not a "normal ambient pH" in the river. The pH in the river can change dramatically based on short-term fluctuations in flow. For example, between May 14, 2007 and July 9, 2007, a period of seven weeks, the pH changed by 1.4 units, from 8.2 to 6.8, in both R-1 and R-3. This rapid change in pH was unrelated to the discharge at E-1 since the same magnitude of fluctuation was observed both upstream, at R-1, and downstream, at R-3.

KRRC pH



During the period from August 2005 through April 2010, the pH in the upstream receiving water sample, R-1, was 0.4 units greater than the downstream sample, R-3, on five occasions out of approximately 250 weekly measurements. The difference in the pH between the upstream, R-1, and downstream, R-3, locations was never more than 0.4 pH units during this time period. The table below shows the dates where the pH differed between R-1 and R-3 by 0.4 pH units. The table also shows the difference between the flow in the river at those times and the discharge flow rate. The very small volume of the discharge at E-1 is insufficient to cause a measurable change in pH in the receiving water. For example, in February 2006, the flow in the St. Johns River was 152 cfs whereas the discharge was 0.88 cfs, or one-half of one percent of the river flow. The data from May 2007 is even more definitive in that the E-1 discharge pH of 7.8 could not have changed the pH in the river from 7.6 to 8.0.

| Date | pH | | | Flow (cfs) | |
|-----------|-----|-----|-----|------------|------|
| | R-1 | R-3 | E-1 | R-1 | E-1 |
| 2/21/2006 | 7.6 | 8.0 | | | |
| 2/27/2006 | 7.6 | 8.0 | 8.0 | 152 | 0.88 |
| 3/1/2006 | 7.4 | 7.8 | | | |
| 3/6/2006 | 7.6 | 8.0 | | | |
| 5/25/2007 | | | 7.8 | | |
| 5/29/2007 | 7.6 | 8.0 | | 13 | 0.4 |

In summary, the data demonstrate that:

1. the pH in the St. Johns River varies appreciably based on flow;
2. The pH in the discharge and in the effluent have always been within the permit limit of 6.5 to 8.3 pH units;
3. There is not a "normal ambient pH" in the river;
4. The very few occasions when the change in pH from R-1 to R-3 was 0.4 pH units occurred while the flow in the river was changing rapidly; and
5. The effluent could not have caused, or even threatened to cause, the pH fluctuations noted in the river.

Turbidity Receiving Water Limit Reference in Compliance Summary

Historic effluent monitoring shows consistently low and compliant levels of TSS and settleable solids. The information provided above concerning the comparative flows in the discharge and the river demonstrates that it would have been impossible for the discharge to have caused a violation of the turbidity receiving water limit. We have requested, but have not received the dates for the two instances to which the Compliance Summary refers. Based on the discussion above for pH, the dramatic variations in flows within the St. Johns River are actually the likely cause of any turbidity conditions referred to in the Compliance Summary.

B. Comments on Effluent and Surface Receiving Water Monitoring and Effluent Limits

We are sensitive to the Board's requirements to include monitoring to ensure representative data is available to adequately characterize the discharge, and to evaluate potential impacts of the discharge on receiving water. The substantial increase in monitoring parameters and monitoring frequencies, however, is not consistent with the nature of the discharge, groundwater and surface water conditions at the Facility, and the long history of monitoring data.

The main variations in receiving water and effluent parameters tend to be related to variations in flow. For the St. Johns River, the winter months are dominated by storm-related releases whereas the summer months consist almost exclusively of irrigation-related releases. Spring and fall months often experience little or no flow during the transition from winter runoff to summer irrigation releases. For the effluent, discharges are typically higher in the winter due partially to rainfall within the pit but primarily to higher regional groundwater elevations requiring a greater amount of dewatering. Lower groundwater elevations in the summer, as a result of irrigation pumping in the area, result in minimal discharges due to less dewatering requirements. As with the receiving water, spring and fall are transitional. Therefore, quarterly monitoring is sufficient to capture any water-quality fluctuations that may occur due to changes in both receiving water and effluent flow rates.

The extensive monitoring to date has provided sufficient information to determine reasonable potential for the discharge to affect receiving water, and to evaluate potential impacts to the St. Johns River. The ongoing, routine receiving water monitoring of the River does not provide additional meaningful information, and it would be logical to limit monitoring of the River to

reporting flow and any minimum required scans to confirm reasonable potential for the next permit cycle.

We specifically request that the monitoring frequency for settleable solids, EC, pH, chloride, iron, and manganese be changed to quarterly instead of weekly or monthly.¹ The basis for this request is that extensive existing information demonstrates the stability of the discharge quality, the fact that the discharge consists primarily of groundwater and not any actual process water, and the well-known characteristics of receiving water flows and quality. While the value of ongoing routine monitoring of surface receiving water has little or no clear benefit, our proposal would continue such monitoring quarterly in conjunction with effluent monitoring events.

Specific discussion of monitoring for other parameters is presented in more detail below.

Effluent Discharge Characteristics

Santa Fe has reviewed monitoring effluent quality as conducted by the prior operator in accordance with the then-current permit that was adopted in 2005 forward. A summary of effluent quality in relation to the previous and current proposed effluent limitations (Table 6 of the Draft Permit) is as follows:

Settleable Solids

Monitoring of settleable solids has been conducted weekly since 2005 with samples analyzed to a detection limit of 0.01 ml/l. The results are typically below the detection limit (75% of all samples); the remaining samples have quantified results ranging between 0.10 and 0.22 ml/l. The maximum daily value of 0.22 ml/l is less than half of the Draft Permit maximum daily limit of 0.5 ml/l. An evaluation was made of the data to determine average monthly values since 2005 for comparison to the Draft Permit average monthly limit of 0.1 ml/l. The evaluation indicates the following:

1. 20 months had all values reported as ND, indicating those average monthly "values" were <0.01 ml/l and thus below the permit limit;
2. 27 months had both ND and quantified results such that average monthly values must mathematically have been below the permit limit; and
3. two months had all results equal to the permit limit.

Total Suspended Solids

Monitoring of total suspended solids has been conducted weekly with samples to a detection limit of 5.0 mg/l. A majority of the results were below the detection limit (57% of all samples); the remaining samples had quantified results ranging between 5.0 and 21 mg/l. With the long-

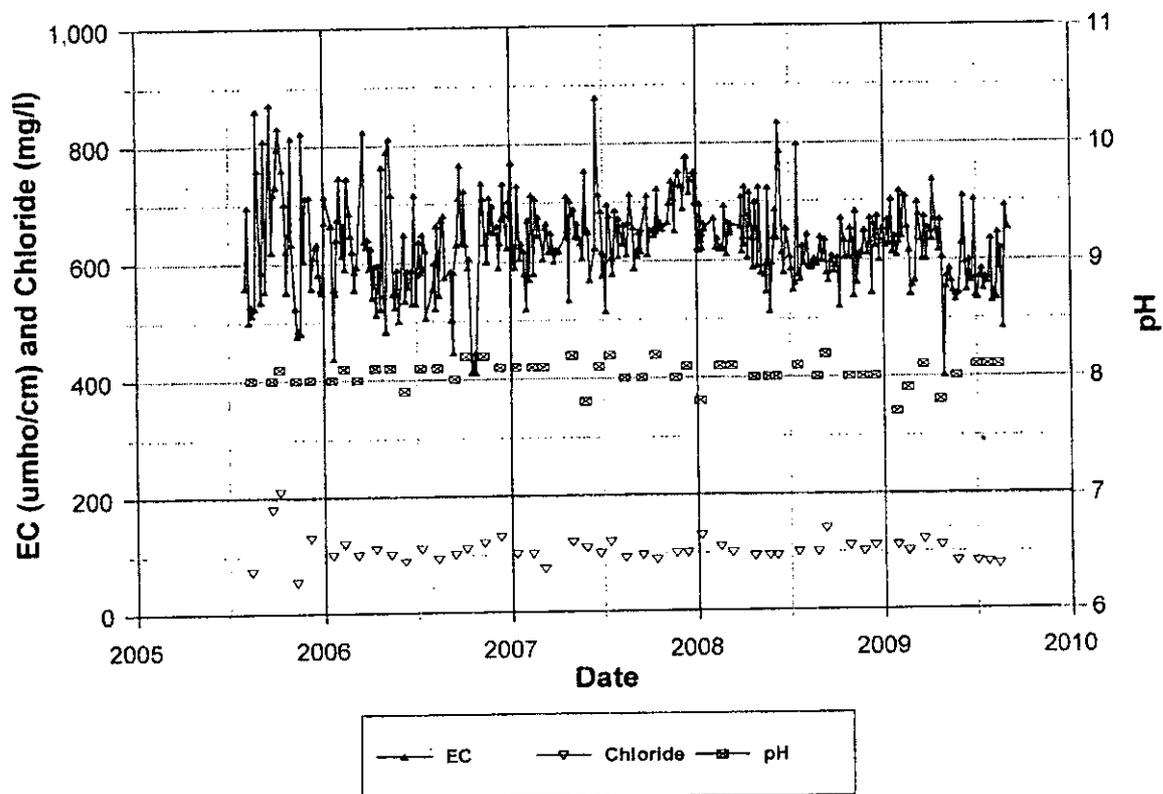
¹ We are requesting that boron monitoring be removed from the permit, because the boron effluent limit has been removed due to a lack of reasonable potential for boron. Similarly we are requesting removal of the limit and of monitoring for oil and grease, and that if retained as a limit monitoring be reduced to annually, as noted in more detail below.

term maximum daily value of 21 mg/l, neither the Draft Permit maximum daily limit of 45 mg/l nor the average monthly limit of 25 mg/l has ever been exceeded. An evaluation was made of the total suspended solids data to determine average monthly values since 2005 as follows:

1. 12 months had all values reported as ND, indicating those average monthly "values" were <5.0 mg/l;
2. 29 months had both ND and quantified results such that average monthly values must mathematically have been between 5.0 and 10.8 mg/l; and
3. eight months had all quantified results with average monthly values between 5.8 and 10.0 mg/l.

Electrical conductivity

Monitoring of electrical conductivity (EC) has been conducted on a biweekly basis. The minimum and maximum values are 402 and 879 umho/cm, respectively; the average value is 630 umho/cm. In general, EC shows a seasonal variation with the highest values typically during the late fall to early winter period, as shown by the graph of effluent EC, chloride, and pH values below (Figure 4 in the Luhdorff & Scalmanini Technical Report dated November 30, 2009, submitted with the Report of Waste Discharge ("November 2009 Technical Report")). With a long-term maximum daily value of 879 umho/cm, the permit-specified maximum daily limit for EC of 1,000 umho/cm has never been exceeded.



pH

Monitoring of pH has been conducted monthly and the long-term minimum and maximum values are 7.7 and 8.2, respectively, with a long-term average value of 8.0. The majority of the pH values fall within the very narrow range of 8.0 and 8.1. Any seasonal or long-term variation in pH was not evident. As discussed in detail above, values of pH have remained between the Draft Permit limits for pH of 6.5 to 8.3.

Chloride

Monitoring of chloride has been conducted monthly and the long-term minimum and maximum values are 53 and 210 mg/l, respectively; the average concentration is 105 mg/l. In general, chloride shows a seasonal variation similar to EC, with the highest concentrations typically during the late fall to early winter period, as shown in the figure above.

Inorganics

Monitoring of total iron, total manganese, and boron has been conducted on a monthly basis. Total iron has a maximum concentration of 1.20 mg/l with a much lower average concentration of 0.22 mg/l. The maximum concentration of 1.20 mg/l is an outlier that likely was the result of a testing error, with the next highest level being 0.34 mg/l. Total manganese has a maximum concentration of 0.79 mg/l and an average concentration of 0.28 mg/l. The results for boron are typically below the detection limit (82% of all samples, detection limit of 0.10 mg/l), while the remaining samples have quantified results ranging between 0.10 and 0.34 mg/l.

Oil and Grease

Monitoring of oil and grease was conducted on an annual basis during December of years 2005 through 2008 with a detection limit of 1.0 mg/l. For all four years, the results were ND.

This information, confirmed in the Compliance Summary in the Fact Sheet (pp. F-6 to F-7) demonstrates that the Facility has not had any violations of water quality effluent limitations. Further, it demonstrates that the discharge is extremely stable and predictable, and of no significant water quality concern that would justify frequent monitoring of effluent and receiving water.

Requests for Revisions to the Draft Permit as to Effluent Limits and Monitoring

Oil and Grease Monitoring and Limit:

The Facility has monitored for oil and grease for many years, and consistently found no detections. This is not surprising, as there are no sources of oil and grease connected to this outfall. Nonetheless, the Draft Permit *increases* the frequency of monitoring for oil and grease from annually to monthly, in addition to retaining a technology-based limit for oil and grease.

Given the new information collected in monitoring and on the absence of sources of oil and grease, the technology-based limit for oil and grease should be removed from the permit. Removal of a technology-based limit is not barred by antibacksliding prohibitions. The oil and

grease limit in the existing permit was not based on an effluent limitation guideline but instead on best professional judgment. The only effluent limitation guideline for this industry is pH.² Regional Board now has considerable additional data not available previously, showing no detections of oil and grease. We also note that adding technology-based limitations where there is an applicable effluent limitation guideline would have been a mistaken interpretation of federal law.

Even if removal of a limit is considered to be a less stringent limitation, and thus potential backsliding, it is not barred by antibacksliding regulations because it falls within two exceptions to those restrictions, under 40 C.F.R. §122.44(1)(2). Section 122.44(1)(2) allows backsliding when new information is available that was not available at the time the previous permit was issued. In addition, it allows backsliding if the revision corrects mistaken interpretations of law or technical mistakes. We would agree that the Regional Board is barred from making the pH limit less stringent than the effluent limit guidelines, but this is not the case for technology-based limits applied via best professional judgment.

Monitoring for oil and grease should be removed, if there is no effluent limit. If an effluent limit is retained, monitoring should be reduced to annually, as the burdens of more frequent monitoring are not justified.³

Hardness Monitoring:

The Draft Order requires monthly monitoring for hardness in receiving water, as well as in the effluent. According to the SIP, monitoring for hardness is only required where there is a limit for a hardness-dependent metal. Here, there is no such limit and hardness monitoring should be limited to events when CTR metal scans are required.

The Fact Sheet shows that the Regional Board has calculated applicable CTR objectives based on 33 receiving water hardness monitoring events, and uses the lowest hardness observed (15 mg/l). Thus, there is no statistical benefit to collecting a large number of hardness samples. There were three hardness values measured in effluent, which have not significantly affected the calculations in the Draft Order given the low hardness, and dominance of flows in the St. Johns River. Even with the extremely low hardness value used in the current calculations, no reasonable potential has been shown for hardness-dependent metals. We request that monthly hardness monitoring in receiving water and effluent be removed, and that the MRP require hardness monitoring only in conjunction with monitoring for hardness-dependent CTR metals.

Copper: Because the Permit Acknowledges there is no Reasonable Potential for Copper, Monitoring for Copper aside from the CTR Scan should be Eliminated:

² As noted in the Fact Sheet (§IV.B.2), the applicable categorical effluent limits are the Standards for the Mineral Mining and Processing Point Source Category, Construction Sand and Gravel Subcategory in 40 CFR Part 436. The only effluent limit applicable under these regulations is the requirement that mine dewatering discharges not cause pH to be depressed below 6.0, nor raised above 9.0 standard units.

³ We note also that the Draft Permit calls for monthly inspection and visual observations of Settling Ponds 1 and 2, which would also detect spills in the unlikely event any were to occur. There are other Facility programs governing the handling of petroleum products within the areas of the Facility where this occurs, which are well outside the area that is dewatered and provides the water to E-1.

The Fact Sheet indicates that the data showed no reasonable potential for copper, which is not surprising given the absence of any source of copper and no detection in the effluent to date. Specifically, § 3.c.i.b of the Fact Sheet concludes as follows:

The discharge does not demonstrate a reasonable potential to cause or contribute to an exceedance of a water quality standard for copper for the following reasons: 1) copper was only detected in one of three samples for both the effluent and the receiving water; 2) the one detected receiving water result is an estimated concentration and does not provide an adequate level of scientific certainty to use as evidence that the receiving water exceeds criteria; 3) the estimated receiving water result marginally exceeds (i.e., less than two tenths) the criterion of 1.74 µg/L; and 4) the estimated effluent concentration (0.8 µg/L) is less than half the copper criterion, which is based on the lowest upstream receiving water hardness of 14 mg/L.

The annual effluent and receiving water monitoring for copper should therefore be eliminated. Copper will also be covered in any CTR priority pollutant scan required under the permit, which would be a more appropriate place to address any confirmation of reasonable potential.

Iron: Because the Permit Acknowledges there is no Reasonable Potential for Iron, Monitoring for Iron should be Eliminated:

The Fact Sheet § 3.c.i(c) confirms based on extensive monitoring data that there is no reasonable potential for iron, and there is no effluent limit for iron. Yet monthly monitoring of the discharge and receiving water for total and dissolved iron is required. Both forms of monitoring should be eliminated from the MRP.

Boron: Because there is no Reasonable Potential for Boron, Monitoring for Boron should be Eliminated:

The Fact Sheet § 3.d.ii(b)(i) confirms based on extensive monitoring data that boron concentrations in the discharge consistently fall below the receiving water objective of 1.0 mg/l, as follows:

Boron. A review of the Discharger's monitoring reports shows an average effluent boron concentration of 0.17 mg/L, with a range from 0.1 mg/L to 0.34 mg/L. These levels do not exceed the Basin Plan water quality objectives for boron.

Therefore, there is no reasonable potential for boron. Appropriately, the Draft Permit contains no effluent limit for boron. Yet monthly monitoring of the discharge and receiving water for boron is required. Both forms of monitoring should be eliminated from the MRP.

EC, TSS and Setttable Solids Monitoring Frequency should be Reduced:

Monitoring for these constituents weekly is overly burdensome given the years of data showing that discharge quality is stable and is well within limits. Monitoring for EC twice per week is unjustified. The Fact Sheet finds no reasonable potential for EC or salinity. We request that monitoring for EC, TSS and Setttable Solids be reduced to quarterly.

Total Recoverable Metals and Priority Pollutant Monitoring should be Reduced:

The permit requires non-metal priority pollutant scans twice during the permit term, and total metal scans three times. The SIP only mandates a priority pollutant scan once to support each permit renewal, and even this can be waived for insignificant threat discharges. (SIP § 1.3.) While a waiver might be justified for this discharge, Santa Fe is willing to agree to test once before the next permit renewal.

There similarly is no reason for total metal scans to be repeated three times during the permit term. This requirement should be eliminated, and priority pollutant metals included only with priority pollutant scans with the reduced frequency described above.

Whole Effluent Toxicity Testing should be Reduced because there is no Reasonable Potential for Whole Effluent Toxicity, and this is a Minor Intermittent Discharge:

The discharge is well understood at this Facility. It is comprised solely of groundwater, along with some stormwater from areas not associated with processing operations. The effluent undergoes effective settling before discharge and has been extensively monitored over many years. There is absolutely no reason to expect whole effluent toxicity. Sampling to date has not failed the tests. Given the lack of reasonable potential and the fact that the discharge is of known, benign quality, with no variables that might introduce unknown chemicals or mixtures, the frequency of acute and chronic WET testing should be reduced from once per year to once during the permit term. Annual monitoring is particularly burdensome. This is particularly important for costly and complex chronic whole effluent toxicity testing, though there is also no reason to believe acute toxicity would be caused by this discharge.

Flow Limitation and Monitoring Changes Requested

The Draft Permit provides a daily maximum flow limit of 1.99 MGD (3 cfs); the permit requires monitoring on a daily basis. Logistically, this requires that the Facility operator observe and log, and then report, readings from a flow meter totalizer every day. This level of detailed reporting is not providing meaningful data. The Facility pumps only what is necessary to avoid flooding, and has complete functional control of the discharge rate through the configuration of its pumping system. Over the term of existing permit, the Facility's daily logging confirmed that the Facility remained below the flow effluent limit 99.8% of the time, and on only three days the Facility was very slightly over the limit, during periods of very wet conditions (and high river flows), no higher than 2.12 MGD. The average discharge rate has been far below the daily maximum, at 0.6 MGD.

We request that the flow limit be revised to be an average monthly flow of 1.99 MGD. This will allow monitoring using the present meters which provide total flow, and significantly reduce the collection of unnecessary data. Santa Fe can regulate the daily flow through its pumping set up, without having to obtain a daily reading from the meter.

We request that the monitoring requirement require monthly, rather than daily, measurements.

Use of Field Meters for Monitoring

Based on our meeting on January 5, 2011, it is our understanding that Board staff is agreeable to allowing monitoring for electrical conductivity (EC), pH, turbidity, and related parameters in the effluent and receiving water to be conducted using an appropriate field meter, as long as calibration records and a field log are maintained at the Facility and are made available during inspection.

Groundwater Impact Study and Monitoring Requirements

Draft Permit Provisions:

Groundwater Limitation -- Section V.B.1 of the Draft Permit is similar to that in the existing permit, reading as follows:

"Release of waste constituents from any storage, treatment, or disposal component shall not, in combination with other sources of the waste constituents, cause groundwater within influence of the Facility and discharge area(s) to contain waste constituents in concentrations greater than natural background quality."

Study and Monitoring Requirements -- The Draft Permit calls for an initial groundwater monitoring well workplan and reports, and ongoing quarterly monitoring. Special Provision VI.2.b (pages 20-21) requires submission and implementation of a Groundwater Monitoring Well Installation Work Plan, followed by a Report of Results and a subsequent Technical Report concerning Natural Background Quality. For each of *nine* groundwater monitoring parameters and constituents, Santa Fe must calculate background and compare natural background groundwater quality to groundwater monitored in downgradient Facility wells.

For the first time, the Draft Permit's Monitoring and Reporting Program then requires periodic groundwater monitoring. The MRP requires quarterly monitoring of groundwater depth, elevation, gradient and gradient direction, and monitoring of nine parameters and constituents, including temperature, pH, electrical conductivity, total dissolved solids, arsenic boron, chloride, iron and manganese. The Draft Permit explains the purpose of these studies and monitoring requirements as being to determine whether groundwater is being degraded by the discharge. (Fact Sheet IV.D.4.b, p. F-30 and VI.D.2.b, p. F-36.)

The only specific Fact Sheet statement addressing groundwater degradation appropriately finds that "Based on the information available, the discharge is not expected to degrade underlying groundwater; therefore, the discharge is consistent with Resolution No. 68-16." (D.4.b, p. F-30) Nonetheless, the same paragraph follows with a statement citing vague potential concerns derived from an unidentified Regional Board investigation from the early 1990s, which we have been unable to corroborate:

A Central Valley Water Board investigation conducted in the early 1990s confirmed that conditions conducive to the conversion of insoluble iron and manganese to more soluble forms can occur in gravel mining recycle and wash water ponds. Anecdotal data from sites where organic wastes are land applied indicate that arsenic in the soil column is also

converted under reducing conditions to more soluble forms and leached to groundwater at levels exceeding MCLs.” (Fact Sheet page F-36, V.D.2.d.)

When we inquired of Regional Board staff regarding the cited investigations, which are not known in the industry to our understanding, we learned that there are no actual reports of investigations by the Regional Board, and there were no Regional Board investigations or formal studies showing these problems representing a known risk at aggregate mine sites. Whatever anecdotal concerns may have been informally talked about years ago have never resulted in evidence of actual problems. This Facility also does not involve application of concentrated organic wastes to land of a type that might have raised arsenic concerns elsewhere.

We further note that more recently, in 2008, the San Francisco Bay Area Regional Board issued an NPDES General Permit for discharges of process wastewater from aggregate mining, sand washing and sand offloading facilities (Order No. R2-2008-0011), which requires no groundwater monitoring. This sister agency, which reviewed conditions at a number of facilities, found no reason to believe there is a potential threat at aggregate mine facilities.

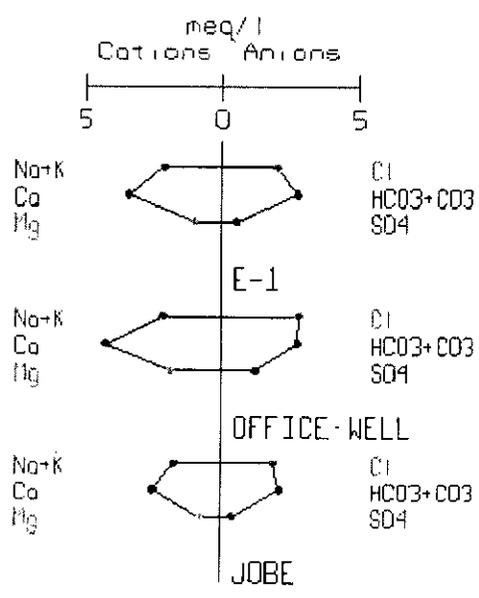
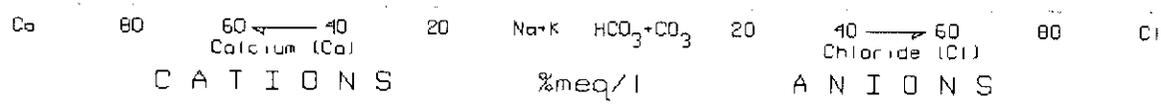
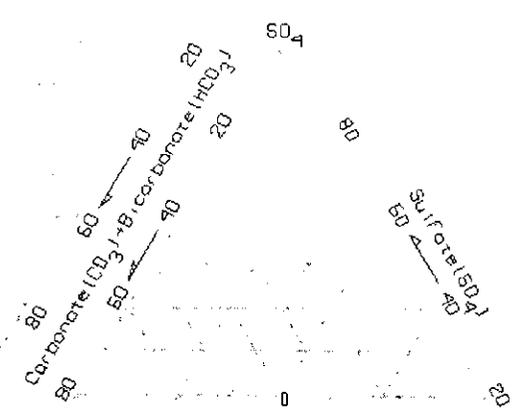
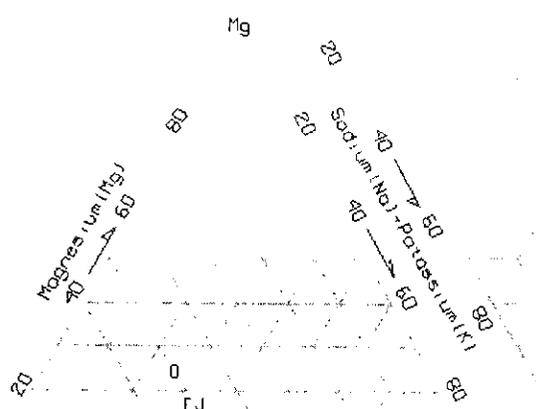
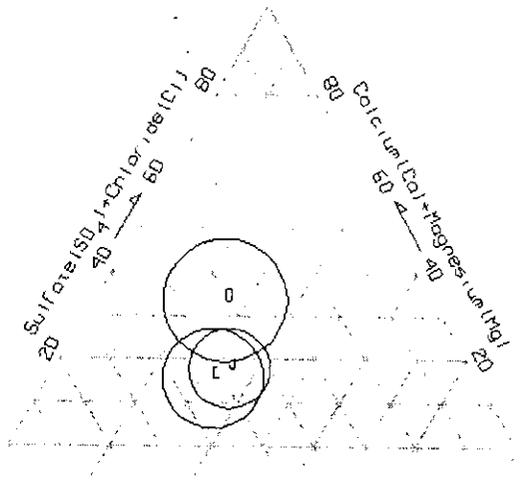
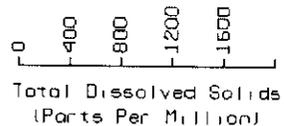
Information Demonstrating No Potential to Degrade Groundwater:

Santa Fe understands that the Regional Board must consider the potential of a facility's discharges of waste to degrade groundwater. However, at this Facility there is ample site-specific data demonstrating that there is no potential for degradation. Therefore, the Draft Permit should be revised to delete Provision VI.2.d and the quarterly groundwater monitoring requirements.

In December 2010, the Facility collected groundwater quality data from an upgradient well next to the Facility office (the “Office Well”), from the E-1 discharge (which is primarily groundwater), and from a downgradient well within the recharge area (the “Jobe” well). These samples were analyzed for general mineral parameters and metals to allow evaluation of standard water-quality and water-type studies (for example, per USGS Water-Supply Paper 2254, *Study and Interpretation of the Chemical Characteristics of Natural Water*). The data have been plotted on standard Stiff Plots and a Piper Diagram, as shown below. The data shows that the groundwater at all three locations (the E-1 discharge at the time of sample collection consisted almost entirely of groundwater being dewatered from the pit) is of the same type – a calcium-bicarbonate water. Most notable was that for all major ions and metals, concentrations were slightly higher in the upgradient Office Well and were lower at the downgradient locations.

The data clearly demonstrate that, after more than a half-century of operation, there is no evidence that the Facility has had any influence on downgradient groundwater quality.

E E-1
 O OFFICE-WELL
 J JOBE



Further, ongoing monitoring at outfall E-1 provides a "sentry" system that would detect any significant changes in the groundwater constituents relevant to this discharge, as the discharge is itself comprised almost entirely of groundwater pumped from an area downgradient of the processing Facility and settling ponds.

Arsenic should not be Included in the Groundwater MRP and Study

There is no evidence of arsenic in the discharges from the Facility. We presume that arsenic was included as a carry over from another type of permit, since the only mention of arsenic in the Fact Sheet is a statement referring to anecdotal data concerning the land application of organic wastes. (Page F-36.) No organic wastes are discharged at this Facility. In the event that groundwater studies or monitoring are retained, please delete reference to arsenic in the Fact Sheet and MRP.

Resolution 68-16 and the Basin Plan do not Require Groundwater Monitoring

The Regional Board does need to evaluate whether there is reason for concern about groundwater degradation from discharges of waste, of course. Any degradation is subject to the applicable requirements of Resolution 68-16, the State's antidegradation policy. However, here, the monitoring of Facility effluent already provides information on the quality of groundwater downgradient of relevant operations, and Santa Fe has provided a technical analysis demonstrating the lack of potential for impacts to groundwater. The Regional Board is not compelled by Resolution 68-18, the Basin Plan or the Water Code to require groundwater monitoring, and it would be an unreasonably burdensome requirement to monitor in this situation, where the data already demonstrate the Facility does not affect downgradient groundwater and the discharge monitoring already occurring at E-1 demonstrates the stability of groundwater quality beneath the Facility.

We appreciate the Regional Board's attention to these comments and requests. Please do not hesitate to contact me if you have any questions about them.

Sincerely,



Bruce Bunting
Plant Manager
Kaweah River Rock Plant
Santa Fe Aggregates

cc: Lonnie Wass
Aide Ortiz
Matt Scroggins
Katharine Wagner
Andy Kopania