SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

HEARING REGARDING
ADMINISTRATIVE CIVIL LIABILITY COMPLAINT
NO. R9-2010-0085
ISSUED TO

EASTERN MUNICIPAL WATER DISTRICT,
TEMECULA VALLEY REGIONAL WATER RECLAMATION FACILITY

SCHEDULED FOR OCTOBER 13, 2010

ARGUMENT IN SUPPORT OF
EASTERN MUNICIPAL WATER DISTRICT'S
POSITION BY GENERAL COUNSEL,
GERALD D. SHOAF OF REDWINE AND SHERRILL

EXECUTIVE SUMMARY OF KEY POINTS

1. The proposed punishment does not fit the "Crime"

2. The spill did not cause actual harm to beneficial uses.

3. The designation of the Step 2 deviation factor as "moderate" rather than "minor" is unsupported.

4. The selection of a 1.3 multiplier for the Step 4 adjustment for culpability is inappropriate.

5. The selection of a 1.1 multiplier for the Step 4 adjustment for "History of Violations" is inappropriate.

BACKGROUND CIRCUMSTANCES

The Eastern Municipal Water District ("EMWD") has been cited for a violation of Discharge Order No. R9-2000-0165 as the result of a spill of sewage on December 25, 2009, that overflowed the Headworks at EMWD's Temecula Valley Regional Water Reclamation Facility,

flowed across a parking lot and through a series of drainage ditches, reaching the Murrieta Creek Channel.

Headworks

The Headworks is where the sewage flows into the treatment plant from EMWD's service area; there are mechanical devices in the Headworks called "Bar Screens" which move back and forth to remove rags, paper and other things that can clog up the treatment processes. The Headworks are operated through an electronic device called a PLC for "Programmable Logic Controller" formerly called a "YIC," for reasons no one can recall. The plant itself has 14 of these PLC's in this part of the operation. PLC 12 that runs the Headworks reports to a supervisory PLC, PLC 10 (known as the "Watchdog") whose function is to monitor the other 13 PLC's and report any failures or problems through the SCADA ("Supervisory Control and Data Acquisition") System. These reports are in the form of computer screen schematics depicting the particular operation and annunciator "pages." Refer to the schematics and annunciator pages attached to the Declaration of Robert Naranjo [Power Points]. Any failures involving any Headworks operation would show up on the Headworks screen and alarms would show up on the YIC 12 (now PLC 12) screens. For example, alarms regarding the Grit System or Ragwasher in the Headworks would show up on the first screen; a communication failure involving PLC 12 would show up on the third screen.

Events on December 25, 2009

Last Christmas afternoon, the power to PLC 12 was erratically reduced because the underground wires supplying the power were intermittently arcing. Weeks later it was discovered that this was because the insulation on some of the wires had apparently been damaged during installation several years earlier and deterioration had allowed them to begin

arcing. The damaged areas were in an underground conduit where the damage could not be seen. As a result of the arcing, the Bar Screens stopped operating, but, as explained in a minute, the Headworks screen continued to show them operating.

Robert Naranjo is the Wastewater Plant Control Technician assigned to the Temecula Valley plant. Art Beavens of Beavens Systems, Inc., is also very familiar with the Temecula Valley SCADA System, including PLC 12. As these gentlemen explained in their Declarations, had the wires arced permanently, and all power to PLC 12 lost, the result would have been not only that the run commands would stop being sent by PLC 12 to the Bar Screens, but also the SCADA Screen for the Headworks would have shown the Bar Screens in red, indicating that they were not running, or that there was a communication failure. The fact that the power was only reduced, however, caused PLC 12 to stop communicating with PLC 10, but allowed PLC 10 to continue to report the last information it had received from PLC 12 and continue to show the Bar Screens on the SCADA Screen in green and as operating.

This is important for a couple of reasons.

James King, the Treatment Plant Operator on duty that day, had been fighting problems with the Grit System and a thing called the "Ragwasher" in the Headworks for a couple of days. Christmas morning it appeared that these problems had been addressed, at least temporarily. Since it was Christmas Day, Mr. King was permitted to go to on-call status at home where any problems would be reported by PLC 10 to the District's IOC ("Integrated Operations Center") which would relay the information to Mr. King by telephone. Between 3:00 and 4:00 that afternoon, a "communication failure" alarm was reported by PLC 10 to the IOC which informed Mr. King that it had received an alarm. Mr. King "acknowledged" receiving this information from his laptop computer, thereby releasing the IOC from further responsibility. The procedure

was for him to check the Headworks' screens to see what the problem was. In bringing up the Headworks Screen on his laptop, Mr. King assumed the problem was related to the earlier problems he had been experiencing with the Grit System and the Ragwasher in the Headworks. The Headworks Screen, however, as reported by PLC 10, showed everything was operating normally. Mr. King relied on the information from the Headworks SCADA screen did not bring up pages 2 or 3 of the PLC 12 annunciator and took no further action.

Since the Bar Screens were not operating, sewage debris clogged the outflow and the Headworks overflowed, leading to the spill. The rest, as they say, is history. When plant personnel arrived at work the next morning at 6:00 A. M., the spill was detected, the screens were manually bypassed and cleared, reports were made, and the cleanup began immediately.

Estimates of the Spill

When PLC 12 stopped issuing run commands, it also stopped recording the metering information on flows to the Headworks. The District's quick analysis, performed within a few days and based on the highest flows during the preceding week, resulted in an estimate that the spill totaled 2.39 million gallons. I have been doing work for EMWD since 1971 and have been its General Counsel since the early 80's, nearly 30 years. I know these people and how they operate very well. They are hard working and honest and straightforward, sometimes to a fault. For example, in basing the amount of the spill on the highest daily average during the preceding week, they were being extremely conservative, to avoid the appearance that they were playing with the numbers. The shock of the initially proposed fine, however, got their attention, and further examination revealed that in fact Christmas Day was a low flow day. Ultimately, EMWD's Staff proposed to revise the flow downward from 2.39 million gallons to 1.6 million gallons, representing the average flows for the weeks before and after the spill. The Regional

Board Staff agreed to that amendment and revised the proposed penalty accordingly, something we very much appreciate.

Nevertheless, based on its perception of the State Board's Water Quality Enforcement Policies ("EP"), the Staff's analysis has resulted in a proposed fine of $524,800.00, even after the adjustment.

Regional Board's Role

Your role in this process is to verify that the proposed penalty is both reasonable and just. Water Code section 13327 mandates the elements that you shall take into consideration in determining the amount of the penalty, reading as follows: [See Power Point.]

> "In determining the amount of civil liability, the regional board, and the state board upon review of any order pursuant to Section 13320, shall take into consideration the nature, circumstance, extent, and gravity of the violation or violations, whether the discharge is susceptible to cleanup or abatement, the degree of toxicity of the discharge, and, with respect to the violator, the ability to pay, the effect on ability to continue in business, any voluntary cleanup efforts undertaken, any prior history of violations, the degree of culpability, economic benefit or savings, if any, resulting from the violation, and other matters as justice may require."

In addition, the EP requires, among other things, that the penalty should "bear a reasonable relationship to the gravity of the violation and the harm to beneficial uses or regulatory program resulting from the violation." EP, Section VI A, p. 10.

We believe that, taken together, these provisions require you to determine that "the punishment fits the crime" (Koko, as the Lord High Executioner, in Gilbert & Sullivan's "The Mikado"). For reasons I'll explain, the proposed penalty does not do that.

State Board's Enforcement Policy

The State Board's Enforcement Policy is new and the formula and factors are somewhat difficult to follow. There is little guidance for application in the real world and no prior

decisions to look to for precedent. We are all trying to navigate these unchartered waters. EMWD appreciates what Staff is trying to do, and we have no doubt that their efforts are sincere. However, we disagree with a number of their conclusions either because our interpretation of the intent of the language in the EP and the Water Code is different and/or because there are no facts that support the Staff's conclusions. To better explain these differences, I would like to briefly review the "rules" involved, as I understand them.

Formula for Calculating the Penalty

The formula is set out in the EP under "A Penalty Calculation Methodology," pages 9-22. In summary form, the portions that are relevant here are Steps 1, 2 and 4. Step 1 – "Potential for Harm," has three factors that require numeric ranking, i.e., (1) the harm or potential harm to beneficial uses; (2) the degree of toxicity of the discharge; and (3) the amount of cleanup. The total of the three numbers assigned to factors 1, 2 and 3 are used in Step 2 to determine the numeric "Deviation from Requirement," i.e., "the extent to which the violation deviates from the specific requirement in the Permit; in this case, the Permit prohibited discharge of untreated sewage; using that deviation number, a specific per-gallon charge can be determined, depending on whether the deviation is considered to be "minor," "moderate," or "major." That per-gallon charge is then applied to the amount of the spill and the result in high volume discharges, as in this case, is multiplied by $2.00 per gallon to arrive at the "initial ACL amount." Step 3 involves per-day assessments and nondischarge violations and does not apply in this case. Step 4 involves three adjustment factors which again are assigned numeric values, i.e., (1) culpability; (2) cleanup and cooperation; and (3) history of violations. The initial ACL is then multiplied by each of these three numbers to arrive at the "Total Base Liability Amount" which, in this case, is proposed to be $524,800.00.

Areas in Contention

I submit that the Staff's conclusions are unsupported in four areas: (1) Harm to Beneficial Uses; (2) Deviation from Requirement; (3) Negligence; and (4) History of Prior Violations; the latter two are both found under "culpability" in Step 4 "Adjustment Factors."

(1) **Harm to Beneficial Uses**

On page 8 of its Technical Analysis, the Staff concluded that "the discharge of untreated sewage to Murrieta Creek harmed avifauna, mammals, reptiles, amphibians, and fish within the impact area." (Emphasis added.)

Immediately after the spill, EMWD commissioned an environmental damage assessment by Tom Dodson and Associates which took place on December 29. The survey was conducted by Ms. Shay Lawrey. In her initial report, Ms. Lawrey reports sighting some critters and assumed from other reports that other critters were in the area. She assumed they were present "and that they absorbed direct impacts from the spill. ("Biological Resources Damage Assessment, (Etc.))," dated January 25, 2010, page 6 ("1st Assessment Report"). She also noted that "no dead or dying fauna was observed in the study area. (Id., pg. 4.) She noted that "visible signs of the spill were present in the form of an oily film slicking over the pooled areas and floating organic material ... mostly concentrated in pooled areas along the west side of the channel." (Id., pg. 5.) She noted that "potential impacts are not easily determined or mitigated" (Id., pg. 6), but that "sewage spill impacts ... may be ameliorated naturally ..." and that "it is expected that the habitat in the impact area will recover to a pre-spill condition naturally." (Id., pg. 7.) Nowhere did Ms. Lawrey describe actual harm to any critters.

EMWD commissioned a follow-up assessment which was performed by Ms. Lawrey on June 3. Her July 15 report ("Spring 2010 Follow-Up Habitat Monitoring Report (etc., hereafter 'Follow-Up Assessment')" dated July 15, 2010) noted that

> "The surveyors noted that the wetland, riparian and aquatic habitats found within the survey area were growing in a lush and healthy manner" and noted seeing many birds, "a fairly diverse group of reptiles and amphibians" and "many fish … swimming in the pools ..." in the survey area. (Id., pg. 5.)

Ms. Lawrey's conclusions include the following: "One of the primary unknowns following the December 25-26 sewage spill was the level of biological harm potentially caused by additional nutrients, toxins and pathogens that were introduced into the creek as the result of the spill." (Id., pg. 6.)

…

"Several other observations made during the June, 2010 follow-up survey can serve to ease some of the concerns over possible spill-related harmful effects to flora or fauna" (Id.)

…

"As of June 2010, there were no apparent signs that the spill resulted in the residual, deleterious affects to flora or fauna occurring in the impact area." (Id., pg. 7.)

Unfortunately, the Staff did not have the benefit of Ms. Lawrey's Follow-up Report when drafting the Technical Analysis. They have since received the Follow-up Report but, despite several requests, have refused to reconsider their numeric value of 3 assigned to Factor 1 of Step 1, based on their conclusion that the spill "resulted in moderate harm or potential harm to the beneficial uses of Murrieta Creek," Technical Analysis, page 4.

This leaves no factual support for the Staff's conclusion that the spill caused actual harm to beneficial uses. That leaves only potential harm available for that support.

The EP categories of "harm" under Step 1 "Potential for Harm for Discharge Violations," include Factor 1 – "Harm or Potential Harm to Beneficial Uses;" Factor 2 – "The Physical, Chemical, Biological or Thermal Characteristics of the Discharge"; and Factor 3 – "Susceptibility to Clean-Up or Abatement."

Despite the references to "potential" harm, in the Step 1 and Factor 1 titles, I submit that where actual harm, or the lack thereof, is documented, then "potential harm" is no longer a factor in the analysis. It is logical and reasonable to interpret that language as expressing an intent that where the actual harm, or lack of harm, is known, that information should be used rather than the potential for harm in the abstract. To analogize using an example in an everyday context, to demonstrate why only using potential harm as a basis for a penalty is not appropriate, if the potential for harm could be the basis for penalties in auto accidents, then in an accident without injuries, a driver who is responsible could be charged for an accident "with injuries" because that could have happened. I submit that the intent of the language in the Enforcement Policy regarding potential harm is that if actual harm cannot be determined, then a factually supportable estimate of potential harm is all that is available and should be used. This conclusion is not inconsistent with the statement on page 9 of the Enforcement Policy that "civil penalties do not depend on proof of actual damages to the environment" because that statement does not address situations where the damage is known or the lack of damage has been verified.

So where does that leave us? The Staff concluded that the appropriate category under Step 1, Factor 1, was "Moderate" which the EP describes as

> "Moderate threat to beneficial uses (i.e., impacts are observed or reasonably expected and impacts to beneficial uses are moderate

> and likely to attenuate without appreciable acute or chronic effects)."

The only support given in the Technical Analysis for the selection of the "moderate" category is in the form of references to the First Assessment Report by Shay Lawrey, quoted above. The value assigned to "Moderate" is 3.

The other categories set out in the EP under Factor 1 includes "0 = Negligible—no actual or potential harm to beneficial uses; 1 = Minor—low threat to beneficial uses (i.e., no observed impacts but potential impacts to beneficial uses with no appreciable harm; and 2 = Below moderate—less than moderate threat to beneficial uses (i.e., impacts are observed or reasonably expected, harm to beneficial uses as minor."

Inasmuch as no actual harm to beneficial uses has been demonstrated here, it appears that "0—negligible" is more appropriate than "3—Moderate." At most, it should be "1—Minor."

Either the "Negligible" or "Minor" categories is also more appropriate regarding the Staff's claim that REC—2 Beneficial Uses and the water quality "needed to sustain the WARM and WILD beneficial uses ..." were adversely affected. See Technical Analysis, page 10.

With respect to the recreational uses, there are not any recreational uses in this stretch of Murrieta Creek. The section of Murrieta Creek affected by the spill is in an industrial area of Temecula; according to Shay Lawrey,

> "The entire study area is disturbed by human influence. The surrounding land use is industrial and commercial. The center-flow channel is affected by flood control vegetation management and additional human intrusion in the channel include Via Montezuma Road and the Rancho California Road bridge crossing and abutments. Buildings occur adjacent to both banks."

First Assessment Report, page 4. See also the photographs attached to the Declaration of Jayne Joy which shows the nature of the area [Power Point]. Again, the Technical Analysis deals only with potential effects and does not cite any actual impacts to assumed recreational uses.

Similarly, no actual harm to water quality affecting the WARM and WILD beneficial uses has been shown and in fact, Ms. Lawrey's Follow-up Report demonstrates that there was no such harm. The score here should be a "0" or at least a "1," not a "3."

(2) Deviation Element

The explanation for "Minor" and "Moderate" categories is found under Table 1 on page 14 of the EP. [Power Point.] In this case, the spill was immediately stopped upon discovery, was cleaned up within 24 hours, and steps were taken to make sure that the reasons for the discharge would not recur. Does that not reflect a "general intent by the discharger to follow the requirement" and does not "the requirement remain generally intact"? How can it be said that "the effectiveness of the requirement is only partially achieved"? If the "Minor" and "Moderate" categories are inconsistent, I submit that the "Minor" category more clearly applies. The Staff's support for choosing category 2, "Moderate," gave no factual reasons for that selection other than to repeat the language in the EP. The difference between the two categories is ten cents (.10¢) per gallon, or $160,000.00.

In addition, if the "score" under Step 1, Factor 1 is reduced from a "3" to a "0," a "1," or a "2," then the proposed penalty would be reduced even further.

(3) **Negligence.**

The initial Required Technical Report submitted by EMWD on March 3, 2010, gave a number of reasons for the spill, all pointing to things that could or should have been done that would have prevented the spill. At that time, however, the true cause and effect of the arcing wires was not appreciated and that factor was not mentioned.

Hindsight is a great teacher. We now know what would have avoided the spill and those things have been done. However, that does not mean that the District was negligent in not doing them earlier.

"Negligence" is doing something that a reasonable man would not do or refraining from doing something that a reasonable man would do.

If the damaged wires had shorted out completely by cutting off all power to PLC 12 rather than arcing intermittently and only reducing the power to PLC 12, we would not be here. As the Declarations of Art Beavens and Robert Naranjo show, PLC 12 was not defective; it did not fail. It is still in use today. Should the District have foreseen the possibility that the wires were damaged and the other unique set of circumstances leading to the spill, i.e., the arcing, the prior problems with the Grit System and Ragwasher, the reduced power that resulted in PLC 10 showing that the Headworks System was continuing to operate properly when James King looked at the Headworks SCADA Screen after receiving the alarm call from the IOC? Hindsight indicates that Mr. King should have looked at the third screen which showed the PLC 12 alarm, but would other operators have likely done differently under the same circumstances?

Again, we would not be here but for the arcing wires. Was the cause of the spill an accidental equipment failure or the result of the District's negligence? I submit that it could as easily have been classified as an accident rather than the result of negligence.

Step 4—Adjustment Factors, Table 4—"Violator's Conduct Factors," EP, page 17, states that adjustments to the amount of liability should be made and should be based on the "degree of culpability" involved and further that

> "Adjustment should result in a multiplier between **0.5** to **1.5**, with the lower multiplier for accidental incidents, and higher multiplier for intentional or negligent behavior."

Despite the fact that legally intentional misconduct is always treated more harshly or seriously than negligence, in this case, the Technical Analysis assigns a multiplier of 1.3 which indicates an assumption that the negligence was at least gross negligence, bordering on intentional misconduct.

As mentioned above, given the fact that the PLC 12 and the SCADA System had not experienced a similar problem over many years of operation that would have alerted EMWD to the possible problem that led to the spill, this spill could as easily have been classified as an accident caused by equipment failure. EMWD's initial report listing the things that hindsight indicated could have been done appears to have prejudiced the Staff in favor of a higher multiplier, one bordering on an assumption of gross negligence if not intentional misconduct.

I submit that if this case cannot be considered to have resulted from an accident, then at most, it should be considered a case of ordinary negligence, with the unique circumstances serving as mitigating factors, and that the multiplier should be a "1," rather than a "1.3," representing the mid range between accident and intentional misconduct.

(4) History of Prior Violations.

Under Step 4, the Technical Analysis, at page 16, assigns a **1.1** multiplier resulting in an upward adjustment of the initial Base Liability Amount, citing "EMWD's Recent History of High Volume Spills." In support of this statement, the Technical Analysis cites one

high volume spill event in November, 2006, that occurred when a District construction crew cut into a pressurized force main resulting in a 1.07 million gallon spill. As the Technical Analysis indicates, the penalty assessed at that time was $53,500.00.

In response, it is submitted that the circumstances leading to the 2006 spill and the one involved herein are so different that the latter cannot be considered to be a "repeat" violation. In addition, "history," as used in the EP implies a number of prior violations, not just one. See the EP Summary of Step 4's Adjustment for "Multiple Instances of the Same Violation."

In addition, the citations to EMWD's SSO's do not qualify as "repeat violations." They are not "high volume" spills, averaging a few thousand gallons, and involve different circumstances than the spill that is the subject of this proceeding. Of note is the fact that EMWD's record is consistently and significantly better than the regional average with respect to SSO's. Declaration of Jayne Joy.

It is submitted that this adjustment factor should be a "1," rather than a "1.1."

CONCLUSION

In determining the appropriate penalty, one that is both just and reasonable under the circumstances, please consider the following points:

1. No actual harm was demonstrated and where actual harm or lack thereof is known to be the case, possible harm should not be a consideration. The correct category under Step 1, Factor 1, should be a "0" or a "1," not a "3."

2. The correct category under "Deviation" in Step 2 should be "Minor," not "Moderate."

3. Did the spill result from an unforeseeable equipment failure? If not and if negligence was involved, was that negligence akin to gross negligence that would justify a 1.3 multiplier in place of ordinary negligence that would result in a "1" multiplier?

4. Was there a true history of prior high volume repeat spills that would justify an adjustment multiplier of 1.1?

I respectfully suggest that Step 1, Factor 1 (harm to beneficial uses) should be rated at "1" at most, that the deviation category in Step 2 should be "minor" rather than "moderate," that the "culpability" and "History of Violation" multipliers in step 4 should be reduced to a "1" from "1.3," and to a "1" from "1.1" respectively.

The result would be an initial ACL of $35,200.00 which, because of the mitigating circumstances surrounding the cause of the spill, is in line with the penalty for the 2006 spill. Adding the $55,000.00 EMWD has spent in clean-up and modifications, the total is nearly $100,000.00 which I submit would satisfy the intent behind the State Board's Enforcement Policy.

Thank you for your time and consideration.

DATED: September 21, 2010

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