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PARTIAL TRANSCRIPT:

Item 6. Las Gallinas Valley Sanitary District, Sewage Treatment Plant and Wastewater Collection System, San Rafael, Marin County – Reissuance of NPDES Permit and Rescission of Cease and Desist Order

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Item 6. Las Gallinas Valley Sanitary District, Sewage Treatment Plant and Wastewater Collection System, San Rafael, Marin County – Reissuance of NPDES Permit and Rescission of Cease and Desist Order

MR. WOLFE: Item 6 is Consideration of Reissuance of NPDES Permit and Rescission of Cease and Desist Order for the Las Gallinas Valley Sanitary District. Marcia Liao is going to make the staff presentation and we do have two parts to this presentation. The first part will focus on toxicity testing, and then we'll talk more specifically about the permit reissuance, itself.

MS. LIAO: Good morning. My name is Marcia Liao. I am an Engineer working in the NPDES Wastewater Division.

MR. WOLFE: Turn the microphone closer. There we go.

MS. LIAO: Okay. My presentation today is on the Permit Reissuance for the Las Gallinas Valley Sanitary District. And my presentation will be in two parts.

The first part will be a brief introduction of toxicity testing. This is

because toxicity is the central issue of this permit reissuance and we are proposing to impose new numeric chronic toxicity limits that the District and the other commenters oppose. We will answer any questions you may have after this first part.

And in the second part, I will cover the specific issues being raised by the commenters on the Las Gallinas Permit Reissuance. And we will take questions after that part, as well.

Part 1 is toxicity testing and its role in the NPDES Program. I will explain why toxicity testing is necessary, what a toxicity test is, and how toxicity tests are conducted, and then what must be done when toxicity is found.

Why is toxicity testing necessary? First, toxicity testing has been a fundamental part of wastewater regulations since the Board's first Basin Plan in 1975. That Basin Plan required acute toxicity testing and set effluent limits. And in the 1980's the Board added requirements for chronic toxicity.

Toxicity testing provides a means to directly evaluate compliance with the Basin

Plan's narrative water quality objective for toxicity, which is for all surface water to have no pollutants in toxic amounts.

Second, there are potentially millions of chemicals in wastewater, although chemical specific testing also would provide crucial information for the protection against toxicity. But we only have tools to evaluate, to measure, relatively few of them, and we have water quality criteria for even fewer of them. So chemical specific testing has limitations and we need something else.

Furthermore, wastewater is a mixture of chemicals. Toxicity testing allows us to evaluate holistically the soup of chemicals that could be in wastewater. Therefore, toxicity testing is necessary and an integral part of NPDES wastewater permits. It is not uncommon for effluents from a treatment plant to comply with all chemical specific limits, but fail a toxicity test. Las Gallinas is just one such example.

So what is a toxicity test? First, I'd like to point out that toxicity testing can be performed on all sorts of soil and water samples. But for today's presentation, I would just focus

on effluent samples from wastewater treatment plants.

In this context, a toxicity test involves exposing live organisms to an effluent sample and observing any toxic effects on the organism compared to the control group.

The typical toxic effects observed consist of mortality, or reduced growth, or reduced reproduction. Test organisms used in toxicity tests include plants, invertebrates, and fish. This slide shows some of the typical test species that are used in wastewater testing.

Now, I'm going to explain how toxicity tests are conducted. There are two types of toxicity tests, acute and chronic. This slide is for acute. Acute toxicity tests measure mortality for 96 hours, which is four days. The test organisms used in this region are fish. To conduct this test, the fish are placed in tanks containing 100 percent effluent, and other fish are placed in the control tanks containing pure lake water. After each day, the number of dead fish is counted and the dead fish are removed. After 96 hours, the total number of dead fish is compared to the control group, to the total

number in the control group. So that's how Acute toxicity tests are conducted.

For Chronic tests, the toxicity effects include mortality, as well as sub-lethal responses on growth and reproduction. Some Chronic toxicity tests can take just one hour, such as the sea urchin test which measures a percent of fertilization. The most tests run more, it takes about two to seven days, both Acute and Chronic tests share the mortality end point, and the main difference there is the Chronic test takes longer, it is seven days, compared to four days of Acute toxicity tests.

Also, in Chronic tests, the organisms are placed in a series of effluent samples at different dilution ratios, plus a control. The toxic end points is measured for each dilution and compared to the control. The lower the percent effluent found to be toxic, the more toxic the effluent is. Because a lower percent effluent showing toxicity shows a more toxic effluent, so toxicity is commonly expressed in terms of Toxicity Unit, or TU. Higher TU means higher toxicity. If an effluent is not toxic at 100 percent effluent, then the TU is 1.0. For

example, if the effluent has to be diluted to 50 percent that is to say by a factor of 2 in order not to be toxic, the TU will be 2, that's 100 divided by 50, and TU is 2, and effluent is toxic. So at one TU, the effluent is non-toxic. Above 1 TU, it is toxic.

So what if toxicity is found? The Basin Plan specifies triggers for accelerated monitoring if toxicity is found. For shallow water dischargers like Las Gallinas, accelerated monitoring is triggered when a single test finds a 2 TU (Toxic Units), or if two of the most recent three samples exceed 1 TU, if accelerated monitoring finds that chronic toxicity is consistent, the Basin Plan requires that the Dischargers conduct toxicity reduction evaluation to identify the cause of the toxicity and to find ways to eliminate it. In this region, these Water Permits have included this requirement for decades.

So this concludes part 1 of my presentation. I will pause here so that we can answer any questions you may have.

CHAIRPERSON YOUNG: You should go into teaching.

MR. WOLFE: Oh, good, I'm glad that it was clear and direct, there will be a quiz.

MR. KISSINGER: Before you go on, there is in the materials, and you'll talk about it but it's probably worth talking about in the context of this sort of academic exercise, can you say a little bit more about whether Toxicity Units Acute and Toxicity Units Chronic are both in an equal usage over the years, or whether one is more commonly implemented than the other?

MS. TANG: I would say another part -- this is Lila Tang, I'm with the Water Board, and I took the oath -- in other parts of California, the Nation, Toxic Units for Acute toxicity is used, but not in this region because the Basin Plan specifies what our Acute toxicity is and there's really no point in it because the tests only involve 100 percent effluent anyway, and so the way the Basin Plan defines what acute toxicity is, you must have a certain level, or you cannot have any mortality beyond a certain level, which around 70-90 percent. So there's no benefit in then converting that to a Toxic Unit of Acute Toxicity. Does that -- but it is used in other parts.

DR. MUMLEY: This is Tom Mumley, maybe a simple response, as well, is this Board has used in required Acute Toxicity limits in NPDES Permits since the mid-‘70s. We established our Chronic toxicity program via Basin Plan in the very late ‘80s, early ‘90s, and the testing in permits pretty much was the beginning of the ‘90s session. So the Acute experience has almost two decades more than Chronic.

MR. KISSINGER: Tom, can you put in context the Basin Plan for me? I’m going to reveal a little bit of my ignorance here. I don’t really understand how it fits into the framework.

DR. MUMLEY: Well, as you should know, the Basin Plan is the overarching water quality management plan for the Basin and recognizes our waters, it recognizes the designated beneficial uses of those waters, it’s where the Board has established water quality objectives to protect those uses, and then programs of implementation of those objections. Or the Basin Plan can also have other programs of implementation, programmatic, or whatever. So in that context is where we have the narrative water quality

objective that's been in place from the first Basin Plan, in shorthand, no toxic pollutants in toxic amounts in receiving water. And to implement that, the Basin Plan established, called for acute toxicity effluent limits in permits, as I said, that started in 1990, so the idea is it's associating those limits with attaining those objectives. There was also some value, we learned back then, and I could get into the history, but in the early '70s it was not uncommon to find Acute Toxicity in treated wastewater due to a number of factors like they're new plants, there were performance issues, and the toxicity limits served as a strong performance measure to get plants operating better and consistently.

MR. KISSINGER: And does that come out of the Clean Water Act? Or does that come under Porter-Cologne?

DR. MUMLEY: Well, the Basin Plan is the foundation of both Clean Water Act and Porter-Cologne. They dovetail well in terms of salvaging water quality standards and water quality objectives, programs of implementation, and policies that would affect permits in

specific Regulatory actions.

CHAIRPERSON YOUNG: So to reiterate the question and answer, all of the water quality criteria that come out of the Clean Water Act, the other requirements that come out of the Clean Water Act are generally subsumed into our Basin Plan. Yes?

DR. MUMLEY: Yes.

CHAIRPERSON YOUNG: And we may have more stringent requirements for some things if we have a site specific reason to do that, but the Basin Plan is supposed to incorporate everything that we are going to be implementing under both Porter-Cologne and the Clean Water Act. Is that correct?

DR. MUMLEY: Correct. And there are both State and Federal Rules and Regs that we follow in establishing water quality objectives, so Federal criteria are not automatically State Standards, the State Acts, unless EPA takes an action to unilaterally impose them on the State, so to speak. And another nuance, and hopefully not a complication, is the State Board has authority and does have the Statewide plans to protect the Statewide waters where the Ocean

Plan, Inland Surface Waters, or Closed Basin Estuary Plans, and the State Board may and can and has established water quality objectives and programs of implementation, and such, policies that could supersede the Regional Basin Plans, or direct the Basin Plans. And this toxicity issue, as State Board member Tam Doduc mentioned this morning, is an issue that's been outstanding and you will see shortly how it plays out in this permit issue.

MS. WON: Through the chair if I may, I have one point of clarification, and that is whenever we adopt Water Quality Standards or Water Quality Objectives, as we call them, in the Basin Plan, they are approved by EPA and so, in essence, they become Federalized. So it's not just that we're implementing State law.

CHAIRPERSON YOUNG: Okay. Do we need to talk at this point in time separate from the permit that is in front of us about where the chronic toxicity issue is now in terms of EPA's actions, current and potential State Board actions, and Regional Board actions? Or would you just prefer to take on that issue as part of the subsequent discussion?

MR. WOLFE: I would say let's go into the presentation specific because, really, we are focusing on this permit. And certainly it's appropriate to understand what State Board is or is not doing, but the action before you is specific to this permit.

CHAIRPERSON YOUNG: Okay.

MR. KISSINGER: On with the show.

MS. LIAO: Okay, now for part 2. Part 2 of my presentation is about the Permit Reissuance for Las Gallinas Valley Sanitary District. I will briefly describe the facility, provide the background to the Permit reissuance, and I will present our response to the comments.

I show in this slide the district is located in Marin County. The facility has a treatment capacity of three million gallons a day and serve about 30,000 people in the North San Rafael area. The treatment plant is located next to Miller Creek, which flows into San Pablo Bay, about a mile away. From November to May, the District discharges into Miller Creek. From June to October, the discharge to Miller Creek is prohibited. So at the District reclaims its effluent in a wildlife pond. That is right here.

And the nearby pasture is about 200 acres of them. It also further treats the effluent to tertiary recycled water standards for offsite users and provides effluent to another recycled water treatment facility in the area. On average, the District recycles about 21 percent of its effluent.

The District has a good compliance record during the past five years, except for one residual chlorine violation. Las Gallinas complied with all its effluent limitations, including Acute Toxicity limit, yet the District has had chronic toxicity issues. Out of 27 tests, 21 contained toxicity greater than one toxic unit and one contained eight toxic units. And as a reminder, one toxic unit means no toxicity, anything greater than one means there is toxicity.

Las Gallinas initiated a toxic reduction evaluation and identified Pyrethroids as the likely cause. Pyrethroids belong to a class of pesticides that is widely used in mosquito repellant clothing and in pharmaceutical shampoos.

So to address these sources, Las Gallinas

has worked to educate the public to reduce Pyrethroids discharge to the sanitary sewer. In addition, Las Gallinas has joined a Pyrethroid Working Group sponsored by the California Association of Sanitation Agencies. It conducts periodic sampling for Pyrethroid and shares the data with a group to help inform the California Department of Pesticide Regulations and also the US EPA Office of Pesticide Programs, informed them of the presence of Pyrethroid in municipal wastewater in levels that cause toxicity.

Consistent with a 2003 State Water Board Order, the first draft permit that we developed included a narrative limit with triggers for accelerated monitoring and toxicity reduction. EPA reviewed our Administrative Draft and wrote a preliminary objection letter asserting that the District's discharge shows a reasonable potential to exceed the Basin Plan's narrative toxicity objective. Therefore, EPA said Federal Regulations require numeric limits.

So we revised the Draft Permit developing numeric chronic toxicity criteria and we calculated the numeric limits following the same approach used for many chemical specific

pollutants. The limits we derived allow for some mixing from Miller Creek.

The Revised Tentative Order also retains the same triggers for accelerated monitoring as in previous permits and as required by the Basin Plan. These triggers are lower than the effluent limits, proposed limits.

The District Bay Area Clean Water Agencies, California Association of Sanitation Agencies and the US EPA all commented on the chronic toxicity requirements. US EPA gently supports it, I mean supports our approach. The other commenters from the Municipal Wastewater Community oppose it. Their comments are similar, so we will refer to them collectively as the Wastewater Commenters. They bring up five substantial issues.

Issues 1 is that the Wastewater Commenters would like the Board to defer adoption of numeric limits until after the State Water Board adopts a statewide toxicity plan. They believe the 2003 Board Order prohibits the Regional Board from establishing numeric chronic toxicity limits. They also claim EPA has accepted the narrative approach used to date.

Our response is that numeric limits are necessary and appropriate. EPA says Federal Regulations require numeric limits and EPA now supports numeric limits. In fact, back in 2003, EPA Supported the narrative approach only as an interim measure to allow the State Board some time to develop a statewide plan. The 2003 State Board anticipated that a policy would become completed within one year, but it has been 12 years and the State Board has not adopted such a policy.

CHAIRPERSON YOUNG: May I ask a quick question on this slide? The commenters have suggested that the 2003 State Board Order prohibits us from adopting numeric limits, and what is our response to that specific interpretation?

MS. WON: I could try to answer that. So in 2003, the State Board imposed narrative limits in place of numeric ones in a permit that it was reviewing in a petition, and in doing so the State Board expressly stated that it declined to make a determination as to whether numeric limits are appropriate, so that comment is incorrect in that sense. The State Board instead wanted to

take up the matter in a regulatory setting, specifically an amendment to the State Implementation Plan, and they envisioned doing it, as Marcia said, within one year, but it hasn't done so and chronic toxicity exceedances continue to be an issue. US EPA has now disavowed the 2003 State Board Order approach and, based on these differing circumstances and facts, my take is that the Board is within its discretion to impose the numeric limits, especially since, based on my reading of the Regulations as to chronic toxicity numeric limits seems to be required.

MR. KISSINGER: Well, did I misunderstand Ms. Doduc's report earlier that she said there was a difference between EPA and the State Board on this issue?

MS. WON: I don't know the ins and outs of the dispute between EPA and the State Board on this issue, my take on reading the Federal Regulations is that numeric limits for chronic toxicity are required.

MR. KISSINGER: Has the State Board -- I guess again I'll show ignorance on my part, it won't be the first time today -- does the State

Board ever weigh in on Regional Board deliberations? Does it give sort of a Friend of the Court brief --

MS. WON: No, because they review our actions, they review our permits. For example, the LA Board has been adopting permits with chronic toxicity, numeric chronic toxicity limits, and those have been petitioned and the State Board will be addressing, or if they have to address the petitions, unless they just dismiss them.

MR. KISSINGER: Is a resolution imminent in those proceedings?

MS. WON: I cannot say, not because I don't want to, but because I just don't know.

MR. KISSINGER: I understand. Okay, thanks.

MS. LIAO: Issue two is that wastewater commenters want a formal policy for determining when numeric toxicity limits are needed. They contend that our methodology is presumptive, they want the Board to collaborate with stakeholders to develop a formal methodology for making such determinations.

Our response is that the need for numeric

limits in this case is self-evident given that 21 out of 27 samples were found toxic. Aside from that, we evaluated the data in two other ways and came to the same conclusion each time.

Regarding the stakeholder collaboration, our response is that a stakeholder process is appropriate for the development of a policy and the State Board is already working on such a policy.

Issue 3 relates to the calculation of numeric limits. The wastewater commenters oppose numeric limits, but if there must be numeric limits, they propose a monthly limit of 3.25 TU and a daily limit of 6.5 TU. These alternative limits are based on the triggers for accelerated monitoring after adjusting for a mixing zone. Our response is that EPA technical guidance document recommends use of a statistic approach in calculating numeric limits and that's exactly what we did.

Issue 4 relates to triggers for accelerated monitoring --

CHAIRPERSON YOUNG: I'm sorry, we have a question.

MR. KISSINGER: Just going back to the

prior slide for a second, I mean, I don't have the technical expertise to make any judgment about the difference between 2.7 Toxicity Units and 3.25 Toxicity Units. Is it a meaningful difference?

MS. LIAO: It is a difference there. Well, because –

MR. KISSINGER: I mean, I guess to be blunt about it, is the view that we would be in violation of EPA's regulations if it was 3.25 versus 2.7? Is that difference of a magnitude that there would be a violation of Federal law not to have that lower number?

DR. MUMLEY: I'll answer that. The frank answer would be -– oh, this is Tom Mumley, I'll answer that. The frank answer is no, I mean, the issue being we are expected to have limits consistent or that conform with law, which doesn't provide specificity of how those limits are established. So the issue here is, is the technical integrity behind the derivation of the limits and why we would assert the Revised Tentative Order limits have more integrity than the suggested ones. The practical difference is, recall 2.7, roughly 2.5 Toxic Units would mean

something is toxic and 40 percent, and if 3.25 Toxic Units means something it would be toxic more like 33 percent. So in other words, it could have a practical difference in terms of performance and one is more stringent than the other. But again, the point that Marcia was making is the suggestion for using the triggers and how they propose using the trigger as a basis for limits has some technical flaw that we don't like compared to our approach, is, if you will, flawless.

MR. KISSINGER: And -- go ahead.

VICE CHAIR MCGRATH: I think it's important that we understand when you use a term like "statistical approach," I mean, typically in acute toxicity there is a certainty level, 90 or 95 percent, because we know that organisms differ and whether or not it's statistically significant that this amount of toxicity exists. Could you walk us through what you mean by an approach consistent with EPA guidance? What does it conform to and perhaps certainty levels or distribution of data?

MR. JOHNSON: This is Bill Johnson, it's always fun when I get to talk. So there's two

ways that you're talking about statistics. Statistics actually comes into this analysis quite a bit. So the statistical threshold for what would be considered significant toxicity would be part of the evaluation in terms of determination when there was no toxicity, and that would play out in the calculation of what a Toxic Unit is. Here what we're talking about when we say that the limit is calculated with statistical approach is that we're actually doing something that is a little bit complicated in that we're making an assumption that translation of the narrative objective into one toxic unit is equivalent to a four-day average. And we're using some statistical assumptions to take that four-day average into what we're used to seeing as a monthly average or a daily average, so we make some assumptions about the coefficient of variation and then a comfort dilution, and what we end up with is a monthly limit of 2.7 and a daily limit of 5.3.

DR. AJAMI: So are you saying that the methodology that they use to come up with 3.25 is different from the methodology that you use to come up with 2.7?

MR. JOHNSON: Yes.

DR. AJAMI: So they're not necessarily apple to apple comparison?

MR. JOHNSON: Right. They're using a completely different approach. We're using an approach that's based on the set --

DR. AJAMI: The older version that Tom was mentioning, right, the 1970's --

MS. TANG: No.

DR. AJAMI: Okay, so why aren't we using the same methodology, the statistical way to calculate?

MS. TANG: Well, the statistics that we're using is actually what the State Board established for chemical specific parameters, you know, to prevent toxicity from chemicals. So that seems to have more direct relationship if we apply it towards the toxicity unit concept. What the 1970's and 1980's, what was established in the Basin Plan back then was not really derived statistically, it was established at 30 percent mortality and 10 percent mortality, it was as simple as that. You know, I'm sure whoever made those decisions were trying to keep it simple, keep the statistics which you could say, you

know, liars and liars, or whatever, I forget what that term is.

DR. AJAMI: So I'm trying to understand, so their proposed 3.25, how different than is from our four-day average and monthly --

MS. TANG: They don't use any statistics, they use the trigger which is in the Basin Plan, which is simply a level that would require the Dischargers to accelerate monitoring and find out, you know, what is causing the toxicity. So they use that number and they applied the same mixing zone that we are proposing for our limits. And so it's a very simple calculation, that's all it is.

DR. AJAMI: Okay, but these two aren't the same –

MS. TANG: No, no, the one that you're proposing is applying as guidance the statistical methodology to come up with a daily max and a monthly average that was established by the State Board based on EPA guidance for chemical specificity.

DR. AJAMI: And that's what you were mentioning about the two decades later, right?

DR. MUMLEY: Correct.

MS. TANG: Two decades later, I'm sorry, I misinterpreted it to mean two decades ago.

DR. AJAMI: No, no, I was just trying to figure out if these two are exactly like what you were mentioning earlier.

DR. MUMLEY: I'll have staff correct me if I'm wrong, but another point to consider is, practically speaking, in terms of compliance based on past data there would be no difference between these two limits, they should be able to comply with what would be our proposed, more stringent limit, than the one that's been recommended, except if they had a problem in which case either limit would be a problem. So for general performance, neither one would be of consequence, and if there was a problem as we've experienced in the past, both of them would get blown out. So --

MR. KISSINGER: And what's the consequence of a permit exceeding the limit?

MS. TANG: The consequence would be a permit violation, they would be subject to discretionary penalties that the Board may impose, or even the third party lawsuit. They would actually have the same requirement, an

obligation to find out what the cause of that violation is, or what the toxicity is. So it's namely that there would be a violation on the books and they would be subject to penalties and other enforcement actions.

MS. WON: And one more thing, my understanding, and Lila correct me if I'm wrong, is these numbers don't present a compliance issue for the Discharger, so meaning they can comply with these numbers.

MR. KISSINGER: Well that was the point, they can, yes.

MS. WON: They can comply.

MR. KISSINGER: But is there an "if" in that?

MS. WON: They can comply.

MR. KISSINGER: But, I mean, this is where it's a head scratcher for me, I mean, if this particular chemical which was identified as the source of the toxicity is something that comes from a chemical that's applied to pets, or to clothes to abate mosquitos, or to get rid of mosquitos, propel mosquitos, I don't think that San Rafael is anymore unique in its usage of these kinds of things. I mean, are we setting up

an environment where everyone is going to be in violation of their permits because, I mean, honestly, how do you abate this problem? Am I missing something?

VICE CHAIR MCGRATH: I have the same concern, that if the sole toxicity issue is pyrethroids, the solution may well be registration and restrictions rather than addition. But I would kind of like to get the staff's presentation through and then walk through what -- I'd like to get some clarity on the nature of the toxicity responses to chronic, or is it some lethal --

CHAIRPERSON YOUNG: I would actually like to follow-up on Yuri's comment because that confused me a little bit. So are you saying that the Permittee is expected to be able to comply with these chronic toxicity, ours, except in cases where the pyrethroids show up? Or in all cases, in which case –-

MS. WON: My understanding is in all cases, but you know, technical staff can better address this issue.

MR. JOHNSON: Well, I would say if you look at the last four years of data and the 27

values that we had, we said 21 out of 27 exceeded 1.0, but 26 out of 27 were less than 2.0. So the level of toxicity isn't very high. It's just one value that was as high as 8.0, and it's that one value that results in the reasonable potential and, you know, then results in these numeric limits. So when we're asking can they comply in the future, there's some uncertainty there, but it certainly seems that most of the time they should have no complying even with the monthly limit, regardless of which number it is, because the history has been that it's been less than 2.0. But there is at least one instance where it was higher, and it was as high as 8.0.

MR. KISSINGER: I'm sorry, but what was the figure where we had 21 out of 27?

CHAIRPERSON YOUNG: That was greater than 1.0.

MR. JOHNSON: Yes.

MR. KISSINGER: Oh, I gotcha.

DR. MUMLEY: Yeah, so in other words, even though pyrethroids may have been the cause of those hits, it would not have resulted in an effluent level violation, and there's that one case, and I'm not familiar enough with the case,

where there was that one high hit was pyrethroid-related or not. So your concern, Board member Kissinger, about the issues like with pesticides that control which maybe are constrained on those uses is of statewide interest, that's why Marcia called attention to the statewide group and we even engaged with EPA on this, so these pesticide issues are becoming more of concern as we drill down in our consideration of toxicity, so your observation is valid. Fortunately we don't have evidence that there are large numbers of high levels of toxicity due to pyrethroids being discharged to the Bay, and fortunately to date we don't have observations of pyrethroids in the Bay that are toxic in and of themselves; we're finding them, but fortunately not at toxic levels, so we're keeping our fingers crossed that that will be the case in the future. But this is a big issue that is getting attention statewide. And at least our view of what we're presenting here doesn't put Las Gallinas in a situation that is going to be a significant consequence given, as Bill said, the observations of past toxicity would not violate these limits except that one case.

MR. KISSINGER: And why, and maybe I should let, well, I'll ask it, I can't help myself, why this particular permit? I mean, there's lots of other ones. Why did we choose this one?

DR. MUMLEY: It's the one big hit, that one major finding of toxicity that stands out in applying our normal procedures for consideration whether there's a reasonable potential that a discharge could cause or contribute to a violation of water quality objective. When we see a hit like that, it becomes a factor in that reasonable potential consideration stew, and so in dialogue with the EPA, we were led to their direction to us to include a limit for toxicity; whereas we've looked at other permits before you recently and haven't had the cause to say explicitly that there's that reasonable potential and therefore a need for a limit. But the uniqueness of this site --

MR. KISSINGER: But the upshot of what we're doing here today based on the briefing materials is we are going to be issuing numerical limits now, not just on this one, but all permits going forward, right?

MR. WOLFE: When there is reasonable –

MR. KISSINGER: But the gist of what was in the materials was, any time you were above 1.0, even if the level, I mean that's how I read it, was any time you were above 1.0 there's a reasonable potential for toxicity.

MR. JOHNSON: Well, you actually have a little bit more discussion than that, and so when we are doing reasonable potential analyses from here forward, we'll probably be writing more detailed analysis than what's here. And what we'll probably be doing is proposing an actual mixing zone ahead of time so that you establish the mixing zone and determine sort of what dilution allowance we're going to include and apply to that one Toxic Unit. So whereas the level that's considered toxic in the effluent would remain 1.0 Toxic Unit, the question that we're looking at with reasonable potential is, what's the effect on the receiving water? And so if we allow for some mixing to happen and determine how much dilution, it may be a number that's higher than one Toxic Unit. In this case, it would probably be 3.25 Toxic Units would become the threshold.

MR. KISSINGER: But if there had been -- if that one sample, then, sampling event had not resulted in a result of 8.0 Toxicity Units, then we wouldn't be having this conversation? It's just that one sampling event?

MR. JOHNSON: That's probably true, yes.

MR. KISSINGER: And we have confidence in the QAQC that was done on that one sampling event?

MR. JOHNSON: It's the result the discharger provided to us in its self-monitoring report, and they have not refuted that value in their comments.

CHAIRPERSON YOUNG: So I have a clarifying question, as well. I want to make sure I know how that 2.7 was derived or sort of know how it was derived. I understand that one of the variables that determines what that number is, is the amount of dilution that we're allowing. So if there were another Permittee that had a different record of violations, you know, maybe higher, maybe lower, whatever, but was discharging into a place where they had the same dilution credits, would they also get 2.7? Or does that number change not just based on the

dilution amounts, but on their past performance?

MR. JOHNSON: That number doesn't account for past performance in any other way than an assumption about the coefficient of variation of the data. But because of the nature of these data, we're using just a default value. So it won't matter.

CHAIRPERSON YOUNG: So we're not being, my concern would that we would be faced with a number of Permittees who would have different limits based on something more than how much dilution that they were getting, so that we would be saying, "Well, you know, this chronic toxicity units over here is okay, but you have to be lower over there," when to the critters and the environment, you know, after you apply the dilution, we kind of want that -- I'm not being very articulate, but we want it to be the same. I mean, we want -- I don't want past performance and statistics that are inappropriately applied, let's just say, I'm not saying that these are, but let me start my sentence over. I think we ought to be setting limits that are safe for the environment and not different based on who has done what in the past and what they found. And

my interpretation of your answer is basically, except for that one coefficient of variation, it's really the amount of dilution that would drive any difference in those numbers among different Permittees.

MR. JOHNSON: Right and you would probably make the same assumption in terms of coefficient of variation if everything else, so it's starting with that translation of our objective as one toxic unit, and from there with the dilution assumptions, these are the numbers that come out.

CHAIRPERSON YOUNG: Okay, thank you.

DR. MUMLEY: Board Chair, I want to just say you're right, it's the calculation limit based on the mixing zone and associated dilution, and bear in mind that this only comes into play when we have what we call our shallow water dischargers that have limited dilutions because the majority, the vast majority of our dischargers, by compliance with the Basin Plan prohibition, have a minimum dilution of 10:1; if you just use 10:1, it's an overly simple calculation, there's a TU of 10.0. So this really only has consequence for the shallow

players, the shallow water discharge players like East Bay MUD which goes to deep water under the Bay Bridge, has a lot of dilution, that if we do a water quality base calculation for toxicity, their allowed Toxic Units would be sky high relative to the receiving water.

CHAIRPERSON YOUNG: Okay, we have Newsha and then we have Jim.

DR. AJAMI: I'm still like a little concerned with that whole calculation and who uses what kind of calculation for the numbers they get. So I'm wondering if there is a way to make sure everybody calculates this number using the same sort of methodology, that way we are talking about the same thing, you know, especially when you sort of like next cases that come out, or maybe I'm not getting -- my feeling is if you are not looking at the same thing, these numbers mean nothing putting them next to each other if you don't use the same methodology or assumptions to calculate them. So I wonder like, moving forward, how we can make sure we have a uniform way of calculating these things so then we all know what we are talking about, and then it's more of a --

CHAIRPERSON YOUNG: I think that was my question, too. And as I understood the answer, basically the difference between different Permittees is going to be based on where they are located and how much dilution they're given in the place where they discharge, which is, I mean, that's okay to be different.

DR. AJAMI: Yeah, that's okay to be different, as long as we are using the same --

CHAIRPERSON YOUNG: As long as the rest of the methodology stays the same, which I think we heard basically yes, it does.

MR. JOHNSON: Well, yes, the methodology would be the same. And you have some discussion on choosing the methodology, but the one that we're bringing to you we think is the strongest and most defensible methodology because what we've done is we've looked at EPA's guidance through the Technical Support document, which basically says a lot about chronic toxicity, reasonable potential analysis, and then when it gets to how to calculate a limit, it says, well, you can do it a different way, we recommend that you use the statistical approach. But it doesn't say exactly what that approach is. So then we

use the State Implementation Policy which is exactly how we do it for chemicals, and it's the statistical approach, and we've applied that. So we're trying to be sensitive enough not to say that we couldn't possibly do it the way the dischargers have proposed, but we really do think that our way is better and more defensible. And it has a more well established methodology that's actually spelled out, and regulation that we can use as guidance.

DR. AJAMI: And that's my point, so can we make sure everybody is constantly -– because if these two methodologies are so different, then that 8.0 might have been 10.0, but we just –- you know what I mean? Like they calculated that number, the TU, and they came back with the 8.0, right? But then just looking at these numbers, if you would have used your methodology, that 8.0 would have been --

MR. WOLFE: But that was the test result. Here we're using the accumulated results of those tests.

DR. AJAMI: Because that was a direct test that they did and --

MR. WOLFE: Right. So that our goal is

from here on forward to have a consistent approach, and we feel our approach is defensible and is supported through the technical support that EPA put out.

DR. AJAMI: And I totally agree. I'm wondering how we can make sure everybody uses that methodology to calculate their numbers. That way we just always have, you know, using the right statistics.

MR. JOHNSON: All the permits set out the methodology and the methodology is the same, and the permits actually define what a Toxic Unit is, and so everybody is calculating it the same way already. We've been doing that for a long time. Just because we have the triggers have been in the permits for a long time, so everybody is doing that the same way. Then the real question that is coming in here is what do we apply as a numeric limit?

DR. AJAMI: Okay.

VICE CHAIR MCGRATH: Can I follow-up on that? What we're talking about, acute toxicity, and it's passed that test. So there's an acute toxicity test which is four days, they've passed that. For the chronic toxicity, are we talking

about a mortality end point or sub-lethal end point?

MR. JOHNSON: The test would include both.

MS. TANG: Which for this particular case, what was it, which, reproduction or growth?

DR. MUMLEY: Serophane (phonetic) is reproduction.

MS. TANG: Well, they're using a Mysidopsis.

DR. MUMLEY: Mysidopsis, I think that --

VICE CHAIR MCGRATH: And the duration, so what we've got is something that is not acutely toxic for four days' duration of exposure, but has reproductive effects for what, maybe two, four, or seven days. And so that's the lab test, and then we're trying to figure out what that means in the field when it will be discharged, in this case to a creek, which will have some flow. Is that correct? Or to shallow waters in the Bay. So the question is, are they really exposed for that long period of time? Or is there actually in the receiving environment, to go to the Chairman's question, is there actual real dilution that would say, "Although we have a TU

response that shows some sub-lethal toxicity, it is unlikely to have a real world impact because of dilution." Is that -– I'm trying to follow the logic chain from lab test to field and be sure whether or not we're talking a sub-lethal effect or a death point. Did you follow my reasoning? Bill, you look like you did.

DR. MUMLEY: I did. Yeah --

VICE CHAIR MCGRATH: Can you rephrase it better?

DR. MUMLEY: Well, yeah. The methodology that we use for toxic chemical pollutants that we've used here account for just what you were saying, you know, it's in the derivation of a monthly or daily limit, it takes into account how that's reflected in the discharge, and how that may affect what's in the receiving water relative to the standard in play. And the development of the standard takes into consideration, or the objective, well, I don't want to confuse you with the seven-day thing, but that type of exposure consideration is why we end up allowing for dilution. There's generally speaking, and I don't want to misstate this, but generally speaking you don't allow dilution for acute

because the implication is acute, is immediate, where chronic dilution makes sense relative to what is the dilution relative to the exposure of aquatic life. So that's why we end up getting this. And since we're looking at the numbers, I would just point out that we have evidence that Las Gallinas would have had one number that would have exceeded the daily limit, but the monthly limits, if they did more monitoring, it's probably unlikely that they would have exceeded the monthly limit, so….

MR. KISSINGER: So just logistically, how does this work? This permit is provided, they have numerical limits under what's proposed for us, they live with those numerical limits now and forever? Now –- just five years and then we look at it again? We look at it a year from now? And how does this work with regard to other Permittees? Do the permits that we have going forward have in them triggers which would impose numerical limits if they have an excessive level of toxicity revealed in their testing?

MR. WOLFE: It's a five-year period, we review do the reasonable potential analysis with each reissuance of the permit, so you may have

noted that some permits we've brought before you recently we actually have removed some constituents and having limitations on that because there has not been reasonable potential. So in this case, we would anticipate that if there was not another 8.0, or something that may be considered anomalous, but was considered an appropriate submittal by the discharger, that we must consider. If at the next reissuance period we would go through the reasonably potential analysis, and it probably wouldn't kick out as having reasonable potential.

MR. KISSINGER: So the reasonable potential analysis is only done upon application for and issuance of the permit? Once it's done, it's done, no matter how many exceedances you have during the course of your permit –

MR. WOLFE: So recognize here we're looking at the past five years, period. And in each permit we would do that report of what were the violations in the past five years, as Jim noted, that were East Bay MUD had none here. We did point out there was this 8.0 value, but also that 21 in 27 exceeded the 1.0 Toxic Unit. We would expect, then, five years down to take that

dataset, to run it through, and say did we have a violation? Or, using that dataset, do we have reasonable potential for an exceedance moving forward? So it's sort of looking at the past five years, trying to project for the next five years. The other dischargers, in the same way we would do that analysis and see if there's a need for that limitation.

CHAIRPERSON YOUNG: I think embedded in your question is also the consideration that, so let's say in less than five years the State Board comes up with some other policy that would make us think that we should change these limits to be consistent with the State Board policy the way the State Board sort of envisions applying all the EPA's requirements. My understanding is that we have reopener provisions and that we could redo it at that time. Is that correct?

MS. WON: That's correct. I'm looking for the exact language.

MR. KISSINGER: No, that's fair. But I guess the other side of the coin is every Permittee knows what their five-year history has been and they know what we do here today presumably will have to be applied consistently

to them, so how, you know, I asked the question why Las Gallinas? Why are we talking about this one as opposed to all the other applicants? And the answer was, well, they were such an outlier with that one sampling event. Is that really the case? Or I assume because of what's been filed in comments by commenters, at least the industry commenters that this is a much bigger issue that it's going to be more than Las Gallinas that we're talking about, right?

MR. WOLFE: There is that potential, although another shallow discharger in the Bay which will be before you soon, EPA has concluded as we have that there is no reasonable potential in that case. So it's going to be an ongoing permit by permit analysis. We recognize that that's to a certain agree an efficient -- we would love to have the statewide policy to help guide us, but in this case there was the reasonable potential; in the past we had been addressing that reasonable potential through the narrative. Essentially EPA said no longer is that the appropriate direction that you need to, when there is reasonable potential, use a numeric approach.

MR. KISSINGER: And Bruce, the way you said it, so there is no statewide policy right now? We've got this --

MR. WOLFE: Correct. So we're relying back, as Tom said initially, we're relying on the Basin Plan, which has allowed narrative, but also we're relying on EPA guidance through Federal guidance down to the State Implementation Policy, and then that has come up with the -- I had the page on F26 spells out what the Basin Plan indicates we need to achieve with each permit and each review of that potential analysis.

MR. KISSINGER: And just to be devil's advocate for a second, if we were to disagree with EPA's position, which we did in the first go round before EPA gave comments, what would happen?

MR. WOLFE: Then EPA in its letter to us has indicated it would object to the permit and they would have the right to issue the permit themselves and impose the numeric toxicity limit.

CHAIRPERSON YOUNG: Yes.

MR. MULLER: Just a very simple one, trying to get away from all these PhDs here and lawyers, could that spike have any impact with

the drought conditions we've had in the last four or five years? Because are we not discharging in wet weather? We haven't had wet weather.

MS. TANG: Well, we haven't had as much wet weather, but there is still wet weather, so for the Las Gallinas permit, they're prohibited from discharge during the dry season. So that's when the impact of the drought is maybe most severe, people are all conserving and, you know, --

MR. MULLER: The dilutions would be changing all the time without the --

MS. TANG: Right. We've used very conservative assumptions in proposing the dilution credit that we're granting, so in the shallow water discharge such as this, it's not as sophisticated as, say, a deep water discharger with a diffuser where you're actually based on science, you know, velocities and buoyancy. Here the mixing zone is a lot dependent upon your discretion, and we're following guidance in the Basin Plan that says, "Well, use the same dilution that you've granted for chemical specific constituents." In this case, it was the cyanide mixing zone that is in the cyanide site

specific objectives. So it's not like there is an actual physical thing that we can point to, here's how we derive that number. We've just gone back to the Basin Plan and used what was already developed.

DR. MUMLEY: I think to simplify the issue before you, because we're getting into the nuances, if we're going to include limits, we're recommending these limits for the reasons we've been talking about. Board member Kissinger is raising that the fundamental issue in the absence of EPA's objection, this issue wouldn't be before you because we have been and continue to be patient and wait for the State Board to establish a policy for implementing limits because our approach with triggers has served, continues to serve a valid purpose of where we find toxicity hits, we've tried to figure out what's causing it, and then take appropriate action. So the issue really is to limit or not to limit the specificity of the limit is secondary and, again, I'd say our recommendation is these are the best numbers that we feel you should consider. So the option at hand that Board member Kissinger brought up is to not limit, which then makes this

permit vulnerable to objection by EPA.

CHAIRPERSON YOUNG: And I do have a card from EPA for later on. Did you ever finish --

DR. MUMLEY: There's a couple more points, but –

MS. LIAO: Okay, now Issue 4. Issue 4 relates to the triggers for accelerated monitoring in toxicity reduction. The Wastewater Commenters want the triggers removed or increased to match the numeric limits. Our response is that the triggers are appropriate because the Basin Plan requires them; however, the revised order does reflect a revision. We are proposing in response to this comment to clarify that, as long as any future toxicity continue to be linked to pyrethroid, the district will not need to accelerate monitoring.

Issue 5 is the Wastewater Commenters want the Board to remove the acute toxicity limits. They point to the District's long history of compliance with acute toxicity limits. Our response is that the Basin Plan requires acute toxicity limits. This has been the policy and our practice in all these water permits since the 1980's.

I'd like to call your attention here to the supplemental passed out to you a little earlier where we clarify our response to this comment. And this concludes my presentation today. I have a picture of the mysis shrimp, which the District uses in their chronic toxicity tests. And again, we'd be happy to answer any questions.

MR. KISSINGER: I have one more question for now. So, you know, you made the point earlier that toxicity is a really difficult thing to capture with precision, it's a soup, all kinds of different chemicals, and so for example you said one of the revisions to the permit was not to require accelerated monitoring for pyrethroids. But how can you know, can it be known analytically that the pyrethroid is the cause of the mortality or the other impacts versus pyrethroids in something else that is in this stew of effluent?

MS. TANG: Well, the change we're proposing is in a way a compromise to give the discharger credit that in the past three or four years they have put in effort to identify pyrethroids. You know, what's the likelihood

that something new is going to come up that's going to be more toxic to pyrethroids? The one TUC trigger is rather aggressive, it's any measurable amount of toxicity is going to start this chain of accelerated monitoring with toxicity identification. Each test is above $1,500. Did I say that right? One thousand five hundred dollars to two thousand. And the TIE, I'm sorry, acronyms, to run through one Toxicity Identification Evaluation manipulation is on the order of $10,000 because you're taking that sample and then you're running it through different columns, metals, chelation, just to categorize, you know, are we talking about an organic, or a metal, or something else? So these things are quite costly. It's a small agency. We think that giving them the credit over the three years that they've isolated it to this pyrethroid, let's go with that --

CHAIRPERSON YOUNG: If I could follow-up, practically speaking they do a toxicity test and they get a hit, then is the first thing they do take their sample and see if the pyrethroids are in it, and if they are then we say, "You don't have to do the more expensive stuff?"

MS. TANG: That's not currently –

CHAIRPERSON YOUNG: It's sort of a Catch 22, I mean, how do they know until they do –

MS. TANG: Well, the way we're proposing to lay it out is, if they have toxicity that toxicity should be at a level that exceeds the effluent limit. Then that's going to trigger them to run this $10,000 Toxicity Identification to see is it still Pyrethroid? Or is it something new that's coming out? So in a way we're saying, well, at the lower level of toxicity that you have been seeing, which you have linked to the Pyrethroids, let's just assume that maybe it's continuing to be Pyrethroids. Again, remember that 20 of the 27 samples were below 2.0 TUCs. That's a very low level. We've gotten complaints from dischargers that that's even too low of a level for them to actually run these Toxicity Identification Manipulations. By the time you run it through a carbon filter, for instance, the loss in the compound that's toxic is just gone, you don't even know which manipulation actually reduced that toxicity. So you know, there's challenges --

CHAIRPERSON YOUNG: -- low level ones are

(indiscernible)

MS. TANG: I mean, these are very powerful tests, but our tools for figuring out what the cause is -- and then when we find out the cause, the tools for reducing them, you know, is somewhat limited, not that this, you know, the tests are very powerful, I don't want to say that they're pointless, but there are all those challenges that follow.

CHAIRPERSON YOUNG: I have to consult with him on the schedule. He's the hungriest person on this Board, always.

VICE CHAIR MCGRATH: Clearly, we're not going to get through this.

CHAIRPERSON YOUNG: But Jim has allowed that maybe we should hear from EPA before we have lunch, so Robyn Stuber, if you would like to come up? Thank you.

MS. STUBER: Good afternoon, Chair Young and Board members. My name is Robyn Stuber, I'm representing EPA Region 9's NPS Permit Section, and I have taken the oath.

Today I'm testifying in support of the proposed permit for Las Gallinas. Of primary importance is that the permit's chronic toxicity

effluent limits comport with the Clean Water Act and NPDES Regulations.

In January, EPA raised concerns about the lack of numeric limits for chronic toxicity in the draft permit and prior to public notice, we worked with your staff to resolve those concerns. The permit, changed to incorporate numeric limits that include dilution, now have our full support. We appreciate that your Board has been a leader in establishing a strong record of effective approaches to control and identify priority toxic discharges. This permit represents an important milestone in that record as you join similar work underway for chronic toxicity in the Los Angeles Region and in the San Diego Regional Water Boards.

I'd like to focus on two issues that we raised in our January initial objection letter and these are the use of triggers instead of numeric chronic toxicity limits, and the need for daily and monthly water quality based effluent limits for POTWs based on a determination of reasonable potential.

First, EPA agrees with the staff that the Las Gallinas discharge exhibits the reasonable

potential to exceed the Basin Plan's narrative toxicity standard, and that water quality based effluent limits are required.

EPA continues to be concerned that many California POTWs discharging to non-ocean waters did not meet the Clean Water Act because they contain only a trigger for further investigation of toxicity, rather than an actual water quality-based effluent limit. This concern has been effectively addressed in the proposed permit.

Second, the permit contains chronic toxicity effluent limits that are as stringent as necessary to meet water quality standards for toxicity in your Basin Plan as required by the Clean Water Act. The numeric daily limit in this permit, which is based on a single toxicity test, will restrict highly toxic discharges that we're all concerned about.

The numeric monthly limit based on multiple toxicity tests will restrict any ongoing toxic discharges that are of concern for protecting water quality over time.

For these two reasons, EPA believes that these numeric limits addressing chronic toxicity are feasible and appropriate and effectively

clarify permit compliance for everyone. Your staff has gotten the chronic toxicity limits in this permit exactly right. We commend them for their consistently high standard of work on permits, in general, and on this important issue, in particular. We fully support the Las Gallinas Permit as proposed. Thanks very much.

CHAIRPERSON YOUNG: Thank you. Are there questions?

MR. KISSINGER: A couple questions. Are the numeric limits that we're talking about here, you've mentioned Los Angeles and San Diego, what about outside of California? What about elsewhere? Is this something that's going on nationwide? Or are we catching up with the rest of the country?

MS. STUBER: For non-ocean discharges, you are catching up with the rest of the country.

CHAIRPERSON YOUNG: We don't hear that very often. Stunned silence. Are there any other questions?

MR. KISSINGER: Does EPA get involved in, I take it, the review that's going on by the State Water Board of the Los Angeles Regional Board decision?

MS. STUBER: Yes, we are actively engaged in that decision at the highest level of our management.

MR. KISSINGER: And do you know where that is procedurally? Do you know whether that is likely to have an answer from the State Board soon or not?

MS. STUBER: There was a recent meeting between the managers and the attorneys related to some of the issues that were discussed by the State Board representative before you today. And we are expecting that the State Board respond with a policy soon. There continue to be disagreements, I think, between EPA and the State Water Board, particularly regarding the requirement of a daily limit, and I think that there are some sticking points around that issue. There's a difference of opinion between the lawyers on that.

MR. KISSINGER: Are you able to expand upon that?

MS. STUBER: No, I'm not able to expand upon that. I'm sorry.

DR. MUMLEY: I am. The issue at hand in the policy discussion is whether a discharger can

get a one-hit pass and EPA's position is no, the limit is a limit. And the State Board is considering an alternative where the second hit constitutes a violation, not the initial hit. And it gets into the dilemma of was there something controllable that wasn't controlled that caused the hit, which makes an absolute hit really fundamental, so the principle that Robyn put forward, these limits have value in terms of protecting the Bay in an immediate and in a long term context. The challenges particularly with POTWs is things can happen beyond their control that could result in a hit, and result in a consequential violation, whereas if there's two hits, that means something is going on that we could argue should be dealt with. The one-time potentially uncontrolled source becomes the issue. So it's fundamentally do you get a one-hit pass or not, is my simple explanation of what the dialogue is about right now.

MR. KISSINGER: Thank you.

CHAIRPERSON YOUNG: All right, thank you very much.

What's the Board's pleasure? Do you want to break for lunch or do you want to wrestle this

one to the ground and then break for lunch?

(Cross talk)

All right, where are we? I was going to ask whether the staff wanted to provide any remarks and put a recommendation on the table, but before we do whatever additional discussion we're doing.

MR. WOLFE: I would say that I've not heard anything new or different, this is obviously a challenging issue because it's essentially changing our response to a dead vacation of reasonable potential where we've used a narrative in the past and going to a numeric; nonetheless, that is consistent with the Basin Plan and, in the absence of statewide policy, I would say it's sort of the next evolution. The permit does allow reopener should statewide policy come out and tell us to go in a different direction. At this point, EPA has validated that we're going in a direction they feel appropriate. With the discussion, obviously there's still ongoing discussions about what the policy will say, and that may evolve over time, but it also sounds like if those discussions are continuing, that having the policy in hand is still many

months out, and we've tried to be continuing to push permits forward for reissuance rather than say that as an issue that might be resolved in a few months, so we'll set it aside. So I would say that it's appropriate to move forward, but we do have the reopener ability to respond to the Statewide permit once and if it comes out differently.

MR. KISSINGER: Is there anything that's driving issuance of this permit now? I mean, I know that this new permit is to begin anyway, July 1 is the concept, but if we were not to act on this permit now, but to -- I don't know whether Ms. Stuber has insight into just what imminently is, or soon is, whether that's a matter of weeks or months. Is there any reason why we couldn't wait and see what happens over the next couple of weeks? I would hate to issue a permit that in fact puts us at variance with the State Board's policy when there's a fight that's going on between EPA and the State Board.

MR. WOLFE: Well, I would say that, as you heard from Tam, she's aware of certain things that are moving forward, she's not aware of whether the toxicity policy is really moving

forward. We know there's been ongoing discussions. And so I would generally say that we would like to move forward with reissuance. In the past -- John Muller remembers this incidentally -- that we've been called to the carpet by US EPA by not doing our reissuances, we try to phase or step our reissuances through, so setting this on hold and working on something else sounds good, but it still essentially wastes our time and the time that we've put into it to this point. So I would say the fact that we do have the reopener provides us the opportunity to make sure of the policy when that policy is adopted.

MS. WON: Mr. Kissinger, I have asked, you know, when I go up to Sacramento on a monthly basis what's going on with the Toxicity policy, and I can't really get a straight answer. So that tells me nothing is really imminent.

MR. KISSINGER: That reminds me of something that was in the materials, somewhere in the materials there was a comment that we had asked the State Board what the status was and they didn't return our call. Am I mis --

MS. WON: I don't recall that.

MR. WOLFE: It wouldn't be the first time that State Board hadn't returned our call, but still…. Tam is very responsive, I'd say. Some of the others….

MR. KISSINGER: I was just very struck by Mr. Mumley's comment, but that was my reaction in reading it, there is one outlier report, one exceedance of a chemical over which Las Gallinas has no control, and for the next five years they're locked into what I take to be very expensive testing protocols, and which will have an impact on everyone else, or many other people that we're issuing new licenses for.

MR. WOLFE: Well, I'm not sure that's true, that we would have many others. As I said, we've already looked at a shallow discharger in Novato and it's not the case there. And so, yes, it's unfortunate and we try not to do sort of the luck of the draw in terms of when your reissuance is up to do that, we'd rather have a blanket policy. We don't have that. And so I feel it's useful to move forward, but recognizing that we do have the ability to open the permit and modify it should there be a different approach through state policy.

MR. MULLER: I don't think we should lose sight of the fine work they've done over the years, other than this toxicity issue here, really and truly. But I think if we have an opener, it gives us a little bit of flexibility in the future that if we do come down with State policy, we could hopefully work something through with them there. But that's my thought.

CHAIRPERSON YOUNG: Jim.

VICE CHAIR MCGRATH: Notwithstanding my concerns which are in some ways very similar to those of Bill Kissinger's, I think the staff -- I'm going to support the staff on this one and I think they've actually done a marvelous job of teeing this up in a way that the State Board maybe can't avoid. To begin with, this is a very well run sewage treatment plant, I mean, if you look at the performance data, the idea that there is chronic toxicity here is a bit of a mystery. And I'm troubled in general by chronic toxicity testing, it doesn't have the kind of track record that acute toxicity, and unlike any of the other Board members, I used to have to figure out whether or not an area could be dredged based on another 20 little hexapods (ph) that survived in

the beaker, and you didn't feed them so they had to be able to get enough food out of the material, and if there was too much sand in there you might be in deep trouble. But we had worked out procedures over a long period of time where we kind of knew how to manage that test and it was pretty robust. Sub-lethal tests on reproduction and particularly contaminants like Pyrethroids, you just don't have the record that says "we know this means that." We know in particular with amphipods that if you catch them at the wrong stage in their reproductive cycle, they're weaker organisms. And so how robust a result you get.

I'm also troubled by Pyrethroids as a contaminant. We know from monitoring data that we've had in the Regional Monitoring Program and other areas that in San Francisco Bay, the creeks around San Francisco Bay and Upper Newport Bay, Pyrethroids do damage in the environment coming from their registered use. And if this is a problem in the environment, it is more a matter, I think, of making sure that the registration and use is properly restricted to reflect it. Notwithstanding those, I think the staff has done

this in the right way, as long as there is discretion to account for dilution that reflects that a test that uses 100 percent effluent in fact substantially overestimates the potential for chronic toxicity in the field. And as long as there's discretion to account for both the time factor and the water dilution in the field, I think it can be properly applied. And then finally, I think it's better for the dischargers and for the ratepayers to have the regulatory discretion rest with the Regional Board than with EPA on this matter. So I think you guys figured it out under difficult circumstances and it's a really complicated thing. Thank you.

CHAIRPERSON YOUNG: I'd like to drill down a little bit following Mr. Kissinger's line of thought. The fact that we are putting numerical chronic toxicity limits in this permit has actually two potential effects on Las Gallinas, one is that they might have to do some expensive testing that doesn't reveal any new information. If they get a chronic toxicity, you get above the numerical limit. A second is that they are opened up to third party lawsuits and potentially to fines from us. I'm okay with that

if the hit that they get is from something other than Pyrethroids. And I'm a little bit concerned about, you know, another 8.0, that it actually is just from somebody dumping some Pyrethroids or washing 10 pets at once, or whatever, in which case they will have a violation, they will have to track it down, and I guess I'm okay with them having to track it down, but I would hate for them to have to get embroiled in a lawsuit for something that it seems like they're well aware of right now and are doing everything that they can do. So I'm opening that up for the staff to set my mind at ease that we're not doing something that causes people to spin their wheels, or open them up to lawsuits, spend a lot of money for what basically might not be a water quality benefit.

MR. WOLFE: I would say that, as we've noted, the limits that are proposed with the exception of that one time, all of their monitoring indicates they could achieve those, and so we don't have a good idea why there was that one time hit, but nonetheless, recognizing the work they've done to try to identify Pyrethroids as the source, we have in response to

the District's comments, we have revised the Monitoring and Reporting Program and, as Lila noted, we are now saying that if the TIE indicates that a pollutant or pollutants other than Pyrethroids causes or contributes, then they would do the accelerated monitoring. But we're basically saying that, okay, we're recognizing the work you've done in the past and so moving forward, under the expectation that it's going to be Pyrethroids, you don't need to do that accelerated monitoring and we've added to the fact sheet we're basically saying we would not expect that to provide useful information regarding the discharger's ongoing efforts to reduce Pyrethroids.

So I think we've softened the blow and essentially with the way the limits are, they would not be subject to violation or penalties for those violations at that level. I think it's also worth noting since there is the prohibition on discharge from June to October 31st. To a certain degree we're only talking about what would happen after November 1. Maybe we have some indication that there's some policy change and we can try to address that before this really

triggers something Draconian. We're not trying to put a big burden on them, unfortunately they are simply the first one that has come along that's both exhibited reasonable potential and essentially gotten EPA's attention.

CHAIRPERSON YOUNG: Let me ask a slightly different question. Let's say that they had another 8.0. And they did enough analyses to show that it was Pyrethroids. Is there a way that we can go back and say, well, you know what? That really wasn't a violation?

DR. MUMLEY: You're asking a question that we're going to suggest an answer to --

CHAIRPERSON YOUNG: You know me so well.

MS. TANG: The only way that we would be able to excuse them from it is to define the limit in a certain way. So what I would suggest is something that follows along with what we've done in the past for pH and chlorine where, you know, provide some flexibility in the limit itself. So one way to do that is to add to the footnote on page 5 of the Tentative Order. Right now there's currently a footnote 4 for the maximum daily chronic limit, so I would just propose that that 4 also be repeated under the

average monthly, and add to the footnote the text that if the discharger can demonstrate the toxicity is due to Pyrethroids, then that toxicity is not a violation of this effluent limit. So what would happen is, they get a hit of 4.0., let's say, they go and do their TIE because that accelerated monitoring would trigger them to do, it comes back as Pyrethroids again, then you know, that would not be counted, we would dismiss that report of violation. And they would not be subject to third party lawsuit or our discretionary enforcement.

CHAIRPERSON YOUNG: That would make me more comfortable.

MS. TANG: Okay, so should I try to read that into the record? It was pretty simple, but I'll do it again.

CHAIRPERSON YOUNG: Pose supplemental, or whatever.

MS. TANG: So little footnote 4 would be added to the 2.7 under the average monthly limit for chronic toxicity, so that that footnote applies to both, so the footnote would read in full: "The maximum daily limitation for chronic toxicity shall be interpreted as the maximum test

result for the month. If the Discharger demonstrates that the toxicity is due to Pyrethroids -– so let me start again.

So the text added to footnote 4 would read: “If the Discharger demonstrates that the toxicity is due to Pyrethroids, then that toxicity is not a violation of this effluent limit.”

CHAIRPERSON YOUNG: Do the lawyers have any objection?

The staff recommendation now is that we adopt this permit with the addition of the language that Ms. Tang just read into the record.

MR. WOLFE: And with the supplemental that we handed out, and with one additional change on page F27 in the Fact Sheet, we mistakenly called the California Department of Pesticide Regulation as the Department of Pesticide Registration, so we will fix the name there, even though it seems they do a lot of registration.

MS. WON: I hate to be the party pooper, but I just don’t see how we can adopt the limit and then have a carve out when that limit was based on Pyrethroids.

VICE CHAIR MCGRATH: I'm not sure I follow you that it was based on --

MS. WON: Well, even if it wasn't, I mean, as a limit --

VICE CHAIR MCGRATH: -- let me finish. What I understood from Bill was the limit was derived from a set of assumptions about the relationship between daily and monthly that are in the EPA Guidelines because -- is that not correct, Bill? We're talking about the value of 2.7 in the table because that's what we're footnoting, correct?

MR. JOHNSON: The limits are derived from just assumptions about toxicity in general without respect to cause.

VICE CHAIR MCGRATH: And without respect to Pyrethroids.

MR. JOHNSON: Right, it doesn't matter what the cause is.

MS. WON: But regardless of that, I mean, you're adopting a water quality-based effluent limit and it's a number, it's a hard and fast rule, and to carve out little certain exceptions dilutes the effect of the limit. And clearly whether that is in fact, you know, a water

quality-based effluent, when we adopt a number, it's a hard and fast number.

MR. KISSINGER: But we're not carving out the monthly average, only creating a carve-out with regard to the daily limit, and so, I mean, the argument would be it's essentially building into this possibility of having a one-hit exception. I mean, I guess we're kind of assuming in this that it is going to be just a one-hit kind of exception and maybe to meet that concern, because I can see the EPA representative in the back looking with a close eye, the question is whether or not it's a recurring event, or whether you had this one-hit event. So maybe the footnote is amended further to build into it that exception goes away if it's a frequent occurrence. I mean, I do still come back with --

MR. WOLFE: Well, that's why the average monthly --

MR. KISSINGER: Right, exactly.

CHAIRPERSON YOUNG: The staff recommendation was to apply the footnote also to the average monthly effluent limitation. We could amend the staff recommendation to only

apply the footnote to the maximum daily concentration, keep the language that we all just heard in which case it would basically be a one-hit thing each month.

MR. KISSINGER: Right.

MR. WOLFE: And that's not unlike what we have done on that same table you note, Footnote 2 for pH, we're basically providing some level --

MS. WON: Perhaps the Board is getting ahead of the State Board on this issue, I mean, if this is the exact issue that's being discussed at the State Board --

MR. KISSINGER: Then maybe we should wait for the State Board.

MS. WON: Yeah. But also, I mean, to the extent you adopt this permit, it makes this issue a statewide issue, not an issue that the State Board always is grappling with only with respect to the LA permits. And if it is a statewide issue, then there is more pressure for the State Board to act.

MR. KISSINGER: Yeah, but while we're putting pressure on the State Board, we've got a bonafide POTW operated and it's got to deal with the problem, something that they have no control

over and may have these one-off exceedances, so we're trying to build in some way to mitigate its impact.

VICE CHAIR MCGRATH: The equity concern that I have, that I'm not at all troubled with serving up to the State Board, and I'm glad Tam is here, if in fact the registration of Pyrethroids for flea control that is used in a tributary to a sanitary system is causing environmental problems, we shouldn't visit Las Gallinas and all the other sewage entities with solving that. That's a problem that has to do with the registration and use of the chemical. And to warp our system for that purpose, I don't believe is equitable. So I'm not troubled by carving out an exemption for a pesticide that we know we've got issues with. I mean, the answer to that in my mind is to further restrict that pesticide in order to protect the Bay.

MR. JOHNSON: Can I just point out that EPA has some comments on this.

MS. STUBER: I think Lila's proposal has put us right in the box of EPA's and the State Water Board's disagreement over single hits, and I think that there is some flexibility there in

how they're addressed. But EPA's concern has always been that if you -- when is toxic too toxic? I mean, what if there is a fish kill and the permit actually authorizes that because there's no daily restriction on toxicity. We're trying to find the right balance, that's why we typically set daily maximum limits at higher magnitudes than we do monthly average limits. And that's typically how EPA has laid out addressing these issues, not only for chemicals, but also toxicities. So that's why we're supporting the daily maximum limit there. The regulations also envision that if the permitting authority is aware of the toxicant when they're establishing reasonable potential, that they set a water quality-based effluent limit for that toxicant. So if you believe that there is reasonable potential for Pyrethroids to cause a water quality violation for this permit and for this discharge, you would set a numeric limit just like you do other contaminants that are causing water quality problems.

MR. KISSINGER: Well, but then to pick up Board member McGrath's point, I mean, Pyrethroids are not something that are in ordinary use. It's

not something that the treatment works can do something about unless you tell me otherwise.

MS. WON: Mr. Kissinger, may I offer some examples? So for example, we in our POTW permits regulate Mercury, we regulate Copper, both our sources that the POTs have nothing to do with, it's really like dentists using mercury fillings and copper brake pads, but we have those limits because, as Robyn is saying, you know, there is a reasonable potential for excursions of those water quality limits, so we need to put those limits in and we can't put a carve out saying, okay, well, for copper, if the source is dentists, then it's not a violation. That's not --

MR. KISSINGER: No, I take that point and know they're in common usage, but I mean, again I'm reacting to this situation of one excursion and we're putting in a limit here that is going to be very costly to Las Gallinas over the long term, and I guess I'm pushing back on Jim's point.

MR. WON: You're a very nice person to consider cost, but in just how the Regulations work, I just don't see how we cannot impose a

hard and fast limit.

DR. AJAMI: Can I ask a question? Bill, is your concern the fact that this is just one of one discharger rather than everybody else being subject to the same rule? Is that your concern? I'm just trying to figure out, imagine tomorrow State Board comes back and says these limits are the limits, let's just be hopeful. That means that everybody is subject to it. Then it doesn't matter, right? Then everybody should be sort of complying with the rule, no matter what the cost is. Is that? I'm just trying to figure out --

MR. KISSINGER: I think it's a combination -- as I read the materials I understood that the State Policy to date, whether it's been formally articulated by the State Board, or in essence, alluded to in their 2003 Decision has been to use a narrative response rather than a numerical limit, and that that remains the default policy, if you will, and it was our policy up and until EPA voiced its objections. We are taking an action that there are good reasons to do it, but then I would look at the particular circumstance that we're doing it, you know, there's a phrase that a lot of

lawyers use, you know, good facts, bad facts make bad law. And I feel like that's what we're dealing with here, and I certainly take your point that, you know, Mercury and all kinds of other commonly used chemicals end up being a problem with a POTW at the end of the pipe, but this feels so one-off to me, where we have one hit and that's driving what we're doing here. And I don't have a sense, and haven't been able to get a sense, of whether what we're doing here will cause very big impacts on lots of other POTWs, or whether it's just this one -- I take it it's got a broader impact, by BACWA's and CASA's input; on the other hand, they're not here today to talk about the degree of horrible, so maybe it's not and they were just doing it in solidarity with Las Gallinas, I don't know. So I've given you sort of an imprecise answer to your question, that's my reason for hesitating, particularly when the State board presumably is about to do something, although they've been about to do something since 2003, so I -- Mr. Wolfe's point of why wait.

VICE CHAIR MCGRATH: I'm going to take another run at this. I mean, I understand EPA's

concern, but I think the fish kill response is not accurate. I mean, we are talking about effluent that meets an acute toxicity requirement, we're talking about trying to figure out in a regulatory scheme the ecological significance in a field of a sub-lethal effect, an impairment or even an assume impairment of reproduction on land. And from my experience, which is admittedly at this point about 12 years out of date for being really active, the modeling that takes you from an occasional excursion into reproductive impairment to a significant impact in the field is not robust in a comparative sense. And to take that as a general rule and then take the particular case of Pyrethroids is what I find most troubling in this. I mean, I have no problem with the idea of a chronic requirement here based on toxicity units because there is a reasonable potential on three metals, and I looked at that. But the Pyrethroids just in terms of it is not like we have a pesticides manufacturing plant in the area and we need to make sure we've got a really good industrial pre-treatment program; we've got something that's caused by legal use, registered use. And if

that's a problem, the way to fix it is not with toxicity policy, the way to fix it is by changing the registration of use of that chemical.

CHAIRPERSON YOUNG: Let me make a point and see where it goes. One of the reasons why I was comfortable initially with the additional language was that I also had in the back of my mind that Las Gallinas was continuing to have a pretty aggressive as a program as they possibly could to address the Pyrethroid problem, so that charging them with a violation at the same time that they're already doing everything that would result from us telling them that they were in violation didn't quite make sense to me, and it still doesn't, although I'm sensitive to Yuri's arguments. So what is in this permit other than the language on pollution prevention programs that assures us that Las Gallinas is going to continue to still be very aggressive in its public education efforts, and in its participation in the CASA group, and doing everything that they can do to address the cause of the problem.

DR. MUMLEY: To my knowledge, it was Bill, is there something specific in there?

Otherwise it translates into how we would exercise enforcement discretion. I mean, it seems like the heart of this discussion right now, and I am similarly moved by Yuri's legal advice, that we're dealing in tricky territory to carve out an exception in the absence of all the information I'd like to have to make this case. But it seems like the main reason we're doing it would be to provide protection for Lagunitas from some third party enforcement because, based on this dialogue that we're having with you and our knowledge, as long as Las Gallinas was appropriately acting on Pyrethroids in the lake as we would expect them to do, we obviously -- we're not going to penalize them when they're doing what we would want them to do to address the issue. So do we really want to, I guess I'll put it -- should we be sticking our necks out to take on this, protect somebody from a third party, and for some circumstances we don't even know may or may not exist, and I'm quite wary of doing that because we have considered and heard those concerns in many other circumstances in the past, and, Board member Young, you're nodding your head, as you know, we generally say we don't

go there. We look at the integrity of our action and how we would implement it. So, I mean, it really does boil down to, do you include a daily limit or you don't. And I think when you try to get into carving it – we're in Marin territory, then I think we should heed legal counsel to definitely be wary of because that in and of itself is not necessarily going to make EPA say, okay, we'll live with that, any more than they would live without a limit.

CHAIRPERSON YOUNG: Okay, well, I appreciate staff trying to address my concerns. I think the Las Gallinas folks have internalized the fact that we were trying to help them out, but I would be prepared to support the staff recommendation minus the change in the footnote. I'm persuaded by Yuri's arguments. I would also, though, want to have reports to this Board and potentially actually reopen the permit if it turns out that we have a number of these situations where because of Pyrethroids, these folks are spending a lot of extra money and not doing -- not being able to do anything that actually improves water quality.

MR. WOLFE: Well, let me just sort of say

what the potential consequence of all this. We have revised the Monitoring and Reporting Program to include the phrase, "The Discharger shall conduct a Toxicity Identification Evaluation when there is an exceedance of the chronic toxicity limitation." In other words, this sets up those limits. So if they're exceeded, the 2.7 monthly, or the 5.3 daily, then they would go into the Toxicity Identification Evaluation. That would be considered also a violation. Then we have added the language: "The Discharger shall accelerate monitoring to monthly if the TIE indicates that a pollutant or pollutants other than Pyrethroids causes or contributes to the toxicity and routine monitoring exceeds the triggers.

So to me, trying to be the Engineer looking pragmatically here, and for this year, while the effective date is July 1, that means the discharge to waters begins November 1, so for the first quarter they would be doing this sampling would be before December 31st this year for the first sample. It's conceivable we may have something from State Board before then, I'm working at this job too long to hang my hat on

that, but it's conceivable. So that gives us a point to make some modification, but it also comes down to really when is it that Las Gallinas is at risk of any consequence: it's those exceedances of the 2.7 monthly, or the 5.3 daily, which happened once in the past five years. In the past with other Dischargers, we would say, okay, that triggers you to go through the accelerated monitoring, toxic identification evaluation. We are softening the blow by basically saying that we're accepting that that's Pyrethroid caused, unless there's some other reason to determine that it's not Pyrethroid caused.

So it seems to me that we have revised the permit already to a certain degree to soften the blow. Yes, this is the first time we've actually taken this numeric approach which is new, we're also optimistic that there will be resolution of the issue by the State Board during this permit term. We do have the ability to reopen, and at this point we have not identified any other Discharger that is needing numeric limits, not to say that there won't be, but we have yet to do so. So I think we do look to

counsel for your legal advice, and I agree, and as Tom said, we have had other requests somewhat along these lines to try to carve out language that seems to speak to only one situation, and unfortunately at times we sometimes find it doesn't or we've done something that we haven't considered in so doing.

So based on that, I'll reiterate and restate the staff recommendation is that we recommend adoption of the permit Tentative Order before you, which includes rescission of the Cease and Desist Order, which we haven't really touched on, but that's just basically saying that they've complied with everything relative to Copper that the past permit required. And that we revised our response to comments as noted in the supplemental, and that we modified the language to ensure we have the correct name of the Department of Pesticide Regulation in there. So that would be my recommendation do the Board.

MS. WON: A CDO is involved and we need four affirmative votes for Bruce's recommendation to pass.

CHAIRPERSON YOUNG: Are we ready for a motion?

VICE CHAIR MCGRATH: I'll move the staff recommendation that is without the change that we discussed, it is as Bruce stated.

DR. AJAMI: I'll second that.

CHAIRPERSON YOUNG: All right, let's have a roll call, unless there is additional discussion? Let's have the roll call vote, then, please.

MS. TSAO: Board member Kissinger – Aye; Board member Ajami – Aye; Board member Muller – Aye; Vice Chair McGrath – Aye; Chair Young – Aye.

CHAIRPERSON YOUNG: So moved. All right, we are going to have a lunch recess.

(Recess at 1:11 p.m.)

(Reconvene at 1:52 p.m.)

REPORTER'S CERTIFICATE

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

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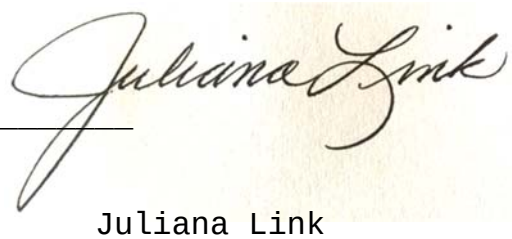
IN WITNESS WHEREOF, I have hereunto set my hand this 22nd day of May, 2015.



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IN WITNESS WHEREOF, I have hereunto set my hand this 22nd day of May, 2015.

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