did a little further checking and we found out that, within the vicinity of Kinoshita well, there were three historical USTs located approximately 100 feet northwest of the Kinoshita well.

00:09:03 These historical tanks were associated with a farm operation, Kinoshita Farm. It came up on a database, and that indicated that there were two tanks that were indicated on the database. In approximately '89-'90, when the city was acquiring the property, they did what was called a Preliminary Site Assessment of the property.

00:09:33 The tanks were identified in that Preliminary Site Assessment, and they did limited soil borings adjacent to those tanks. And, according to those -- that report, there was no releases that were identified. However, at the time that that testing was done, they did not do the kinds of analysis that might identify MTBE. It just was not standard protocol.

00:10:03 Male Voice: Could I ask a question [unintelligible]?

Michael Donovan: Sure.

Male Voice: Would something like -- historically, there was an airport right on that site. Would that have any impact on what we're talking about today?

Michael Donovan: Well, preliminary indications are that MTBE was used starting about 1985.

00:10:27 Now, I -- and you could ask Chevron for the -- when they started to add it to their gasoline, but in records I have seen, that it varies depending on who the producer is and who supplied the gasoline. It would vary specifically, but around 1985. So, if we use that as a start point, that was the start point at which it would be associated with. So, in -- so, the tanks were at least known to be existing in 1990.

00:11:03 It's still unclear whether the tanks were used after 1990, after the sale of the property. And, also, when we inspected the locations where the tanks were reportedly, that we could only see one tank. The other two tanks either were -- had been removed or at least their surface features were removed, and there was no indication that they were present.

00:11:34 These were used for -- to supply farm equipment, tractors, [unintelligible]. To give you an idea of where these are located, here's the Kinoshita well, and here's the location of the reported underground tanks. The only one that we know that still appears to be present is what was referred to as UST 3, which is located inside of a building.

00:12:05 It appeared that, based on how it's positioned, it may have been put in prior to even the building being built. This is from the database information. This is what we know. One tank was installed in 1955. It's approximately a 280 gallon tank. And, then, one was installed in 1979. It was approximately a 1,000 gallon tank.

00:12:32 The reason -- we asked why the second tank had been installed, and we found out that it was installed because that's -- the oil embargo crisis. And, so, retailers were -- and wholesalers were telling that --

people that they might not get delivery. So, it was very customary for them to install an extra tank to -- in anticipation that they wouldn't get the deliveries. So, that's why the two tanks.

00:13:00 Why the third tank never showed up, it may have not been used for decades, and so it was just left in place. So, where do we go from here? We're preparing a scope of work conducting the following operations, and it -- that is to do some geophysical work, identify the presence and -- presence or absence and the orientation of those USTs.

00:13:31 And, then, possibly to expose the top of these USTs and to remove any contents that may be present. And, then, potential removal of the USTs following the regulatory authorities' requirements. And, then, typically what they require is that soil samples be taken from beneath the tanks. And, we'll find out if these are -- were indeed a source, a potential source, for the MTBE that was seen in the Kinoshita well.

00:14:05 Our last -- we had been looking at some treatment alternatives for both the Kinoshita and the Dancehall well. We've arranged to have meetings with two treatment technology firms. One is for oxidation, which is a treatment that destroys the MTBE in its process. It's been used both from an in situ, where it's applied into the soil groundwater to try and destroy the MTBE in situ.

00:14:39 And, it's also used as an above-ground treatment for processed water. The second meeting that we've arranged is with Calgon, which is a major distributor of carbon, which is another process of removing

MTBE from water. It's more of an above-ground treatment type technology, a well head treatment.

00:15:05 The last one, and we're just looking into this, is a relatively new technology that's been used at certain sites. In that, they use a biologically active carbon, and that they find a naturally occurring organism that will breakdown the MTBE, and try and inoculate carbon and then pump water into this. And, it destroys the carbon in the process. But, it's only been used at very low rates and may not be applicable to this -- these particular sites.

00:15:43 And, that is it for my -- is there any questions?

Male Voice: Thank you very much. At what point will the determination be made as to when any of these treatments will be installed, the treatment process?

Michael Donovan: Well, what we've done is we're doing these alternatives in the event that action is not taken on a timely basis by Chevron.

00:16:16 And, Orange County Healthcare Agency is coming with an alternative. We're doing it -- researching this so that we have a fallback position. Hopefully, we won't have to do this, that Chevron will do what's necessary, and...

Male Voice: Actually, I meant at what point of testing the amount of MTBE will this become a necessary process? What is the breakoff point there where we have to treat according to current technology?

00:16:52 Michael Donovan: The -- I'll give you two answers. First, the regulatory requirement is that the secondary standard is 5 micrograms per liter. The primary standard is 13 micrograms per liter. But, what we're arranging, we've gotten a proposal from one of the companies that -- to take a amount of water and -- from the Dancehall well or -- and it could be from the Kinoshita, and do a bench scale test.

00:17:26 We're still in preliminary discussions with that. One of the things that we've talked about is that, since we don't know what eventually the plume concentration might be, is we might take that water and try and elevate the concentration to a level that we think that the well might encounter, such as approximately 40 micrograms per liter of what we might see in the future. We don't know what that would be, but to try and see what it -- how effective the treatment technology would be on the low levels and also this higher level.

00:17:59 Male Voice: So, the standard that we have set today -- and I don't mean today today, but the technology today -- there would be no treatment than prior to the 5 micrograms per liter?

Michael Donovan: The Department of Health Services does not require that there is a treatment prior to reaching that particular level.

Male Voice: I think the other part of the question is, since there has been a well shut down in the past because of MTBE being detected, what position does -- do we have in doing treatment for that, or is that going to be part of the equation here to get the well started back up is what I mean.

00:18:50 Michael Donovan: The well could be started up today, and it could be piped into the system, and the concentrations are not such that they would exceed drinking water standards.

Male Voice: Okay.

Michael Donovan: Okay. Thank you.

00:19:23 Chairman Jack Zepp: Natasha, do you have a presentation, or just available to answer questions?

Natasha Molla: Good morning. I just -- I had a couple of notes of what we've done since we were last here, so you could hear that. And, then, I'm also available to answer questions. Since the last Water Commission meeting, we have met with the City. We've met with Orange County Healthcare Agency on various issues.

00:19:50 As Mr. Donovan mentioned, we've installed MW15D and MW16A, B, C, and D. We've also sampled those. We've met with a few property owners. And, we've received approval for our alternative boring locations, which is in Del Obispo that Mr. Donovan mentioned. We've met with the community via the coffee chats at Metro Java. We've attended City Council meeting the beginning of February and updated them.

00:20:19 We've also met with Southwest Water to understand the operations. We have a meeting planned tomorrow with PSOMAS to understand

more of the basin hydrology. And, we've conducted a file review at the agency and with databases for Kinoshita. And, we're also preparing our Interim Remedial Action Plan that Mr. Donovan mentioned. That's due at the end of March.

00:20:44 So, just to let you know what's been going on. So, if there's any questions I can answer, let me know.

Male Voice: Does anybody have any questions?

Chairman Jack Zepp: I have one. Since the last time we were together, has there been further testing of the Dance hall well?

Natasha Molla: The city has been sampling it daily until the end of January, and I think they may have gone to a weekly status. So, that's my impression. The city's collecting the samples.

00:21:17 Chairman Jack Zepp: Is it the city that...

Natasha Molla: -- that's collecting the samples. Correct.

Chairman Jack Zepp: Eric, has it been -- how is the Dance hall well as of the last test?

Eric Bauman: The Dance hall well's values have been holding between 1.2 and 1.8 micrograms, and the samples we've been taking, we've turned the well for about an hour to get a clear volume, and then turn it back off.

00:21:46 Chairman Jack Zepp: Okay. So, is it fair to conclude from that that the recent rains haven't had any significant change -- caused any change in the amount of MTBE in the water for the Dance hall well?

Eric Bauman: I can't really speak to the impact of the rains at this point, only that the values we are getting are steady.

Chairman Jack Zepp: Say that again please.

Eric Bauman: I can't really speak about the rain having an impact because it's over a longer period of time. But, at this point, the values we're getting are holding steady.

00:22:25 Male Voice: What about the Kinoshita well? What are the readings there, and have they changed at all?

Eric Bauman: The Kinoshita well values are -- have dropped back down. We had a high of 3.8 and it dropped back to 2.0 at this point, but it continues to remain off.

00:22:55 Male Voice: Just an update on that the Dance hall well is still closed -- shut down.

Eric Bauman: Yes, it is.

Male Voice: And, Kinoshita?

Eric Bauman: Kinoshita is also shut off.

Male Voice: Okay.

Chairman Jack Zepp: I don't -- Chevron just -- does Chevron anticipate there being any delay in completing what needs to be done in the 45-day period that I understood is now running on the remediation response?

00:23:23 Natasha Molla: We were required to submit a plan within 45 days and we plan on meeting that.

Chairman Jack Zepp: You don't foresee any reason why you wouldn't have a plan submitted within the 45-day period?

Natasha Molla: Correct. I do not have -- I do not foresee any reason that I should not meet that deadline.

Chairman Jack Zepp: Is there any possibility of it getting submitted sooner?

Natasha Molla: Hmm. [Unintelligible].

Chairman Jack Zepp: Don't drink water until…

Natasha Molla: You can drink the water.

Chairman Jack Zepp: Anybody else have anything? Thank you.

Natasha Molla: Thank you.

00:23:52 Chairman Jack Zepp: Thanks, Eric.

Eric Bauman: On the Field Engineering Operations Status Reports, we know that we missed our opportunity to bring an item up for your inclusion on the unagendized items.

00:24:23 So, [unintelligible].

Female Voice: [Unintelligible].

Eric Bauman: Okay.

Female Voice: [Unintelligible].

Eric Bauman: Okay. I'll just hit the highlights on the report. On the high west side pipeline, [unintelligible] is that we are -- bids are due. I believe that is March 3rd.

00:25:00 And, part of that, when we go to the Council, we'll be asking to move money forward. Our original plan for that would have had the bulk of the money being spent in 2008-2009, but as part of coordination with the grant for the paving project, we've pulled the whole project forward. So, when that item is brought to Council on the -- it's going to be the 8th. You -- we went to Council on the 4th, right? The day after -- yeah. Yeah, it'll be brought to Council on the 4th, so we'll receive bids on the 3rd and bring it to Council on the 4th.

00:25:38 And, we'll be asking them to -- asking the Council to approve the project and allocate money for it -- bringing forward monies planned to spent in '08-'09. On the Advanced Water Treatment, the AWT, for recycled water, the Aqua Aerobics requested additional time to run tests to prove out the cloth membrane technology that it had.

00:26:21 They're convinced that they can get a chemical balance which will allow that system to work properly. However, the membrane system provided, which it's more like a -- it's more like a mop or a bit of spaghetti -- proved much more efficient at treating the water with the varying conditions of the raw, secondary-treated wastewater. And, that is where the design will be headed unless Aqua Aerobics and the cloth membrane system is able to come up with a real improvement in its chemical dosing system.

00:27:12 On the colored water issues, we've been tracking, with daily composite samples, the quality of the water and several key indicators. The iron, manganese, and turbidity and the currents have noted that the manganese and turbidity in particular are much higher than the service contract standards, although they are, and it remains within the levels of the enhanced service contract standard.

00:27:48 It appears also that we'll be adding TDS to our daily sampling as we have had some issues with the TDS to the water rising. The [unintelligible] water has gone from 500 at last, to up to 650 milligrams per liter. And, not wishing to experience the problems that would become apparent with that, the plant has been directed to turn off until it can correct the problem with the TDS.

00:28:29 Male Voice: [Unintelligible]

Eric Bauman: The -- you're referring to the colored water problem? It is more prevalent in the 250 south system, which is the area in the -- it's framed by the San Juan Creek and the southern portion of Del Obispo. Lately, the plant has been off, and we have seen improving quality as we are putting more Met water in, which is coming from the north and from the east.

00:29:25 There's nothing about the piping or distribution system itself. It's more a matter of where the greater proportion of the source water is coming from. It would result in the pattern that we're seeing. In the areas to the north and to the east, we see more import water. The ratio of water provided is higher in import.

Male Voice: [Unintelligible].

Eric Bauman: Yes. And, we're not getting as much blending in the southern section.

00:29:56 Male Voice: [Unintelligible].

Eric Bauman: Not without a significant amount of piping. And, it's -- even if we could fully blend, we may not blend our way down out of the problem.

Male Voice: Eric, I've seen a -- I've had a increase of people telling me about colored water problems on the -- in the area between La Novia and San Juan Creek on the east side of the freeway.

interior floor and column footings. At current, [CDM] maintains a position that that differential settlement is acceptable and not creating a problem.

00:33:02 So, we'll -- we are having [Tetrotech] review that and provide a -- provide their opinion as to whether or not that is fully acceptable or we need to do other remedial action inside the tank to prevent the -- any further settlement from creating leaking problems.

00:33:30 I was expecting to have the report back from Tetrotech at the end of the month here, and we'll see what -- if the concur. If they take a strong disagreement, we'll guide how much time it's going to take to resolve the issue. In the meantime, we've worked out a system of installing displacement sensors within the -- submersible displacement sensors within the tank so that once we fill it up, we can monitor on a weekly basis if we're getting any -- if the differential settlement is continuing or is stabilized, and to evaluate if we need to take further action on the issue.

00:34:16 Male Voice: Has there been, or are there ever, any leaks in that terminal?

Eric Bauman: We did have one episode where the -- one of the underdrain systems was picking up additional leaking. And, when we sent a diver in, he found an area where there appeared to be water leaking through a crack, and then he patched that.

Male Voice: Right. I remember the crack.

00:34:43 Eric Bauman: And, subsequently, we haven't -- we didn't see additional leakage. There's a slow -- when the tank is full, there's a slow, steady trickle. It's not a major amount and it's hard to sort that out from the groundwater. And, CDM claims that that amount of leakage is about a fifth of what is considered to be acceptable for a tank.

Male Voice: Mm-hmm.

00:35:12 Eric Bauman: And, we haven't noted any other clear sources for leaking.

Male Voice: So, you call it maybe seepage instead of leakage.

Eric Bauman: That might be a better term for it. We do continue to monitor the subdrain system on a weekly basis and take measurements of the rate of water coming from the subdrain system to continue to -- as a measure of the groundwater at this point because the tank is empty.

00:35:42 But, it also give us a measure of whether or not -- whether any other changes have transpired.

Male Voice: In the design of these tanks, they're not designed as totally watertight.

Eric Bauman: No. Concrete isn't totally watertight. It does actually have a certain permeability for water.

00:36:14 So, that's part of a consideration in terms of the seepage rate through the tank, so that there's actually a value, that you'll get so many inches of water passing through per inch of concrete per foot of hydraulic gradient driving on it. And, then, you multiply that by the total surface area in question, you'll get a number. So, that is one of the things considered.

00:36:40 Although, the concretes have improved considerably and we shouldn't be seeing -- the kind of problem that we're seeing is not [unintelligible] is not related to that sort of issue. It was related to an actual crack that was identifiable and a dye test rapidly showed that there was a seepage rate going through. An item not on the Operations Report, the -- at the end of the year, Professor [unintelligible] is doing his assessment of the 750 south habitat restoration.

00:37:20 He had determined that several areas had not sufficiently thrived and, particularly, some areas noted as sections 8 and 12. The 8 is close. At any rate, the two sections will require additional planting. He prepared a plan and has met with one -- the current maintenance contractor, Nature's Image, and they have provided a proposal.

00:37:56 And, he'll meet this week with [Ed Stewart] and Associates to provide a competing proposal to do the work. So, we're looking to get a competitive bid out of the two and bring that to the Council on March the 18th. We do need to get the work started in early April so that we can plant -- install these plantings while we have the tail end of the rainy season, and cut down the amount of irrigation that we have to do,

as opposed to allowing the plant to flourish under the normal rain cycle that we have.

00:38:45 Okay. Do you have any questions about some of the other items or other issues?

Male Voice: If you don't mind, I'd like to go back to the groundwater recovery plant operations. I have a couple of questions. One -- I realize when you did the write-up that the two wells were off and that they're still shut down. Now, in the third well, we're not using because it would create too much water availability for the train in the plant.

00:39:19 But, what is their prognosis on starting to use the water in these wells that are shut down, or what time frame? When she was talking, 45 days, and then there may be -- you know…this could end up being a six or eight month term, or longer, or shorter. I don't know what it is.

Cindy Russell: Are you talking about the Dance hall Well and the Kinoshita well?

Male Voice: Yes.

00:39:49 Cindy Russell: The City Council -- once we determine on the IRAP and other items that the Council needs to further consider, so those wells obviously have MTBE levels that are below the 5 micrograms a liter and are acceptable for drinking water standards. The Department of Public Health didn't say we should shut them down, but, when queried, they said the city might want to consider not

running the Dance hall well as to not exacerbate the problem or damage the remainder of the well field.

00:40:24 They didn't say yes. They didn't say no. I'll just put it that way.

Male Voice: Right. I understand.

Male Voice: [Unintelligible] not run it ever again?

Cindy Russell: Well, not run it until we've dealt with the issue. All of that said, I think what you're getting at is yes, we can run the wells now because -- and we wouldn't be in violation of Department of Public Health [unintelligible] drinking water standards. The water would be safe.

Male Voice: Yeah.

Cindy Russell: And, you might -- I don't know, and we haven't had this conversation here at the Water Advisory Commission.

00:40:53 It still hasn't come up yet. One of the things that we told the Council at their last meeting was that when you combine those two wells with the other wells that don't have any MTBE in them, even if they were at the very top levels [unintelligible] detect --

Male Voice: Right.

Cindy Russell: -- that we blend those out, and everything. Those levels are lower. The City Council still felt the wells should be off until we determine some sort of treatment for those wells.

00:41:21 And, that's what Mr. Donovan pointed out, that Chevron has opposed well head treatment.

Male Voice: Yeah.

Cindy Russell: We'll be -- we anticipate proposing in the IRAP well head treatment for Dancehall well. And, depending on what we find out about Kinoshita well, we'll then -- Eric and Mike Donovan have been evaluating treatment for the Kinoshita well. We may be in the spot of dealing with Kinoshita well ourself, as soon as -- you know…we're going to be at a place where we have to decide are we going to treat, are we not going to treat, and from a public perception point --

00:41:53 Right.

Female Voice: -- and for the comfort and -- of our customers --

Male Voice: Right.

Cindy Russell: -- and the rate payers to let them know that we're treating that. So, I don't have a specific answer, but I think in the next 30 to 60 days, we're going to give you more feedback about what we're going to do, when that's going to happen, and how we think these can be back on.

Male Voice: And, the second part of my question is now there are certain requirements to our contract with the operator.

00:42:25 And, I'm not -- incidentally, we have a lot of legal minds up here, but I'm not one of them. So, my concern or question is is, since we are voluntarily shutting down part of our supply, and the way that our supply wells are set up, shutting down one well may affect the entire operation of the plant to the extent that, instead of running at full or three quarters, which you won't do three quarters, you're either half -- you're zero, half, or full [unintelligible].

00:43:04 And, I just wonder, are we -- perhaps, is there any problem with us deciding not to operate a well so that our plant operation is lower than…

Cindy Russell: Yes. Actually, if we were -- let's just say we were operating at half capacity, and we could otherwise run at full capacity with those wells on, that is not the fault of the operator.

Male Voice: Right.

Cindy Russell: That's the city's responsibility. They decided to shut down those production wells.

Male Voice: Right.

00:43:32 Cindy Russell: And, so, we'll have to fund -- from a financial standpoint, that's a financial standpoint, that's our nickel.

Male Voice: Okay.

Cindy Russell: And, we'll need to proceed to recover any damages from Chevron from the -- if we believe that we've turned it down and that's something that we're pursuing --

Male Voice: Sure. Okay.

Cindy Russell: -- when it comes to those wells. So, that would be what -- we'd ask the operator to continue to operate as best as possible. You've noticed that Eric put in the report hearing that if he turns the [Teerador] well on -- they're still getting it repaired.

00:44:03 But, even if it comes on, we've got too much water.

Male Voice: Yeah, it doesn't…

Cindy Russell: It doesn't work to turn that on. So, that is an issue we're facing and the Council's aware of that.

Male Voice: Oh, I'm -- okay. Thanks.

00:44:43 Male Voice: Unintelligible.

Eric Bauman: Yes, the Teerador well is on the [unintelligible] project.

Male Voice: [Unintelligible].

Eric Bauman: I don't know. They're not taking over the sites. We're making arrangements to provide an easement for them for parking purposes. They'll still -- we'll still have access to the well through their property and we'll retain the entire property and conditions there existing, so that if -- if and when we have to re-drill the well, we can relocate the entire well and housing within the property.

00:45:27 You don't have to move it. If you need to re-drill a well, you'll have to put it some 20 feet away. So, I'll move over 20 feet, re-drill it, reconfigure the parking arrangement a bit. But, that is an issue for far in the future.

Male Voice: [Unintelligible].

Eric Bauman: At, current -- and, currently, there's no reason to re-drill the well. But, in -- if you looked down 50-100 years, eventually the casing will give out for one reason or the other, and you're going to find yourself needing to re-drill the well.

00:46:02 So, we tried to keep that option open.

Chairman Jack Zepp: Cindy, is there a clock run -- The groundwater recovery plant in the sense that at some point in time we have to decide whether or not it's performing adequately?

00:46:30 Cindy Russell: You mean from a standpoint of our contract, whether or not it's running.

Chairman Jack Zepp: Yes.

Cindy Russell: One of the -- there's not really a clock running. The construction phase is complete. They're in operational phase right now. One of the things that [Trussell] is doing is evaluating whether or not the plant is running satisfactorily. You know…Eric talked a little bit about the product water and the raw water here a little bit. Trussells' evaluation will include some -- will include feedback about what they identify as methods to operation -- things that we can change so that we could work with Southwest Water to change in the operation of the plant to assure that we meet the enhanced water quality standards.

00:47:19 There's not really a clock running on it though. I mean that we don't have to --

Chairman Jack Zepp: Is it open ended? I mean…

Cindy Russell: It's kind of open ended. It's a 20-year agreement. And, so, the goal here is for us to determine through -- by working with Trussell -- is the design of the plant adequate, is there things that need to be changed in the design.

Chairman Jack Zepp: Right.

Cindy Russell: And, if there are things that need to be changed in the design so that we get consistent good quality water, as opposed to having kind of erratic product water that we've been having, what are those things,

and whose obligation is it to affect those changes in the design based on the contract.

00:47:42 Same thing with the operations. What operational changes need to be made and are those operational changes required the responsibility of Southwest Water or the city from a financial standpoint to pay for -- based on the contract. And, that all goes to the Well Water Guarantees and the Product Water Guarantees and those sorts of things.

00:48:10 So, that will be a little tricky to deal with.

Chairman Jack Zepp: And, into this -- while we're trying to evaluate whether or not the groundwater recovery plant is operating sufficiently to our expectations, into the calculus at least is the fact that there's a dispute -- a question about whether or not we're providing them with standard quality water -- up to the quality they expected to get on the one hand.

00:48:40 On the other hand, we're shutting down wells, which is cutting off supply to the groundwater recovery plant. So, I suppose that, on any given day, it's hard to say what's causing the problem.

Cindy Russell: Yeah. Well, let's just --

Chairman Jack Zepp: So, my question is, ultimately, is going to be do we see a light at the end of that tunnel where we can get a snapshot and say the groundwater recovery plant is or is not performing to our expectations under the contract?

00:49:08 Cindy Russell: I think so. I think that -- and that light at the end of the tunnel is imminent. I think it's out here in front of us. Trussell's being doing the work for quite awhile now. Right now, actually, our well water is within the contract guarantee. We did have issues when -- last summer, and kind of going on until October. When the rains started, the rains helped a lot. Our raw water quality has improved greatly.

Chairman Jack Zepp: Okay.

00:49:34 Cindy Russell: So, now, we're at a situation where our raw water is meeting the contract requirements and we do get, as Eric just described, either manganese or TDS that is outside the product water guarantee. And, we're not -- we've asked them to shut the plant off until they can deliver product water at the enhanced water quality standards per the contract. So, I think that answers your question is that we've come to a point where, contract wise, we're delivering what we're supposed to. The plant is not delivering what it's supposed to.

Chairman Jack Zepp: Right.

00:50:04 Cindy Russell: So, like, let's just use yesterday. Yesterday, if we could have had all the wells operating and everything, we could have been running at full capacity. Now, the Dance hall well is off because of MTBE. Kinoshita is off because of MTBE. That puts us at half capacity. And, at half capacity -- so, that's not the fault of Southwest Water. They city shuts those wells down. But, the half capacity was unable to run because of the TDS level. So, we'll be -- we

have a meeting -- actually have a meeting with Southwest Water on Monday to talk about, okay, we consistently have this problem where we can't get enhanced water -- that we can't -- you're -- we're not getting product water that meets our Product Water Guarantee.

00:50:41 And, therefore -- and our well water is clearly within the realm. Okay? This is -- you know…we need to talk about what the solutions are here because this is an issue of a contract. You're not meeting the obligations of the contract.

Chairman Jack Zepp: Right.

Cindy Russell: That's, technically, a breach. And, so, we need to determine what are we going to do next. This is not a -- and this is not a six-month contract. This is a 20-year agreement. We can't continue to operate like this. We're not going to send substandard water to the customers.

00:51:09 And, so, we need to now work real clearly -- because we now have a clear path to go down.

Chairman Jack Zepp: Right.

Cindy Russell: To say, "Hey, this is the issue." And, secondarily to that, how do we design the plant so that when we have issues again in the future -- I mean this plant will be here for a long time and it's a positive source of water and all of that. So, when we have drought conditions again, and higher levels of mineral content in the well water, what can we change in the design of the plant so that it deals with that stuff more

effectively the next time, and we don't go through what we went through for the last year?

00:51:46 But, we didn't -- we do have the plant off in an effort to try and do that and not have our customers in the 250 zone and 350 zone receiving water that may or may not -- I mean it was -- we kind of decided to kind of err on the side of caution. Again, this week, the TDS could have resulted in some esthetic issues as well, as from an odor standpoint, as opposed to a color standpoint.

00:52:14 And, so, rather than have customers have to deal with that -- it's a little disconcerting to the customers the fact that the odor got -- and it's disconcerting to the city from a financial standpoint because -- that's what we're going to be talking to Southwest Water about. We need to find some sort of financial relief here, or we need to take action in another manner as it relates to this contract.

Chairman Jack Zepp: One of the things I'm wondering -- and I think the whole Commission would appreciate it if you would specifically give us an update on that meeting -- with that meeting plus any followup meetings you have --

Cindy Russell: Sure. Absolutely.

Chairman Jack Zepp: -- so we know where that's going.

00:52:45 But, I don't know. We have trained legal minds to my left here who could tell us I'm sure. But, one of the things that concerns me is that the longer the supply side is in question, the easier it is for the

operators of the plant over the period of months and years just to start saying, "Well, you know…it's been so long now, you know…you can't really fault us for anything that's going on because we've never had a stable platform to work from."

00:53:14 Cindy Russell: Well, yeah. They could say that. The contract provides -- the contract does provide -- doesn't say that they have to have a stable platform to work from. Water is not necessarily consistent in how it's delivered. And, then, you know…there is averaging that goes on and that kind of thing. But, they need to be able to deal with the changes in the water quality. That's kind of the nature of a water treatment plant.

Chairman Jack Zepp: Mm-hmm.

Cindy Russell: And, so, they have the obligation to deal with it, whether it's down here or up here, as long as it's within the contract requirements as far as the source water here.

00:53:50 And, so, I would, you know…I suspect that they'll make their arguments back the other -- this is not going to -- this will be a legal issue to deal through. I can guarantee you. But, we know -- I think we've got some information now we can work with that -- about what are we going to do to get this done? [Unintelligible]. So, that meeting's Monday.

Chairman Jack Zepp: Good. Okay. Anybody else have anything? Thank you.

00:54:25 Eric Bauman: Not -- that's one of the items on the Engineering and Operations Status Report.

Chairman Jack Zepp: Okay. Do we have a motion to receive [unintelligible]? All in favor.

Male Voice: Aye.

Chairman Jack Zepp: Opposed? Okay. We'll receive [unintelligible]. And, the next item of business is Commissioner/Staff Remarks. Anyone have any remarks?

Male Voice: A question. [Unintelligible].

00:54:59 Female Voice: The City Clerk.

City Clerk: [Unintelligible] that memo she sent out. I think it's way in advance. I thought, when I looked at all of your guys' dates, it was quite awhile.

Male Voice: [Unintelligible].

City Clerk: Yeah. So, when we get more information from her, I'll supply you with the info.

Male Voice: Okay. So, it's a couple of months, at least, off.

City Clerk: Yeah.

Male Voice: Okay.

Cindy Russell: We have just a couple of -- information for the Commission. We've only two -- well, in the future, put the MTBE item as a separate agenda item on the agenda for the regular report, like we're going to do the same thing for the Council.

00:55:36 And, I'm pretty sure you're probably all aware, the Council's requested a monthly report from our consultant as well. That'll be on the second Council meeting of every month. So, the next would be March 18th. So, we can give the report of what happened in February will go to them. You'll kind of get your report, and I'm trying to figure out how this is going to work because your meeting will be subsequent to the Council meeting. So, the Council's going to be hearing about what happened in February when you just kind of heard what happened in February.

00:56:04 It's a little easier to give you guys more up-to-date information because you have the -- your agendas are a little easier to get out than the Council agendas. The Council will hear pretty much what you just heard today, but they won't hear it until March 18th. So, it'll kind of work in that manner. What you hear in March, they're going to hear in April, and so on and so forth. We, as it relates to MTBE, also the access agreements where Del Obispo, we wind up on the street, I don't think we're going to, but that's not positive.

00:56:31 And, for the staff parking lot back here, we'll have those to Chevron shortly and we'll let you know that. I see the staff -- if you've got some -- [unintelligible]. We got from [Murdoch] -- they're doing a presentation on the desalinization plant this Friday, and they invited

the Mayor, Council Members, and some others. I don't -- I was going to call Susan Hinman and find out if that's an open meeting for the general public, or not, or if they had just invited folks.

00:57:00 They sent a letter to Eric and I and the City Manager. And, so, we're going to participate -- attend that on Friday. So, we'll let you know everything. If it's something that's an open meeting though, I'll let you all know [unintelligible].

Chairman Jack Zepp: She mentioned -- she called me yesterday and -- to tell me about it. And, you know…I certainly got that -- she's not around right now as you may know. But, I got the impression that if anybody -- I can't go, but if anybody on the Commission would like to go, I think, at least from her perspective, that'd be fine.

Cindy Russell: Oh, okay. Then, I will -- it's the Southwest Water District. It's at two o'clock on Friday.

00:57:32 I will -- since she's not here -- I know that she's got that information, but I'll find it and get it from you, or we'll try to track it down today. But, I'm almost positive it's at Southwest Water District's offices.

Female Voice: Mm-hmm.

Cindy Russell: It's a presentation about that, so…

Male Voice: They're asking for a project, so you consider participating in it. They have -- they're looking to need some $4.5 million dollar in

development money at this point, which I -- they're looking for $4.05 million and they're looking at developing a 25 million gallon per day plant.

00:58:15 So, for whoever -- for however so much participation on [unintelligible] pro-rated basis would calculate out. That's not the entire construction costs of the plant. So, the actual new construction costs of the plant is around $5 million per million gallon per day capacity. So, it's a relatively large venture and the more partners they can get onboard with it, the better cost efficiency they can get.

00:58:50 And, the -- So, they'll make that presentation and find -- try to elicit a commitment to fund the initial $4.5 million of seed money to really develop out a number of the issues for the ocean desal. The initial study that Murdoch had conducted under grant -- with grant funding, really proved out the ability to construct slant wells out in the ocean and yield water.

00:59:29 Now, they face technical challenges in terms of how to arrange the slant well so they really get ocean water, not only from a perspective of not wanting to have a negative impact on the groundwater basin, but also because the iron and manganese present in the groundwater would really foul up their system, a true ocean desal system. So, they have that technical issue.

00:59:56 And, then, how to get the water from the collected well field to the intended site. They have a tremendous issue of running a tunnel boring machine from Point A to Point B and missing whatever might be in the

way. Also, this will allow them to evaluate available and current technologies of the membrane systems. So, those are some of the key highlights that have been communicated to me as what they're looking at.

01:00:40 Male Voice: Jack and I attended the Water Advisory Committee meeting, which was again, pretty interesting. And, I would recommend that if anybody else could go, it would be worthwhile. The other thing we attended was, again, Jack and I went to the Tristate Water Quality Joint Meeting, which was I thought very interesting, and brought up a lot of issues that we aren't -- I don't think we're as involved in as possibly Southwest Water and San Clemente, but --

[Audio gap]

01:01:32 Male Voice: -- meeting it might be worthwhile for some or all of us to attend. And, the last thing I had was, Cindy, you sent out a memo on February 6th about talking to us all on consolidation status. Was anything developed there?

Cindy Russell: Oh, yeah. The Council on -- what's today? Thank you. On the 19th, the City Council decided to terminate any further consolidation efforts.

01:02:02 And, they directed us to -- we'd be doing a number of things. They provided us with direction to hire someone to come in and do a management and operational assessment, and audit of our water resource system. The goal of that, of course, is to identify what's here and if what's here meets our needs, and we have all the things that we

need to have, and doing all the things, meeting our best management practices on all of that.

01:02:37 And, so, we've collected one proposal that we had collected initially when we were doing the work for the consolidation, as well as requested a second. We got some information from the Southcoast Water District as to folks that had helped them in the past with things like that. And, I also called Murdoch to get some recommendations on consultants they think might do that. So, for -- while we're in the search of a new director, we would have this interim [unintelligible] person in here to be evaluating our organization, our practices, our procedures.

01:03:14 We, obviously, have master plans in place for all of our stuff. You know…are they sufficient and that kind of thing. So, over the month of March, April, May, June, with the goal of having a director by July. That person would do that, as well as provide staff with some support in helping us deal with MTBE, and colored water, and that kind of stuff because it is getting a little cumbersome trying to deal with all this stuff at the same time. So, that's kind of where we're going down that road. We should have some more -- I would anticipate that within two or three weeks, we'd have someone selected to be here.

01:03:50 Male Voice: In the next two or three weeks?

Cindy Russell: Yeah. So, by the time we have our next Commission meeting, if not before, I can give you an update, a real quick update. We've either selected someone or whatever. The City Manager and the Council

MINUTES
February 26, 2008
Regular Meeting
City of San Juan Capistrano
Water Advisory Commission

CALL TO ORDER:

8:02 a.m. in the City Council Chamber.

ROLL CALL:

COMMISSIONERS PRESENT: Chairman Jack Zepp, Vice Chairman Alan Freisleben, Tom Lytle, and Lee Goode.

COMMISSIONERS ABSENT: Dan Merkle (Excused)

STAFF PRESENT: Dave Adams, City Manager; Cindy Russell, Interim Public Works Director; Eric Bauman, Water Engineering Manager; Eric Joseph, Water Operations Manager; Francie Kennedy, Water Conservation Coordinator; Michelle Perea, Commission Secretary; and Christine Casper, Administrative Specialist.

ORAL COMMUNICATIONS: None.

ITEMS RECEIVED TOO LATE TO BE AGENDIZED: None.

CONSENT CALENDAR:

Item No. 1 Approve Regular Meeting Minutes of January 2008

Commission Action
Moved by Commissioner Lytle, seconded by Commissioner Goode, and carried unanimously 4-0, to approve Item No. 1.

AGENDA ITEMS:

Item No. 2 Consideration of Engineering and Field Operations Status Update for February 2008

Written Communication: Staff report dated February 26, 2008, by Cindy Russell, Interim Public Works Director. Staff recommendation: "By motion, Receive and File."

Presentation and Discussion: Eric Bauman, Water Engineering Manager, reviewed the staff report and was available to answer any questions.

EXHIBIT 13

Mike Donovan, PSOMAS, provided an update on the MTBE investigation to date. Concerning Chevron's Camino Capistrano site, another set of well clusters have been installed referred to as MW-16, A, B, C, and D. MW-15D was installed to the MW-15 cluster and the wells were sampled on February 12, 2008. The MW-16D sample was found to have an MTBE concentration of 2.9 mcg/L. On February 4, 2008, Orange County Health Care Agency (OCHCA) issued a letter requesting that Chevron submit an Interim Remedial Action Plan (IRAP), within 45 days of the receipt of the letter. The Corrective Action Plan must be submitted with a site conceptual model following additional site investigations. Also the OCHCA requested monthly sampling of MW-15 and MW-16 well clusters, or weekly if the Dance Hall Well becomes operational. On February 25, 2008, Chevron held a meeting with OCHCA, wherein Chevron proposed well-head treatment at the Dance Hall Well. The OCHCA requested additional monitoring wells as part of the IRAP process.

Regarding Chevron's Ortega site, Mr. Donovan stated that Chevron is close to completing agreements with certain landowners whose property they wish to install monitoring wells. Chevron has indicated that drilling will commence about two weeks following approval and signing of agreements.

Mr. Donovan spoke about the Kinoshita Well, which has had detectable concentrations of MTBE. PSOMAS investigated possible sources as it did not seem that the plume could have reached that area yet. The investigation determined that there are three underground storage tanks in that area that were removed or the surface features were removed. There may have been storage of fuel during the oil embargo era as it was customary to store gas. These tanks have not been used for decades, and Mr. Donovan recommends the area be investigated.

PSOMAS is meeting with two treatment technology firms that involve APC-Oxidation and carbon absorption (Calgon) to remove MTBE. Another technology PSOMAS is researching is referred to as biologically active carbon.

Commissioner Lytle asked at what point would the treatment commence. Mr. Donovan indicated that PSOMAS is just researching the treatments. Treatment is not required at this time as the MTBE values have not reached the 5mcg/L secondary standard.

Natasha Molla, Chevron, updated the Commission on a list of items that Chevron has accomplished since the last WAC meeting on January 22, 2008. Chevron has met with the City and OCHCA. They have installed MW-15D and MW16 A, B, C and D, and sampled all. They have met with property owners regarding the Ortega Site and received approval for alternative boring locations. They have met with the San Juan Capistrano community at a coffee chat and updated the City Council. They met with Southwest Water and have a meeting tomorrow with PSOMAS to understand more of

the basin hydrology. They are currently preparing the IRAP, which is due at the end of March.

Chairman Zepp asked if there has been further testing of the Dance Hall well. Ms. Molla indicated that it is her belief that the City is collecting the samples. Eric Bauman, Water Engineering Manager, said that the MTBE levels in the Dance hall well are holding and are ranging between 1.2 and 1.8 mcg/L. Commissioner Goode asked about the Kinoshita Well MTBE levels. Mr. Bauman informed him that the levels have dropped, from 3.8 to 2 mcg/L. Both Kinoshita and Dance Hall wells remain off at this time.

Commissioner Lytle questioned staff about when the Dance Hall and Kinoshita wells could be put back into service. Cindy Russell explained that the levels of MTBE are below the secondary standard of 5 mcg/L, and are acceptable for drinking water standards. The DPH did not request the City to shut the wells down. Instead, the City Council did not want to turn the wells back on, but possibly pursue treatment for those wells. Per Michael Donovan of PSOMAS, Chevron should be proposing a well-head treatment soon, and staff should have more information within 30 to 60 days.

Eric Bauman, Water Engineering Manager; updated the Commission on the 760S Reservoir Restoration Project. Sections 8 and 12 have not thrived and will need additional plantings. Staff will get competitive bids for this project. Plantings should begin in early April.

Commission Action
Moved by Vice Chairman Freisleben, seconded by Commissioner Goode, and carried unanimously 4-0, to approve Item No. 1.

COMMISSION/STAFF REMARKS:

Cindy Russell informed the Commission that there will be a separate agenda item for the MTBE issues for the WAC and the City Council Meetings. Also she reported that MWDOC is having a presentation on Desalinization, Friday, February 29, 2008, at 2:00 p.m. Staff will update the Commission on the location.

Commissioner Goode and Chairman Zepp went to the WACO and Tri-Cities Water Quality Joint meetings. Chairman Goode thought both were very informative and encouraged all Commissioners to attend in the future.

Cindy Russell, answered a question from Commissioner Goode about the water consolidation status. She said that at the February 19, 2008, City Council meeting, the City Council agreed to terminate any further consolidation efforts. They directed staff to

hire a consultant to conduct a management and operational analysis of the City's water and sewer system. The consultant should be selected within the next 2 to 3 weeks. There will be a Mayoral sub-committee to handle the recommendations from the consultant.

ADJOURNMENT:

Being that there was no further business to discuss, the Water Advisory Commission adjourned at 9:07 a.m. to the Water Advisory Commission meeting on Tuesday, March 25, 2008 at 8:00 a.m. in the City Hall Council Chamber.

Respectfully submitted,

Michelle Perea
Commission Secretary

Prepared by,

Christine Casper
Administrative Specialist

1 - 3.18.2008 - CC-CKA

EXHIBIT 14

1 - 3.18.2008 - CC-CKA

00:00:00 Female Voice: This is the March 18, 2008 City Council and Community Redevelopment Agency Meeting.

Male Voice: The City of San Juan Capistrano Council Meeting for March 18th, 2008. Madam Clerk if you wish to call roll.

Female Voice: Councilmember Allevato.

Councilmember Allevato: Here.

Female Voice: Councilmember Hribar.

Councilmember Hribar: Here.

Female Voice: Councilmember Uso.

Councilmember Uso: Here.

Female Voice: Mayor Pro Tem Nielsen.

Mayor Pro Tem Nielsen: Here.

Female Voice: And, Mayor Soto.

Mayor Soto: Here.

Mayor Soto: We do have some closed session items this evening.

00:00:29 I see no one in the audience. We will adjourn to closed session until 6:30pm.

Called the City of San Juan Capistrano meeting -- the City Council Meeting of March 18th, 2008 to order. If, Madam Clerk will take roll please.

Female Voice: Councilmember Allevato.

Councilmember Allevato: Here.

Female Voice: Councilmember Hribar.

Councilmember Hribar: Here.

Female Voice: Councilmember Uso.

Councilmember Uso: Here.

Female Voice: Mayor Pro Tem Nielsen.

Mayor Pro Tem Nielsen: Here.

Female Voice: Mayor Soto.

Mayor Soto: Here.

Mayor Soto: I don't see any other comments here. Mr. Hunt, thank you very much -- and your staff -- for a great presentation. Thank you sir.

Female Voice: Mr. Mayor, just to give the Council an update, as Mr. Hunt said, the Water Advisory Commission will see this presentation next Tuesday morning, and the Council can anticipate an agenda item and report back to Council, so that the Council can make some decisions on whether they'd like to participate.

00:49:29 And, given the timing of the Water Commission meetings and everything, we may be talking to South Coast Water District about, if we can extend that -- it may not get to you until the May 6th Council Meeting. So, we'll talk to them and I anticipate that that will be fine. But, I'll just be in touch with the Councilmembers and let you know what's happening as far your agenda and things like that. So, something to think about.

Mayor Soto: That's fine. Thank you. All right. Moving on to Item B3.

Female Voice: Thank you Mr. Mayor. The next item this evening is a status report from the City's consultant regarding methyl tertiary butyl ether, MTBE, testing and remediation conducted by Chevron and, also, status update of the Dance hall well and Kinoshita well and all those items.

00:50:13 And, [Michael Donovan] from PSOMAS is here to make the presentation. Also, Chevron is present to answer questions regarding

Michael Donovan's presentation or any other questions that Council may have as well.

Mayor Soto: Thank you.

Michael Donovan: Good evening. The broad update on the MTBE investigations that are being conducted in the San Juan Capistrano area, this is an update since February 5th when I gave the last update to the Council.

00:51:03 Okay. The site investigations, I believe I went over this again, but I want to reiterate. On February 4th, Orange County Healthcare Agency issued a letter requesting that Chevron put together a IRAP which is an Interim Remedial Action Plan, and that plan must be submitted within 45 days of the receipt of that letter. Right now, tentative date for that letter, or that plan, to be submitted is March 26th.

00:51:40 Also, the county requested that a corrective action plan be submitted, that it include a site conceptual model, following the additional investigations that Chevron is proposing, and is in the midst of conducting. Also, it must address the MTBE plume, as well as impacts to the Dance hall well. In addition, they indicated that the existing wells that they have just installed, MW15 and 16, which are the closest well clusters to the Dance hall well, that they be sampled on a monthly basis, and then increased to a weekly basis if the Dance hall well comes online.

00:52:24 Chevron also, as part of this, they installed one set of well clusters, MW16 -- I'll show you in a minute with a map. A, B, C, and D, these

are four wells that increase in depths. They sampled this well on February 12th, and they also installed an additional well on existing well cluster at MW15, a D, which was a deeper well that most -- which is approximately 75 feet below ground surface.

00:52:56 On February 25th, Chevron held a meeting with the Orange County Healthcare Agency to obtain feedback on the IRAP process. They had proposed a well head treatment at the Dance hall well with -- and that was their -- reported to IRAP approach. Orange County Healthcare Agency requested that additional monitoring wells will be required as part of the IRAP process, including both cross gradient, down gradient, at and adjacent to the station to try and fully develop the -- where the plume is located.

00:53:33 Also, that Chevron is in the process of -- with completing access agreements with the various offsite property owners to conduct what was called a CPT, which is a Cone Penetrometer Testing investigation to the south, southwest, and southeast of the station, and is in progress. On February 27th, a meeting was held between Chevron consultants and PSOMAS to convey information related to hydrogeologic information that PSOMAS had in-house as part of the work that had been done on the -- for the San Juan Basin Authority.

00:54:08 They -- later on, Chevron came in and had the files copied and so they are in position of the information that they...On March 3rd and 4th, Chevron initiated the CPT investigation, and on March 7th, CRA submitted a detailed sampling and analysis plan, and a QAP, which is a Quality Assurance Project Plan. It was a requirement by Orange

County Healthcare Agency as part of their low flow sampling approval.

00:54:42 Chevron also is continuing negotiations -- access to proposed site investigations go on. On March 12th, a meeting was held between Chevron and the City of San Juan to discuss what the IRAP option or the well head treatment at the Dance hall well, and Chevron was proposing a GAC system, which is a granulated activated carbon with a potential with green sand filters for manganese and iron treatment. And, the reason is is that the iron and manganese that naturally occurs in the water would have a tendency to contaminate the carbon and make it less susceptible to taking and removing the MTBEs.

00:55:26 So, it has to be taken out before the water can go into the GAC filters. Chevron requested that they wanted a guaranteed continued operation of the Dance hall well. This was a bit of a problem. We don't have a particular realm of what this continued operation is because, obviously, that would require that the Dance hall well would typically -- and during a course of the year would go down, or at least, the [WARP] system might go down for maintenance or so forth.

00:56:02 So, continued operation is a bit unrealistic. But, it was not specifically defined as to what that continued operation is. And, I think that will be part of what their IRAP and proposed remedial plan will be. They estimated that once they got approval for this particular type of treatment system, it would take approximately six to nine months to implement.

00:56:35 The overall footprint of this proposed treatment system was approximately 40 by 70 feet. We took a look at trying to identify if there was any suitable areas in where the groundwater treatment plant is to see if it could be incorporated, either as in to or adjacent to the facility, and we provided some information, some aerial photographs for Chevron to try and figure out to see if this would work.

00:57:03 Chevron has also proposed that well head treatment would be part of the overall corrective action plan, would be able to capture the plume, and pull the plume in. So, it'd be the long-term remedial option is what they're hoping will be approved. To give you an idea of where these -- where we're talking about. Here's the station. Here are the wells that they just newly installed -- these red. And, here's the Dance hall well.

00:57:35 All of these wells have had detections on various levels depending on where you are in the well. Go to the next slide. It gives you an idea. In the white bulge, you can see where detections have gone and where this is close to where the station is, progressing down towards the Dance hall well as it -- the concentrations in about mid-plume are up to about 78 micrograms per liter, and they decrease to about 2.9 at the deepest well at MW16, which is the closest well to the Dance hall well.

00:58:17 Moving on to the Ortega Highway site, [unintelligible] everybody the Ortega Highway site is located right at the corner of Del Obispo and Ortega Highway, not a tremendous amount. There have been problems associated with getting access to the various properties, so that the --

not a tremendous amount of information has been collected as yet. Next slide.

00:58:46 What Chevron has completed is that they have gotten access agreements with the [Denault] property. The [Strocial] property is, hopefully, being imminent that that is being reviewed by Chevron as we speak. Orange County Fire Authority has been completed, and a contingency work plan is trying to -- is being looked at Del Obispo in the event that access to some of these properties are not obtainable.

00:59:16 The problem with the -- Del Obispo Street is obvious, for traffic congestion that would occur and, also, it's -- frankly, it's dangerous to be working into the street with the kind of equipment that is required. On March 7th, Chevron did groundwater sampling as part of the existing wells on and adjacent to the site. And, then, on March 17th of this week, Chevron initiated geoprobe investigations on the Orange County Fire Authority and the Denault's property.

00:59:53 In fact, in my drive here I saw the actual work being done on the property. So, they're actively investigating as we speak. Go ahead. Moving on to the Kinoshita well, I wanted to -- this is a aerial photograph to give you a perspective of where the Kinoshita well is to the existing.

01:00:19 Here's the Chevron well at Camino Capistrano and Del Obispo. Here's the Dance hall well. And, then, here's the Kinoshita well. Now, there is also -- not depicted on here -- but, there's a number of other wells that are located in between the Kinoshita well and the Dance hall well.

Next slide. In January of this year, water samples from Kinoshita well detected three to four micrograms per liter of MTBE, and subsequent samples have remained above one microgram per liter of MTBE.

01:00:55 Now, what we did is that we had a low confidence that the plume that might have originated from the Camino Capistrano could have migrated all the way to the Kinoshita well, especially bypassing existing production wells that are in between. So, we took a look at what kinds of other underground storage tanks or sources could be in the area, and we did -- used a data record search firm to identify records that might be in the area showing underground storage tanks and so forth.

01:01:33 This map depicts underground storage tanks. This is a quarter mile. This is a half mile. There are tanks in the area. They just have to be -- they happen to be quite distant. Also, there's a problem with them being on the other side of the creek. And, also, like these, the closest ones would be -- typically, can be considered down gradient, a little bit difficult to try and get.

01:02:02 So, we took a look at the database and we discovered something. Next slide. There were three historical [USTs] located approximately 300 feet northwest of the Kinoshita well. These historical USTs were associated with Kinoshita Farms and, as part of the acquisition of this property in 1990, a phase I or preliminary site assessment was conducted.

01:02:33 And, that as part of the --

[Audio gap]

01:02:57 -- identified three underground storage tanks. They did limited soil testing to each of these storage tanks with borings as close as they could physically get. There was no indication of how close they were, or whether they had gotten actually underneath the tanks or anything. There was not sufficient information in the reports. And, they reported -- the testing reported no releases. However, given in 1990 they typically did not run the types of analysis that you would find MTBE at that time. There's no -- it may not be representative.

01:03:36 But, at least, there was no -- they did run tests for gasoline and they did not find gasoline petroleum products. Now, it's also unclear whether USTs were used following the sale of the property to the City of San Juan. So, there is a possibility that the tanks might have been used for a brief period after the property was acquired because it was still being used as a farm.

01:04:05 Right now, in a review of the facility, there -- it is unclear whether two of the three USTs were removed. There's no indication, surface indication, that those USTs are present. There is one UST that is present. At least, that there's indications. There's a dispensing unit that still exists. We did a review of the Orange County Healthcare Agency and Fire Authority for any records of tanks being removed from this property and there were no records that existed.

01:04:41 Next slide. This is a -- gives you an aerial view of where the tanks here. Here the Kinoshita well. It's in blue on the far lower left. And, then, in red are the three tanks. This one, there's no indication of it being present. This one, there's no indication of it being present. This one, which is housed inside of a building, you can see indications of the fill [unintelligible] and along with the dispensing unit -- very, very, very old.

01:05:16 According to the database, this is what was reported for both of these tanks. One was installed in 1955. It was a small tank, 280 gallons, had regular gas, and it was not reported as far as what its tank construction, but knowing the time period, it probably was steel. The second tank, which was a larger tank installed in 1979, was a 1,000 gallon.

01:05:45 It was installed because of the oil embargo at the time, and the possibility of disruption in supplies. So, it probably also is steel. Based on discussions with previous owner, these tanks were in use, at least up until 1990. Next slide. Right now, we have requested scopes of work from a number of consultants who do a variety of activities.

01:06:16 One is -- on of these things is to identify the presence or absence and orientation of these USTs using geophysical methods. The second is to expose the top of the UST and to remove any contents that might be present so that they don't be -- continue as ongoing source. And, then, to have the tanks removed and sampled directly beneath them and see if there has been a release from these tanks.

01:06:44 Lastly, we have been looking at some treatment alternatives about the Dance hall and the Kinoshita wells. The two types of treatment technologies that we were looking at -- one is for what's called a Hypox, which is a hydrogen peroxide ozone, which is a destruction-type technology for water, using it -- a company called APC. And, the other one is carbon -- granulated activated carbon and calgon.

01:07:19 And, we've arranged for these firms to come in and give presentations on the technologies to the City of San Juan. And, we're researching another technology. It is called a biologically active carbon, which it uses a technique of using indigenous organisms. MTBE is a little bit unique in that it there's not a lot of organisms that like it, but if there are, they might be able to be used to inoculate the carbon and then pumped into carbon, and the carbon would actually destroy with the biologic inoculation where it wouldn't be -- have to be changed.

01:08:00 But, this has only been done on a very small level, not for a high production well. It's only for -- like you would treat a plume, an existing plume, at a very low level. And, that's it. If you have any questions…

Mayor Soto: I believe we do have some questions here. Mayor Pro Tem?

01:08:28 Mayor Pro Tem Nielsen: Thank you. A couple of questions on the Chevron-proposed [unintelligible] at the Dance hall well with the continued operation, then guarantee and understanding, question -- I would assume that that means that there would be a guarantee on their

part that there's no MTBE on the output side when we're doing this treatment.

Michael Donovan: Oh. Absolutely. That there would be a requirement from them, not only from the MTBE, but that there's no alteration in the water that go -- it would still go to the groundwater recovery plant for [RO].

01:09:06 So, it has to not only remove the MTBE, but not be changed such that it would violate the agreement that's currently in place with the -- with South West.

Mayor Pro Tem Nielsen: And, if this GAC were put in place at the Dance hall well, how long would that process have to stay there until the MTBE was cleaned up and that the process of filtering was no longer needed?

Michael Donovan: Years.

01:09:31 Mayor Pro Tem Nielsen: Years, decades...

Michael Donovan: I have not seen --

Mayor Pro Tem Nielsen: A long, long time.

Michael Donovan: A long time.

Mayor Pro Tem Nielsen: Also, is there any update -- on the plume toward the [Teerador] well, it looked like there's no wells yet, and --

Michael Donovan: There's only been nearby wells that have been put in place and there's nothing that's come out. They're just doing the investigation, starting to branch out from the -- from that station. So, there's no data that's available to see where it's going, but --

01:10:01 Mayor Pro Tem Nielsen: Would it make sense, given the concern with Teerador well and seeing what happened with the Dance hall well, would it not make sense for you to do some drillings right by the Teerador well to see if the plume has reached that point, and then worry about back from it? But, at least, get some information right at the Teerador well quickly.

Michael Donovan: That might be a question for Chevron.

Mayor Pro Tem Nielsen: From the city's perspective --

Michael Donovan: From the city's perspective, right now, preliminary indications are that it looks like the plume is not going towards Teerador.

01:10:37 And, Teerador is not actively pumping right now. And, it looks like the plume is going more of a -- directly south to slightly southwest. At least, that's the preliminary indications at this moment in time. So, at least from right now, there does not seem to be as big a concern. With respect to Dance hall, Dance hall was almost directly in line with the plume, in the plume direction that it was going -- in the area that the plume was going.

01:11:06 Mayor Pro Tem Nielsen: And, I noticed that MW13 and 14 didn't have any readings since December. Is there any reason why January or February we don't have updated readings?

Michael Donovan: They weren't being required to sample those. They only do them on a quarterly basis.

Mayor Pro Tem Nielsen: Would it make it easier to -- because I know there's been some talk in the past about modeling, and that when we last had them folks here, they said they didn't have enough data points to do the modeling. If they were doing all of these monthly, would that expedite the modeling process, as opposed to quarterly?

01:11:35 Michael Donovan: I can't answer that because I don't know what parameters are used to do their modeling. That would be a question for Chevron.

Mayor Pro Tem Nielsen: Chevron. Okay. Thank you.

Mayor Soto: Mr. Donovan, do you recall, or is there a record as to what size of release that was, how many gallons?

01:11:58 Michael Donovan: I don't recall exactly. You have to ask that to Chevron. But, I remember one quantity -- I think there was two releases and I remember -- believe that 2,000 gallons was one of the first releases, but I don't know what the second release was. But, that would be a good question for Chevron.

Mayor Soto: Okay. And, also -- and this might be another question for Chevron. But, they're treatment area, you indicated to be a 40 by 70 area, is that actually a building, or is that just a treatment area, or --

01:12:31 Michael Donovan: No, that is just preliminary. And, they did indicate that, based upon what area was available, that there may be a reconfiguration. So, it could be long and narrow versus short and fat. And, so it depends on what area's available and they probably could configure it. One of the criteria was -- is that the 20,000 pound carbon vessels are approximately 12 foot in diameter and, so, that becomes a limiting factor that it has to be a bit bigger than.

01:13:00 It can't be 12 feet. It has to be a little bit bigger than that. But, that starts to become a limiting factor.

Mayor Soto: Okay. Any other questions? All right. Thank you, sir.

Michael Donovan: Thank you.

Female Voice: Would the Council like Chevron to come and answer maybe a couple of the questions that…

Mayor Soto: Sure.

01:13:32 Female Voice: Good evening. I'm going to have my consultant, Jack [Frame] answer some of your technical questions that you had, unless you had anything specific for me.

Mayor Soto: Do we have any questions here gentlemen? No. Thank you.

Jack Frame: I'm Jack Frame, [Unintelligible] Consulting, representing Chevron. In answer to one question about the release, there was a 2,000 gallon regular gasoline release and then a subsequent 800 gallon of premium gasoline. But, those were decades ago.

01:14:06 So, those were the releases that we -- that we're aware of. And, I'll be happy to answer any question you have.

Mayor Soto: Mayor Pro Tem?

Mayor Pro Tem Nielsen: Go back on the -- can you explain on the modeling -- first, what is the delay in being able to do the modeling? I noticed on MW13-14, there had not been any, apparently, tests since December to update those borings. Is there a reason why, and is there a way to get to a -- your data points that we talked about before quicker so that you can get your modeling to see where this is going?

01:14:42 Jack Frame: There's a number of things we need for modeling, and one of them is a -- to better understand the aquifer characteristics. And, we're hopeful that when the well is brought up on April the 1st, tentatively, that the City Council would be amenable to letting us run that -- or re-running that well for 72 hours. That would allow us to put some transducers in monitor wells that are existing nearby that we could gain a better understanding of what the aquifer characteristics are because what we need to do is determine the hydraulic coefficients in the aquifer.

01:15:21 Without those, modeling is absolutely worthless. And, anything less than 72 hours normally doesn't generate very much data. And, it was originally planned to just turn the well on and turn the well back off. But, if you could see fit to let it run for the 72 hours, we would put the transducers in, and it would allow us to gain some information that would head us a long ways down the road to developing a model. But, to answer your question directly, the -- whether we analyze the wells monthly or quarterly, doesn't do a whole lot for us because the question was raised about how fast does the water move.

01:15:58 And, I told you, you know…I'd give you a range. I've subsequently done a calculation making assumptions of what the hydraulic conductivity of the aquifer because we don't really know, so I'm just guessing. And, it would appear that the water's moving at a rate of about eight tenths of a foot a day, so about 300 feet a year. So, it doesn't move very much in a quarter. So, having those monitor wells sampled more frequently doesn't do a lot for us relative to determining how we are we going to calibrate the model.

01:16:32 We can -- having the aquifer characteristics, the hydraulic coefficients are really critical to us though, so I would ask that the City Council consider letting that well run for 72 hours when you turn it on.

Mayor Soto: So, do you have a plan for us as to how we could run it for 72 hours without introducing that water into our drinking water system?

Jack Frame: No, sir I do not. As I said --

Mayor Soto: Could you come up with one?

01:16:56 Jack Frame: As I said before, with the concentrations down at 2 BPB, the outlet of that well, when mixed with the other water, is going to be below detection on MTBE. So, I would suggest that maybe you might reconsider just for that 72 hour period to let that water pass.

Mayor Pro Tem Nielsen: And, I'd suggest that you think about if there's another way to run it for 72 hours without introducing the water that you talked to our folks about how we could do that.

Jack Frame: I'll tell you right now, sir, that there's no viable way to do that. 800 gallons a minute -- to be able to dispose of 800 gallons a minute of water, if you dumped it down the sewer, it would be a terrible waste of the resource, and there's no way to recover that water and then reinject it.

01:17:39 Mayor Pro Tem Nielsen: Can you put your filters in place to take out the MTBE at that point?

Jack Frame: We would not be able to do that to around April, sir. As you saw from Mr. Donovan's -- our best guess, and it is a guess, six months is really a stretch, nine months is probably more like it. And, that's assuming there are no major hiccups in the permitting process because, as you know, you've got a lot of people that are going to have to say yes.

01:18:04 And, we have to be able to design it and build it, the system, and put it in place, make the tie-ins down gradient of the producing well and back into your system, and that's going to take time as well. So, there's no way we can do that between now and then.

Mayor Pro Tem Nielsen: And, the last question was just in terms of the Teerador well coming back. Has there been any attempt to do any testing right around the Teerador well? I recall our last conversation, with your military background protecting the town and the fortification going at that point to make sure that nothing has reached that point, has there been any attempt to test that?

01:18:39 Jack Frame: No, sir. Our belief is that we have -- there's no indication the plume is heading thataway. And, we'd be very reluctant to go and make a major jump over -- near the Teerador well because there are other potential sources as well. And, when we see our plume going south, it's kind of hard for us to believe it's going to do a flanking move so quickly, sir.

Mayor Pro Tem Nielseon: Okay. Thank you.

Mayor Soto: Dr. Uso.

01:19:05 Councilmember Uso: Are we testing for any other byproducts of gasoline other than MTBE? I guess this is a question, not just for you, but for staff. Benzenes, you know... Well, I don't know all that stuff, but I know you do.

Male Voice: [Unintelligible].

Male Voice: Mike Donovan can address that question.

01:19:27 Michael Donovan: For the Kinoshita well, it was only reported for MTBE and oxygenates. And, for the Dance hall well, with the detection of two chlorinated compounds, perchloroethylene and TC, trichloroethyelene, it was increased to include those compounds and a whole host of [unintelligible] compounds.

Councilmember Uso: Is there a reason why we're not testing for other byproducts that might be part of that plume, any other gasoline byproducts that are also known to be unhealthy?

01:20:07 Michael Donovan: No, but right now, the well is shut down and it's not being operated. So, it's -- we can increase that to include and report all [unintelligible] compounds associated with that.

Councilmember Uso: I guess my question is why we wouldn't want to do that along with the test wells? I mean you're still pulling some water out of the test wells that are showing MTBE. Are they only being tested for MTBE and why are we not testing for other compounds that may also be dangerous for our residents to consume?

01:20:47 Michael Donovan: The -- Chevron is testing for a whole host of compounds, petroleum compounds, as part of their monitoring program.

Councilmember Uso: Okay. And, so, since I've not seen any of that in any of the reports, I have to assume that they've all been negative.

Jack Frame: When we run this analysis for the water, we run a EPA protocol. It's called a GCMS 8260.

01:21:16 That -- when we run that sample, what we're looking for are the normal analytes that we would expect to see from gasoline, benzene, tylene, ethyl benzene, zylenes. Those are all non-detected and they have been. The nice thing about gasoline is that those compounds, which are the most toxic, which is benzene and ethyl benzene, don't move very far because the bacteria and [unintelligible] like those and they preferentially eat them quicker. So, the plume that you would expect to see from a gasoline release for those constituents do not travel very far down gradient.

01:21:49 Unfortunately, the MTBE is not well liked by most bacteria, and it's also more soluble, and it migrates much further, and that's why we're seeing the MTBE in the Dance hall well. And, you wouldn't expect, and nor do we see, the [unintelligible] constituents. If you looked at our analytical data, you'll see that those decay very rapidly as they move away from the site, sir.

01:22:10 So, we do not believe that the Dance hall well is threatened by any of those compounds.

Councilmember Uso: Now, you're asking us to run the well for 72 hours so that you can model the movement of the plume because the pump actually

operating will affect the movement, or should affect, the movement of the plume. Is that correct?

01:22:39 Jack Frame: It -- well, let me -- the answer's -- that answer's yes. But, let me -- a little bit different result is that we're trying to determine the characteristics of the aquifer, the water movement. Obviously, the plume being in the aquifer is going to move some when you turn on the well. Absolutely. In fact, it's moving right now whether the well's on or off.

Councilmember Uso: Yeah. And, so is the water. Is that correct?

Male Voice: Jack Frame: That's right. The water's moving and with the MTBE with it , it's going right on by.

Councilmember Uso: The faster the water is moving, the faster the MTBE is moving.

Jack Frame: Yes, sir.

Councilmember Uso: And, it's moving towards --

Jack Frame: Down gradient.

01:23:09 Councilmember Uso: Down gradient.

Jack Frame: When we turn on -- in order to do an aquifer test, when you turn on a pump, any pump, and the aquifer has some impact on it. The bigger the pump, the more impact. Dance hall has a nice impact on it. We'll

put transducers, which are pressure sensors, we'll be able to determine the, if you will, the drop in the water table at varying distances from the pumping well.

01:23:36 This allows us to accurately, or more accurately, relatively accurately, calculate the aquifer characteristics. And, without those, a groundwater flow model is absolutely worthless. So, that's what we -- that would be very helpful to us. We can use data that was used when they did the basin study, but those were literally literature values and they most likely are incorrect. They're the best that are available without doing a pump test and that's the low cost solution.

01:24:06 By being able to -- if you turn your well on, we do -- we get two sets of data. We get the data when the well first comes on, and then for that 72 hour period. When you shut the well off, the aquifer rebounds. We'll continue to monitor and we'll get both the drawdown and the recovery, which gives us a really good dataset and would help us determine the aquifer characteristics to, in fact, do the groundwater flow model.

Councilmember Uso: Something that I guess I should know, how is it -- are we pumping water through the Teerador well?

01:24:39 Female Voice: Currently, no.

Councilmember Uso: Currently no. So, how do we know that if we start pumping water through the Teerador well that the plume won't change directions since

now the gradients have changed? Am I correct in assuming that the gradients change when you start pumping, as we spoke before?

Jack Frame: Well, every well in the aquifer is going to have some impact on the water flow in that system.

01:25:05 We believe that the water flow that the teer -- or the aquifer that the Teerador is in, is not exactly the same as the water -- the aquifer that sits at the Dance hall. So, there's -- it's not exactly you turn on the Teerador and, suddenly, you got a left hand turn over to the Teerador for the plume. The water primarily moves down gradient, obviously to the south, and you've also got three other wells down in that area, if they were running, would be pulling water toward them.

01:25:35 If they're not, then the natural gradient is down in their direction as well. But, the water is moving thisaway relative to here's Dance hall, here's Teerador, so that you turn the Teerador well on, you're going to have a limited influence over in the direction of where the plume is. Will you have some? Probably, yes, but I don't think it will be significant.

Councilmember Uso: All right. Thank you.

Mayor Soto: Councilmember Hribar.

01:26:00 Councilmember Hribar: If we turn the well on, the Dance hall well on, for 72 hours, does that expedite the remediation coming to the solution to this remediation?

Jack Frame: I think the short answer is yes, sir.

Councilmember Hribar: By how much?

Jack Frame: I would not even choose to guess sir.

Councilmember Hribar: So, this well water will get mixed with our other wells, or the balance of our water, so I think this Council should address that. I -- 72 hours, you know…if our people -- we'll tell the people not to drink the water if they're concerned about it. It's below Federal standards, State standards, let's turn the well on for 72 hours.

01:26:40 Mayor Soto: Councilman Allevato:

Councilmember Allevato: Yeah, I think that we got into this mess with Chevron. I think that you want to work with us in getting us out of this mess, and we should work collegially here, and use our best science, our best methods of working together to move this process along. And, if it entails opening the well up for 72 hours, blending it with our other water, imported waters, and then having a concentration that's negligible, I'm personally in favor of that.

01:27:23 So, I think we need to address that issue. And, you know…if the public does not want to drink water during that period, there's other ways of obtaining water. But, I -- if it's negligible and it's below the scientific standard of any possible danger, I don't see the problem in drinking the water.

Mayor Soto: Thank you Councilmember Allevato. Maybe we can have Mr. Donovan weigh in on this as our consultant.

01:27:56 Michael Donovan: I agree that a 72 hour test would greatly increase the knowledge with respect to the hydraulic coefficients and so forth, and that the Council should consider it. Definitely with the concentrations below drinking water standards, I think this is an opportune time to do it.

Mayor Soto: Very good. Thank you. Councilmember Hribar.

Councilmember Hribar: Yeah, Mr. Mayor, you know…how much -- you can still bathe, you can still wash your hands, come on. What's the -- you know…everybody gets a couple of quarts of water, go to San Clemente and drink their water for three days. Let's get this done and let's try to expedite it.

01:28:37 Mayor Soto: Gentlemen.

Mayor Pro Tem Nielsen: I believe this is just an advise issue. I would suggest that staff work it up for us and present it to us for recommended action.

Female Voice: I'll prepare a staff report for April 1st for you to make that decision so that maybe in the next day or two, depending on your decision.

Mayor Soto: April 1st? How appropriate.

SIERRA ANALYTICAL

Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	Reported:
Newport Beach CA, 92660	Project Manager: Lisa Nelson	11/24/03 15:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Dance Hall-2	0311122-01	Water	11/10/03 13:30	11/10/03 13:48

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

EXHIBIT 15

26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
TELEPHONE: (949) 348-9389 FAX: (949) 348-9115
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SIERRA ANALYTICAL

Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	**Reported:**
Newport Beach CA, 92660	Project Manager: Lisa Nelson	11/24/03 15:42

Microbiological Parameters by APHA Standard Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dance Hall-2 (0311122-01) Water	**Sampled: 11/10/03 13:30**	**Received: 11/10/03 13:48**							
E. Coli	Absent	2.0	P/A	1	B3K1037	11/10/03	11/10/03	SM 9221E	
Fecal Coliforms	Absent	2.0	"	"	"	"	"	"	
Total Coliforms	Absent	0.0	"	"	"	"	"	SM 9222B	

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SIERRA ANALYTICAL

Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	Reported:
Newport Beach CA, 92660	Project Manager: Lisa Nelson	01/13/04 09:44

Conventional Chemistry Parameters by APHA/EPA Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dance Hall-2 (0311122-01) Water Sampled: 11/10/03 13:30 Received: 11/10/03 13:48									
Total Alkalinity	**348**	0.400	mg/L	1	B3K1808	11/10/03	11/10/03	EPA 310.1	
Carbonate Alkalinity	ND	0.400	"	"	"	"	"	"	
Bicarbonate Alkalinity	**348**	0.400	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.400	"	"	"	"	"	"	
Chloride	**300**	0.500	"	"	"	"	"	SM 4500-Cl-B	
Color	**23.0**	1.00	Color Units	"	"	"	"	EPA 110.2	
Specific Conductance (EC)	**3160**	0.100	µmhos/cm	"	"	"	"	EPA 120.1	
Cyanide (total)	ND	0.0200	mg/L	"	"	"	"	EPA 335.2	
Fluoride	**0.140**	0.0200	"	"	"	"	"	EPA 340.1	
Total Hardness	**1030**	0.400	"	"	"	"	"	SM 2340 C	
Methylene Blue Active Substances	ND	0.100	"	"	"	"	"	EPA 425.1	
Nitrite as N	ND	0.0200	"	"	"	"	"	SM4500-NO2B	
Nitrate/Nitrite as N	**3.40**	0.0200	"	"	"	"	"	EPA 353.3	
Odor	**2.00**	1.00	T.O.N.	"	"	"	"	EPA 140.1	
pH	**7.12**	0.100	pH Units	"	"	"	"	EPA 150.1	
Sulfate as SO4	**900**	0.500	mg/L	"	"	"	"	EPA 375.4	
Total Dissolved Solids	**2200**	1.00	"	"	"	"	"	EPA 160.1	
Turbidity	**25.4**	0.0200	NTU	"	"	"	"	EPA 180.1	

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SIERRA ANALYTICAL

Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	**Reported:**
Newport Beach CA, 92660	Project Manager: Lisa Nelson	11/24/03 15:42

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dance Hall-2 (0311122-01) Water Sampled: 11/10/03 13:30 Received: 11/10/03 13:48									
Hexavalent Chromium	ND	0.0020	mg/L	1	B3K1040	11/10/03	11/11/03	EPA 7199	

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SIERRA ANALYTICAL

Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	**Reported:**
Newport Beach CA, 92660	Project Manager: Lisa Nelson	11/24/03 15:42

Metals by EPA 200 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dance Hall-2 (0311122-01) Water	**Sampled: 11/10/03 13:30**		**Received: 11/10/03 13:48**						
Silver	ND	2.0	µg/L	1	B3K1803	11/18/03	11/18/03	EPA 200.8	
Aluminum	**3.5**	2.0	"	"	"	"	"	"	
Arsenic	**17**	2.0	"	"	"	"	"	"	
Boron	**0.43**	0.066	mg/L	"	B3K1405	11/14/03	11/17/03	EPA 200.7	
Barium	**69**	1.0	µg/L	"	B3K1803	11/18/03	11/18/03	EPA 200.8	
Beryllium	ND	2.0	"	"	"	"	"	"	
Calcium	**280**	0.53	mg/L	"	B3K1405	11/14/03	11/17/03	EPA 200.7	
Cadmium	ND	2.0	µg/L	"	B3K1803	11/18/03	11/18/03	EPA 200.8	
Chromium	ND	5.0	"	"	"	"	"	"	
Copper	ND	0.012	mg/L	"	B3K1405	11/14/03	11/17/03	EPA 200.7	
Copper	ND	5.0	µg/L	"	B3K1803	11/18/03	11/18/03	EPA 200.8	
Iron	**4.1**	0.064	mg/L	"	B3K1405	11/14/03	11/18/03	EPA 200.7	
Mercury	ND	0.0001	"	"	B3K1711	11/17/03	11/17/03	EPA 245.1	
Potassium	**5.6**	0.90	"	"	B3K1405	11/14/03	11/17/03	EPA 200.7	
Magnesium	**82**	0.41	"	"	"	"	11/17/03	"	
Manganese	**2.1**	0.011	"	"	"	"	"	"	
Sodium	**250**	0.71	"	"	"	"	11/18/03	"	
Nickel	**16**	2.0	µg/L	"	B3K1803	11/18/03	11/18/03	EPA 200.8	
Antimony	ND	2.0	"	"	"	"	"	"	
Selenium	**9.1**	2.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	ND	2.0	"	"	"	"	"	"	
Zinc	**19**	10	"	"	"	"	11/19/03	"	

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SIERRA ANALYTICAL

Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	**Reported:**
Newport Beach CA, 92660	Project Manager: Lisa Nelson	11/24/03 15:42

Trihalomethanes by EPA Method 502.2

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dance Hall-2 (0311122-01) Water Sampled: 11/10/03 13:30 Received: 11/10/03 13:48									
Bromodichloromethane	ND	0.500	µg/L	1	B3K1321	11/13/03	11/13/03	EPA 502.2	
Bromoform	ND	0.500	"	"	"	"	"	"	
Chloroform	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
Total Trihalomethanes	ND	0.500	"	"	"	"	"	"	
Surrogate: 1-Chloro-2-fluorobenzene		*78.5 %*		*60-135*		"	"	"	

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SIERRA ANALYTICAL

Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	**Reported:**
Newport Beach CA, 92660	Project Manager: Lisa Nelson	11/24/03 15:42

EDB and DBCP by EPA Method 504.1

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dance Hall-2 (0311122-01) Water Sampled: 11/10/03 13:30 Received: 11/10/03 13:48									
1,2-Dibromoethane (EDB)	ND	0.0200	µg/L	1	B3K1401	11/14/03	11/14/03	EPA 504.1	
Dibromochloropropane	ND	0.0100	"	"	"	"	"	"	

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SIERRA ANALYTICAL

Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	**Reported:**
Newport Beach CA, 92660	Project Manager: Lisa Nelson	01/13/04 09:44

Physical Parameters by APHA/ASTM/EPA Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dance Hall-2 (0311122-01) Water	**Sampled: 11/10/03 13:30**		**Received: 11/10/03 13:48**						
Langlier's Index	+0.47		N/A	1	B3K1808	11/10/03	11/10/03	Calculation	

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SIERRA ANALYTICAL

Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	**Reported:**
Newport Beach CA, 92660	Project Manager: Lisa Nelson	01/13/04 09:44

Anions by EPA Method 300.0

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dance Hall-2 (0311122-01) Water	**Sampled: 11/10/03 13:30 Received: 11/10/03 13:48**								
Nitrate as NO3	**15.1**	0.100	mg/L	1	B3K2417	11/10/03	11/10/03	EPA 300.0	

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26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
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SIERRA ANALYTICAL

Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	**Reported:**
Newport Beach CA, 92660	Project Manager: Lisa Nelson	11/24/03 15:42

Chlorinated Pesticides and PCBs by EPA Method 505

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dance Hall-2 (0311122-01) Water Sampled: 11/10/03 13:30 Received: 11/10/03 13:48									
Alachlor	ND	1.00	µg/L	1	B3K0609	11/17/03	11/18/03	EPA 505	
Aldrin	ND	0.0750	"	"	"	"	"	"	
Atrazine	ND	0.500	"	"	"	"	"	"	
Chlordane	ND	0.100	"	"	"	"	"	"	
Chlordane-alpha	ND	0.200	"	"	"	"	"	"	
Chlordane-gamma	ND	0.200	"	"	"	"	"	"	
Dieldrin	ND	0.0200	"	"	"	"	"	"	
Endrin	ND	0.100	"	"	"	"	"	"	
Heptachlor	ND	0.0100	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.0100	"	"	"	"	"	"	
Hexachlorobenzene	ND	0.500	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1.00	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	0.200	"	"	"	"	"	"	
Methoxychlor	ND	10.0	"	"	"	"	"	"	
cis-Nonachlor	ND	0.0200	"	"	"	"	"	"	
trans-Nonachlor	ND	0.0200	"	"	"	"	"	"	
Simazine	ND	1.00	"	"	"	"	"	"	
Toxaphene	ND	1.00	"	"	"	"	"	"	
PCB-1016	ND	0.500	"	"	"	"	"	"	
PCB-1221	ND	0.500	"	"	"	"	"	"	
PCB-1232	ND	0.500	"	"	"	"	"	"	
PCB-1242	ND	0.500	"	"	"	"	"	"	
PCB-1248	ND	0.500	"	"	"	"	"	"	
PCB-1254	ND	0.500	"	"	"	"	"	"	
PCB-1260	ND	0.500	"	"	"	"	"	"	
Surrogate: 4,4'-Dibromobiphenyl		*115 %*		*35-150*	"	"	"	"	

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SIERRA ANALYTICAL

Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	**Reported:**
Newport Beach CA, 92660	Project Manager: Lisa Nelson	11/24/03 15:42

Organo-Chlorine Herbicides by EPA Method 515.2

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dance Hall-2 (0311122-01) Water Sampled: 11/10/03 13:30 Received: 11/10/03 13:48									
2,4,5-T	ND	0.200	µg/L	1	B3K0610	11/14/03	11/19/03	EPA 515.2	
2,4,5-TP (Silvex)	ND	1.00	"	"	"	"	"	"	
2,4-D	ND	10.0	"	"	"	"	"	"	
2,4-DB	ND	0.200	"	"	"	"	"	"	
3,5-Dichlorobenzoic acid	ND	0.200	"	"	"	"	"	"	
Acifluorfen	ND	0.200	"	"	"	"	"	"	
Bentazon	ND	2.00	"	"	"	"	"	"	
Dalapon	ND	0.200	"	"	"	"	"	"	
Dacthal Acid Metabolites	ND	0.200	"	"	"	"	"	"	
Dicamba	ND	1.50	"	"	"	"	"	"	
Dichlorprop	ND	0.200	"	"	"	"	"	"	
Dinoseb	ND	2.00	"	"	"	"	"	"	
Pentachlorophenol	ND	0.200	"	"	"	"	"	"	
Picloram	ND	1.00	"	"	"	"	"	"	
Surrogate: 2,4-Dichlorophenylacetic Acid		*45.6 %*		*35-150*	"	"	"	"	

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SIERRA ANALYTICAL

Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	**Reported:**
Newport Beach CA, 92660	Project Manager: Lisa Nelson	11/24/03 15:42

Volatile Organic Compounds by EPA Method 524.2

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dance Hall-2 (0311122-01) Water Sampled: 11/10/03 13:30 Received: 11/10/03 13:48									
1,2,3-Trichloropropane	ND	0.00500	µg/L	1	B3K1202	11/11/03	11/11/03	SRL PT-GC/MS	
Surrogate: 1,4-Dichlorobenzene-d4		*112 %*	*80-120*		"	"	"	"	
Benzene	ND	0.500	"	"	B3K1203	11/11/03	11/11/03	EPA 524.2	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromochloromethane	ND	0.500	"	"	"	"	"	"	
Bromodichloromethane	ND	0.500	"	"	"	"	"	"	
Bromoform	ND	0.500	"	"	"	"	"	"	
Bromomethane	ND	0.500	"	"	"	"	"	"	
Methyl ethyl ketone	ND	5.00	"	"	"	"	"	"	
n-Butylbenzene	ND	0.500	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.500	"	"	"	"	"	"	
Chlorobenzene	ND	0.500	"	"	"	"	"	"	
Chloroethane	ND	0.500	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	0.500	"	"	"	"	"	"	
Chloromethane	ND	0.500	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
Dibromomethane	ND	0.500	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.500	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.500	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.500	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.500	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.500	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.500	"	"	"	"	"	"	
Di-isopropyl ether	ND	3.00	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	3.00	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	

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Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	Reported:
Newport Beach CA, 92660	Project Manager: Lisa Nelson	11/24/03 15:42

Volatile Organic Compounds by EPA Method 524.2

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dance Hall-2 (0311122-01) Water	**Sampled: 11/10/03 13:30**	**Received: 11/10/03 13:48**							
Hexachlorobutadiene	ND	0.500	µg/L	1	B3K1203	11/11/03	11/11/03	EPA 524.2	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.500	"	"	"	"	"	"	
Methylene chloride	ND	0.500	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	3.00	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Styrene	ND	0.500	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	3.00	"	"	"	"	"	"	
Tert-butyl alcohol	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
Tetrachloroethene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.500	"	"	"	"	"	"	
Trichloroethene	ND	0.500	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
Vinyl chloride	ND	0.500	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.500	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*	*86-118*		"	"	"	"	
Surrogate: Toluene-d8		*101 %*	*88-110*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.0 %*	*86-115*		"	"	"	"	

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Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	**Reported:**
Newport Beach CA, 92660	Project Manager: Lisa Nelson	11/24/03 15:42

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3K1040 - 7199										
Blank (B3K1040-BLK1)				Prepared: 11/10/03 Analyzed: 11/11/03						
Hexavalent Chromium	ND	0.0020	mg/L							
LCS (B3K1040-BS1)				Prepared: 11/10/03 Analyzed: 11/11/03						
Hexavalent Chromium	0.00641	0.0020	mg/L	0.00600		107	90-110			
Matrix Spike (B3K1040-MS1)		**Source: 0311122-01**		Prepared: 11/10/03 Analyzed: 11/11/03						
Hexavalent Chromium	0.00578	0.0020	mg/L	0.00600	ND	96.3	80-120			
Matrix Spike Dup (B3K1040-MSD1)		**Source: 0311122-01**		Prepared: 11/10/03 Analyzed: 11/11/03						
Hexavalent Chromium	0.00572	0.0020	mg/L	0.00600	ND	95.3	80-120	1.04	20	

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Boyle Engineering	Project: T-22 Drinking Water	
1501 Quail St	Project Number: ES-C68-200	**Reported:**
Newport Beach CA, 92660	Project Manager: Lisa Nelson	11/24/03 15:42

Metals by EPA 200 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3K1405 - EPA 200 Series										
Blank (B3K1405-BLK1)				Prepared: 11/14/03 Analyzed: 11/17/03						
Boron	ND	0.066	mg/L							
Calcium	ND	0.53	"							
Copper	ND	0.012	"							
Iron	ND	0.064	"							
Magnesium	ND	0.41	"							
Manganese	ND	0.011	"							
Potassium	ND	0.90	"							
Sodium	ND	0.71	"							
LCS (B3K1405-BS1)				Prepared: 11/14/03 Analyzed: 11/17/03						
Boron	0.201	0.066	mg/L	0.200		100	85-115			
Calcium	10.7	0.53	"	10.2		105	85-115			
Copper	0.198	0.012	"	0.200		99.0	85-115			
Iron	0.196	0.064	"	0.200		98.0	85-115			
Magnesium	10.8	0.41	"	10.2		106	85-115			
Manganese	0.215	0.011	"	0.200		108	85-115			
Potassium	13.2	0.90	"	12.0		110	80-120			
Sodium	8.80	0.71	"	10.2		86.3	85-115			
Matrix Spike (B3K1405-MS1)	**Source: 0311122-01**			Prepared: 11/14/03 Analyzed: 11/17/03						
Boron	0.622	0.066	mg/L	0.200	0.43	96.0	70-130			
Calcium	283	0.53	"	10.2	280	29.4	70-130			QM-07
Copper	0.202	0.012	"	0.200	ND	101	70-130			
Iron	4.24	0.064	"	0.200	4.1	70.0	70-130			
Magnesium	89.9	0.41	"	10.2	82	77.5	70-130			
Manganese	2.22	0.011	"	0.200	2.1	60.0	70-130			QM-07
Potassium	19.0	0.90	"	12.0	5.6	112	70-130			
Sodium	253	0.71	"	10.2	250	29.4	70-130			QM-07

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