SOUTHWEST JORDAN VALLEY GROUND WATER CLEANUP PROJECT
NATURAL RESOURCE DAMAGE TRUSTEE PUBLIC HEARING

TAKEN AT: West Jordan City Hall
Council Chamber
8000 South Redwood Road
West Jordan, Utah

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REPORTED BY: Kelly L. Wilburn, CSR, RPR

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P R O C E E D I N G S

MS. NIELSON: I want to welcome you here tonight. Thank you ahead of time for taking the time, and having the interest in this proposal to decide to take time from your very busy schedules to be with us this evening.

My staff, and I, and members of the Jordan Valley Water Conservancy District, and Kennecott, very much appreciate the opportunity to talk to you about the proposal that we're gonna be discussing tonight, and have an opportunity to answer your questions and receive your comments and feedback.

Perhaps I can tell you just a little bit about how we're going to proceed tonight, and then we can do a few introductions and move into the presentation itself. We're gonna take a few minutes to look at a PowerPoint presentation, some of which you've already viewed on the documents, the maps around the hall here.

We'll talk about the proposal, what it's designed to do, how the process is going to move forward, and what the result will be in terms of the work that Kennecott and Jordan Valley are proposing to do.

We'll take an opportunity for a few minutes of clarifying questions, just to make sure that everybody understands the proposal. And if we need to resolve or be a little bit more clear about any part of it, that we have a chance to do that. And then we're going to go to a public comment period. And I'll talk about that a little bit more when we get to that point.

Before we begin tonight, though, I'd like to introduce a few of the individuals who you're going to be hearing from and who've been working on this project. First of all I'd like to introduce Doug Bacon from my staff, who's right over there against the wall.

Doug is a member of the Division of Environmental Response Remediation for the Department of Environmental Quality. And he is an individual who if you have any questions, want to talk to someone at the Department, if you can't reach me you should feel free to ask for Doug when you call the general number.

I want to introduce Paula Doughty from Kennecott. Paula will be making part of the presentation this evening on the proposal. And John Cherry, also from Kennecott. And Richard Bay, with Jordan Valley Water Conservancy District.

I also want to extend my thanks to Mayor Holladay for the opportunity to meet here this evening in the City Hall and take advantage of the facilities here. And also for the City's willingness to be the repository for the documents that are the basis for the plan that we're gonna be talking about this evening and receiving public comment upon.

As you are aware, this is an opportunity to learn about and to provide comment on a groundwater clean-up plan. An opportunity to remove contaminants from groundwater in the southwest portion of the Jordan Valley, and provide that water to the public at municipal-quality drinking water standards for their use.

Under a Consent Decree that was signed in 1995 the Trustee for natural resource damage, myself, was provided with a plan that the Court approved. And that's the plan to which the proposal that we'll be reviewing tonight was directed. It's the opportunity to meet the requirements of the objectives of that Consent Decree, and to provide clean drinking water for the citizens within the affected area.

With that, I think we'll start with the presentation. This is a map -- a general map of the area that we're going to be talking about. You can

see the cities of West Jordan, South Jordan, Riverton, and Herriman identified here.

The two plumes are outlined in -- or colored in light blue. And the concentrations here are sulphate concentrations. The blue being the least contaminated groundwater in terms of sulphate, and the red core being the more contaminated or most contaminated portion of the groundwater. This is the area we're going to be talking about tonight.

As part of the Consent Decree that Judge Green approved in 1995 there were specific requirements that Kennecott was directed to meet and that were part of the settlement agreement that was approved.

But there was also a provision of funding to enable the Trustee to ensure that these requirements or conditions were met. And in September of 1995 those two components of the financial assurance totaled $37 million.

The first of those was a letter of credit for 28 million, an Irrevocable Letter of Credit to the Trustee. And that letter of credit increases at a 7 percent rate annually, and has since 1995.

The second portion of the financial assurance was a cash amount that was provided to the

Trustee, which has been held by the state of Utah, has also been interest bearing, and that amount initially was $9 million. It was designed and specifically designated separately to compensate for the lost-use portion of the water that had been damaged.

Today, September of 2003, the Irrevocable Letter of Credit is worth $48.1 million, and the lost-use payment, with interest, is worth 13.2 million. So at this point the Trustee has $61.3 million to go to this project. And you'll learn more about how that's going to be used in the presentation this evening, and also in the documents that are available for public comment.

At this time I'd like to turn the project discussion over to Paula. I'd like to invite you as you are listening, if you have questions, to consider those when we come to the end of Paula and Richard's presentation. We'll be happy to try and clarify some of those questions.

But if at any time you can't hear what we're saying, please don't hesitate to raise your hand, so that we can be more clear in the presentation. Thank you very much.

MS. DOUGHTY: I'm gonna use the -- can you all hear me okay without this? Can you hear back

there in the back? Okay, great. In the mid 1990s Kennecott joined forces with the Jordan Valley Conservancy District and actually formed a partnership, where we basically are seeking to use all portions of the trust fund on a joint proposal.

And that's what we're here to talk about today is this joint proposal that we have -- that we have provided to the state Trustee. This joint proposal we planned and -- I hope I can get this thing to work -- to fulfill all the obligations under the NRD Consent Decree that Dr. Nielson mentioned, as well as all of our CERCLA obligations.

This is a list of the obligations and the commitments that we're gonna make with this proposal. And that is that we will be extracting the contaminated groundwater from the acid plume on a five-year rolling average of 400 acre feet per year.

And that is what was set in the Consent Decree. As you see, as I get into this a little bit further you'll see what we truly are attacking at the moment, which is above and beyond this requirement.

We also are fulfilling the completion of all the source controls -- and I'm gonna as well get into that in a minute -- producing 8,235 acre feet of municipal-quality water that will go back to the

affected communities.

That water will be extracted from the plumes, from the Zone A and Zone B plumes, that we'll talk about here in a minute. And that water will be delivered to the affected communities through the Jordan Valley Water Conservancy District, who is the purveyor of municipal quality water.

We also will be containing the sulphate groundwater plume on Kennecott property at 1,500 milligrams per liter. And we also have committed to prevent the reduce or spread of the aquifer contamination.

Again, just to get you -- make sure that you fully understand where we are, this is the Oquirrh Mountains over here to the west, as you are looking from the valley. That is the Jordan River right there.

And for those of you that kind of know the area, that is the town of Copperton located right here with the large Kennecott Bingham pit. Butterfield Canyon here, with Butterfield Creek going to the south here.

The sources of the two plumes that we have, the A and B plume, primarily from historic reservoirs that were constructed. In 1930 -- in the

1930s Kennecott constructed a series of evaporation ponds located right here. And they are the primary source for the Zone B plume.

And in 1965 some Bingham reservoirs were constructed right there also, at kind of the mouth of Bingham Canyon. And that was used basically to manage processed leach waters as well as acidic storm waters for -- you know, from 1965 through 1991.

The Bingham Reservoir, as well as the evaporation ponds, were built to the standards of the time back in the '30s and the '60s. But unfortunately back then, to tell you the truth, the Clean Water Act was not around, the regulations weren't around.

And, to tell you the truth, they just -- they were not -- even though they were built to the standards of the day, they obviously did leak and are the source of the contamination that we're here to talk about today.

The characteristics of the plume, the Zone A plume is characterized -- this red area here is primarily what we call the acidic -- the acidic core of the plume. It has a pH between 3 1/2 and 4 1/2. And it has sulfates of greater than 20,000 milligrams per liter. The outer blue contour there is what has been defined as the affected area, and that has

sulfates of 500 milligrams per liter. So anything above 500 is to the interior of the blue.

The Zone B plume has substantially lower sulfates, does not have the characteristics of acidity to it. It averages roughly 750 milligrams per liter of sulphate there for the Zone B plume. Next.

The source control activities that Kennecott completed, in the mid 1990s Kennecott built a series of cutoff walls. And what those are basically are dams and 26 drainages off of the Oquirrh Mountains. And all the drainages are the waste rock routes that were on the, you know, on the left-hand side, and that's what you see when you look to the west.

Built these dams that go down into bedrock. And as water is collected in the alluvium it is -- it is brought back into Kennecott and captured by those cutoff walls and brought back into Kennecott's system. The waste rock collection system was upgraded in the mid 1990s, and those cutoff walls were constructed then.

The large Bingham reservoir, they were actually taken out of service in 1991 and replaced with the small Bingham reservoirs. And then constructed the larger Bingham reservoirs that have a

triple-liner system with leak detection systems. You know, state-of-the-art reservoir at this point, with -- as well as with monitoring around it.

And then also we took out the South Jordan evaporation ponds. And then we as well -- historically, leaching has been going on on the waste rock dumps since, I believe 1912, something like that. And we terminated that active leaching in September of 2000. And then obviously there's been a tremendous amount of soil removal, many projects that have gone on over the last 10 to 15 years.

The three main components of the proposal that we're presenting today are, as we mentioned, two -- basically two plans that are going to address the two plumes that we've got. We're going to be constructing two reverse osmosis treatment plants.

And for those that don't know, reverse osmosis, or osmosis, is basically kind of a selective movement of water across a membrane whereby the -- you are able to contain -- I don't know if that's the right word -- but anyway, keep the contaminants on one side of the membrane, and the water flows through to where you get a purified water coming out.

And the Zone A plant is funded by Kennecott and the District, and it will be owned and

operated and constructed on by Kennecott. It will produce 3,500 acre feet per year of municipal quality water for water rights that are owned by Kennecott.

The Zone B plant as well is going to be funded by Kennecott and the District. And when Richard gets up he's gonna show a little bit more of the finances associated with this proposal. It will be owned and operated by Jordan Valley. It actually is located at their current site.

It's adjacent to their current site down at 8200 South and 1300 West there, as well as where they will be constructing the Zone B plant. And it as well will be producing 3,500 acre feet per year of municipal water. It will be utilizing water rights that are currently owned by the Jordan Valley Conservancy District.

There also is a component which we call the lost use. Whenever you are treating a water with reverse osmosis there is a portion that is lost in the treatment process that you are not -- if you put 8,000, you know, acre feet of water into a plant, 8,000 feet of good quality water does not come out.

There is a portion of the -- basically the contaminant that is a waste by-product that is lost to the treatment process. And to address that

loss of that additional increment, the lost-use component will be picked up in the Zone B plant. And Richard is gonna get into that as well.

The lost-use component actually will produce anywhere from 1,235 to 2,300 acre feet per year of water that also will be delivered out to the affected communities.

This is a chart -- this is primarily -- this is not primarily, this is the Zone A RO filtration, with the quality of water that we're going to be producing out of the Zone A RO plant. And these are the drinking water standards here. And as you can see everything is well below, if not significantly below, the drinking water standards out there.

The by-product, or the waste that I talked about, this is the quality of that water. That water will be going to Kennecott's tailings line and will be deposited in the tailings impoundment. Our -- we currently discharge -- or have a permit to discharge off of our tailings impoundment.

It's a seasonal discharge, depending on -- primarily on rainfall and spring runoff and things like that. When we do discharge, these are the permit limits that -- that the State of Utah Division of Drinking -- or Division of Water Quality has set

with us. And as you can see, the by-product from the RO plant is substantially below our permit limits.

This is the -- this is the location of the Zone A reverse osmosis treatment plant. What we're doing is using the shell of a demonstration plant that was constructed several years ago, and we're now going in and putting the RO skids and membranes within this plant.

This is looking west. You can see Kennecott's waste rock dumps in the background there. And it's located there at the mouth of Bingham Canyon, just to the south of Bingham Canyon.

Again, this is a more crude picture of the two plumes, the Zone A and the Zone B plumes, with the infrastructure that's in place. And I'm gonna talk a little bit about the Zone A, and we'll defer the Zone B discussion to Richard.

These are the -- Kennecott has been extracting through two wells, and actually a third well. These are case 60 and 109 in our sulphate well here. We have historically, since the 1960s, been extracting from these wells for our process. We've been actually bringing it to the concentrator and utilizing that water in our system.

Those are what -- those are the wells

that we will be diverting to the reverse osmosis treatment plants to produce the drinking water. We, as well, have installed -- in 1997 installed an acid well to take out that core acid component that I talked about that was red on that original map there.

That water will be extracted at a rate of about 1,500 gallons per minute and go to our tailings line, here, for discharge down to the tailings impoundment, which is located off the plant up to the north there. The tailings that come out of the Bingham pit primarily are neutralizing that, neutralizing, and therefore it has a capacity to neutralize the acidic water that we will be extracting out of that.

For periods of time when it does not have that capacity, and it's heavily monitored, we will be supplementing with one and just basically be adding and treating the water there. But on the whole primarily that water -- the tailings itself acts in itself to treat those tailings.

This is the location of the Zone A RO plant, right there. And I guess that's -- that's it. And then obviously the product water will end up heading to the east and to the District's distribution system.

The actions that we've completed to date is that we have completed all the source controls that I discussed a few minutes ago. We've also been extracting the sulphate contaminated water to the tune of about 3,200 gallons per minute. As I indicated, we have been utilizing that water in our process for many years.

And this water will start, oh, actually by the end of this year a portion of this will be going to the RO plant for treatment. But will not -- we'll still be bringing it into our system, and probably not until 2005 will it actually be delivered to the District.

We've been extracting the acid plume. The current extraction rate is about 1,500 gallons per minute. That second acid level, it brought us up to that level, that rate, only within about a month and-a-half, two months ago.

That 1,500 gallons per minute is 6 times the NRD requirement, as I mentioned before, that 400 acre feet over a 5-year rolling average. This 1,500 gallons is 6 times that requirement and that obligation.

In doing so we have, over the last year, removed 98 million pounds of sulphate from the

contaminated aquifer. And that has allowed, at this point, a significant reduction in sulphate concentrations in the majority of the plume. So we are already seeing some contraction of the plume, the Zone A plume itself, because we have been doing these extractions up here that I've mentioned.

Over the past couple years we have completed pilot testing for both Zone A and Zone B on the RO plant. We submitted the remedial design to the state Trustee and the EPA in December of 2002. And then also, as I mentioned, we have already started the construction of the Zone A RO plant.

And we anticipate by the end of this year that we will be about 50 percent passing on line for the Zone A RO plant by the end of this year. And with that, I'll turn it over to Richard.

MS. NIELSON: If anyone in the back is interested in a seat, there are a few more right up here in front.

MR. BAY: I would now like to talk to you about the Zone B portions of this plan and the lost-use portions. Can you all hear me okay with this microphone? This slide shows the location of the combined treatment plant that will treat the deep Zone B groundwater and the shallow lost-use water.

This is in West Jordan, with the Jordan River in the background. It will be this vacant site, currently acquired by Jordan Valley Water Conservancy District, at about 8300 South. The process will -- will be a reverse osmosis process.

The deep groundwater will be collected from seven deep wells that are shown on this map: A row of five wells on 13th West, from 114th South to about 8700 South, and then two additional high-producing wells in the center of this Zone B plume, shown here at about 110th South and about 102nd South.

And you can see the collection pipelines in white that collect these pipelines on 27th West and on 13th West streets, up to this treatment plant site at about 8300 South and 10th West.

Also at that plant, through a separate process but in the same building, and compatible, will be the lost-use treatment portion. And that will result from a series of five shallower riverbank filtration wells located in the shallow Jordan River aquifer area in the Jordan River Valley.

The treated water will be conveyed along 7800 South into the Jordan aqueduct, a large-diameter treated-water pipeline on 3200 West. The by-product

water will be discharged northward, probably on 13th West, to 29th South and the Jordan River.

On this map also are shown existing water facilities that will be used for distribution of the treated water. In the Zone A area the treated water, as Paula showed, from the plant will be discharged through this finish-water pipeline to this 3-million-gallon storage tank on 102nd South and 70th West.

And will be delivered, through this Jordan Valley pipeline system on 102nd South, to West Jordan and South Jordan Cities, southward on 5600 West in this major transmission pipeline, to South Jordan and Herriman Cities, and stored in this tank.

And then also delivered in these areas to Riverton City. And -- and then deliveries to existing meter stations on the Jordan aqueduct to South Jordan and West Jordan Cities. And so there's substantial infrastructure, with storage and pumping, available to serve these four affected cities.

The process is -- will look like this on the inside. Paula talked about the reverse osmosis process, such as this plant that exists in Brighton, Colorado that's quite similar, treating groundwater. Including some pressure vessels with membranes, that

Paula talked about, that separate at the ionic level, at the molecular level almost, the salts and the minerals to produce a very pristine stream and a more saline by-product stream.

This chart shows the -- some important water quality parameters of that treatment. A series of trace metals are shown, with the product water -- that's the treated water -- having non-detectable levels.

Probably two of the more important parameters, to give you a feel for the quality of this water, are sulphate -- the main contaminant that's being removed -- being reduced to 56 parts per million, or milligrams per liter. And total dissolved solids, or an indication of the total salinity and mineral concentration -- shown as TDS here -- at 250 parts per million.

That means that that water quality is returned to a quality that's comparable to the more pristine Provo River and Weber River sources that Jordan Valley imports into the valley, and the southeastern and eastern groundwater -- deep groundwater sources in the Salt Lake Valley.

The by-product -- this is the lost -- this is the lost-use smaller stream that has the

higher concentrations. And compared with the permit limits for discharging to the Jordan River at 29th South, you can see that those limits are met. Again, the important parameters are the sulfates and the total dissolved solids at just a bit above 8,000 parts per million.

The next one is similar for the lost use, the shallow groundwater. And again, very comparable non-detectable metals. Again, the sulfates just above 50 parts per million. The total dissolved solids mineral signature of 250, and very comparable by-product. The lost use that is discharged to the north and replaced through the shallow treated water.

The Zone A water, 3,500 acre feet treated per year, will have a subsidized price, originally in the range of 15 to 20 percent below normal market prices, as a result of the trust fund contributions. And that will be allocated to the four affected cities to distribute to the affected public in this manner.

These allocations to West Jordan, South Jordan, Riverton, and Herriman Cities have been calculated based on a series of evaluations of population, of surface area, of municipal rights impacted, and -- those are the important parameters.

The allocations are broken up in these

volumes of acre feet per year and at these flow rates, fairly steady flow rates, through the year. This will be a great benefit to the four cities in terms of lower-priced water to -- to supplement their sources.

The Zone B water and the lost-use water will also have a cost efficiency, with the trust fund bringing it down to the current pricing structure. And Jordan Valley will deliver Zone B, Zone A, and lost-use waters through contracts to the four cities, which are all member agencies of Jordan Valley already.

The schedule that we're pursuing that is intended in the project is to, after the public hearings tonight, and during this month and the information time period, assuming that -- Trustee approval and the agreements are also approved by Kennecott and the District in the fourth quarter of this year, then design and construction would immediately begin. With completion of the Zone A facilities in 2005 later in the year, and completion of the Zone B and lost-use facilities early in 2007.

I'd like to talk to you now about benefits, to the public, of the project. There are a series of benefits that are required specifically in the Consent Decree, and those are shown here. There

must be a treatment of contaminated groundwater. A minimum of 8,235 acre feet of treated water must be produced annually, at a municipal high quality, to a local water purveyor. And that is accomplished in this project.

It must provide a sustainable, at least 40 year, water supply to the affected municipalities. And it must prevent and reduce the spread of contamination in the groundwater aquifers. It must restore the natural resource, the groundwater, to the -- for the benefit of the affected municipalities. And this project also accomplishes the purpose of restoring the lost use resulting from the by-product or concentrate discharge from demineralization.

I'd like to talk to you now about some -- some of the benefits that will accrue to the public that go beyond those required specifically in the Consent Decree. And these are possible because of the efficiencies that are built into this project by Kennecott and the District, and negotiated with the Trustee.

This project will contribute land and water rights for the -- both Zones A and B and lost use; lands owned by Kennecott and the District, and water rights by Kennecott and the District. There is

an integration of this project with the Federal EPA Cleanup or Remediation Program under CERCLA. And there's an efficiency in handling that remediation in the Zone A area with this entire Zone A/Zone B project.

There is a water quality enhancement beyond the 500 parts per million salinity quality that's specifically required by the Consent Decree, to bring the water dawn to a more pristine 250 parts per million.

And the use of Jordan Valley's existing and future water supplies and treatment facilities provide a backup. In case of temporary failure or down time of Zone B, or lost use, there's a commitment to provide those waters from other sources and also backup treatment facilities.

Another very intriguing benefit is the funding of the project. While there is a substantial amount of money in the trust fund, $61.3 million, shown here broken up into two components under a letter of credit and under a lost-use cash portion shown here; there are additional funds, $19.3 million provided by Kennecott and $23.3 million provided by the District, over the construction and the full 40 years of operation, to bring this to a funding of

$103.9 million in today's dollars.

Additional benefits will include use of existing infrastructure, including storage, pumping stations, pipelines, to distribute this immediately to the affected municipalities. There is a commitment by Kennecott to accept and convey and dispose of the by-product streams, the concentrates, from Zone A and also Zone B, if needed, later in the project in the -- in their tailings pipeline, tailings impoundment.

There is the experience that Jordan Valley has in operating water systems and treatment plants to bring to the project, and to -- also there is the -- there is the benefit of no return on investment, since this will be operated by a public agency that's not for profit.

There also will be a benefit, as we see it, to gain some experience in reverse osmosis membrane technology treatment as -- so that that benefit will accrue as we grow into another million people in this valley over the next two and-a-half decades. And we foresee that technology need in many other areas to meet those growing demands.

Some of the other issues, or the important issues that have been raised and have been considered during the formulation of this project, are

shown here. One of the issues that has arisen is the question of the impact to the shallow groundwater system. Especially in the Jordan River Valley area, where the five lost-use riverbank filtration wells will operate.

And some recent modeling and studies have shown fairly modest impact in drawdown and a -- the Jordan River operating as a boundary condition to prevent effects east of the Jordan River. The principal or the deep aquifer groundwater level impact has been an item of concern and much discussion with the cities.

The modeling that Kennecott has provided has shown fairly modest drawdown amounts after 40 years in the Zone B area. They've shown some more extensive drawdowns in the Zone A area, which are a result of the remediation and the capture of the higher concentration plume areas. And in discussions with the State Engineer, this seems to be a good trade-off with the benefits of remediation and containing and contracting the plume.

Potential migration to areas beyond the plume's current location has been a concern. Groundwater modeling projected over the next 40 years also shows the ability to contract both the Zone A and

the Zone B plumes substantially, and to make substantial removal of sulfates and contaminants over the 40-year life of this project.

By-product discharge, that lost use, the more saline stream requires discharge and has been a concern. It's been -- permits have been accomplished that are within current permitting structures, both for the Zone A discharge into the tailings pipeline on -- through the Oquirrh Mountains area, and for the Zone B and lost use, through permitting, to the Jordan River.

Dianne, I think that's a fairly good summary of the project.

MS. NIELSON: Thank you very much, Paula and Richard. Are there any questions or clarifications that we can provide before we go to public comment?

Okay, perhaps if you could come up the aisle and I can give you the microphone, then everyone can hear your question.

AUDIENCE MEMBER: As you mentioned, the potential impact on the shallow wells and the deep water wells is you start with product -- project and begin drawing the water out of the wells. There's very possibly some individual personal wells in

unincorporated areas and city wells that will be affected.

You said a modest impact on them. Could you give more detail on what you suspect that would be? And if there are any wells that are ruined because of the project, is there any provisions to help the individual or the municipality replace that well?

MS. DOUGHTY: I'll take that. If you look here to the Exhibit 3 to left, these were --

(Ms. Doughty was asked to speak up for the benefit of the record.)

MS. DOUGHTY: Anyway, these are models of the aquifer drawdown that are expected over the 40-year life of the project. And both of these are models through 2047. If you can, it's somewhat hard to see here, but this area in gray is Kennecott Utah Copper property here, with the primary extractions that we have, you know, here on our property for both the sulphate and the acid plumes.

As you can see, here around the extractions that we currently have we will be seeing a substantial drawdown. In fact, up to the tune of over 100 feet of drawdown there on Kennecott property. Over the 40 year life what we have done is gone to the

Cities of Riverton and West Jordan and discussed with them -- they are the primary extractors in the area from their wells here in Riverton and West Jordan -- we discussed with them what we would expect to see of their extractions over the life of the project.

Where we have a little bit -- which actually doesn't have a whole lot of difference in the drawdown -- but Riverton, they've given us a number of roughly 4,300 acre feet per year is what they plan on extracting, which we put into the model.

As well as West Jordan currently is extracting about 4,000 acre feet per model. But that is our -- some of the data points that have gone into the model. That is modeled with -- with West Jordan actually reducing their extraction rate.

All of Kennecott property here, we are expecting to see in this zone here anywhere, over the 40 year life, anywhere from 20 to 30 feet of drawdown, or a lowering of the aquifer level there in this area here. And obviously where West Jordan is doing their primary extractions, we're seeing quite a bit of a drawdown in that location as well.

There has been a contingency plan that's been developed. Over the life of the project, for the last five years at least, there's been a Technical

Review Committee that was established early on. And that includes members of the local communities, members of the local governments, as well as the regulatory communities, environmental groups.

And we've gone through -- so this process is something that has been worked on through a whole group of people over the last many years. This isn't -- this isn't a project that, to tell you the truth, that Kennecott and the Jordan Valley Conservancy District actually developed. It is a project that a large group of people, with a lot of expertise, and experience, and knowledge, pulled together.

And the contingency plan that was developed, that again has been reviewed by the Technical Review Committee, is such that -- and if you want to -- there's actually a slide that we can touch on.

The contingency plan is such that, when a third-party person that believes that he's having an impact to his wells, comes to either Kennecott, the Department of Environmental Quality, or the State Engineer with a complaint or an issue. And, as a group, those three entities will basically be evaluating the quality and the quantity. Depending on

what, you know, what the concern is, whether it's a quality or a drawdown issue.

There's several factors that will be looked at. Obviously the seniority of the water rights. I think one of the unfortunate things is that, probably many of you know, since the mid 1980s there's been a significant drawdown and decrease in the water level areas throughout the southwest Jordan Valley that are not associated with the remediation activities.

And I guess one of the complexities of this issue is that there -- the evaluation will have to determine, you know, where -- what is the incremental increase and impact that Kennecott's remediation activities are having on that drawdown that has been occurring.

The Basin has been over procreated since of 1970s or so, and there definitely are extractions above and beyond what should be extracted from that Basin. And Kennecott, as well, has seen some negatives associated with that drawdown.

Kennecott has a lot of senior water rights. There are a lot of people that have junior water rights to Kennecott, that have been extracting and have had impacts to us over the years. This

evaluation by these three parties actually will determine the difference of what's already existing, which is not Kennecott's responsibility, and what our remediation activities -- the impacts that we're having.

From there we will, if it's determined that yes, there are true impacts by Kennecott, we will evaluate the very methods of restoring or repairing that issue. And we'll make that recommendation. And then go through those -- implementing that recommendation.

Some of those -- some of those mitigation options may be, you know, that we work with the -- that we actually adjust our pumping. That is we -- there is a significant amount of monitoring that has been going on over the life of the project.

Actually there are over 40 -- over 400, excuse me, 400 monitoring locations throughout the southwest Jordan Valley that we will, on a quarterly, semiannual, and annual basis, will be monitoring the groundwater levels that will feed into our model. And continually be upgrading and recuperating that model.

So we should see, and be able to kind of forecast as time goes on, the adjustments in the model and where we -- where we expect to see some drawdowns

occurring. Above and beyond that, there is also another hundred-or-so monitoring points where we are monitoring the quality of the water.

There was -- prior to any remediation in years past, there was a significant amount of monitoring that went on to give us a good kind of quantitative and qualitative database kind of pre-remediation. And, you know, we will be comparing that baseline to what we're seeing over the life of the project. So we'll have a good -- kind of a good comparison there.

So we can adjust our pumping. You know, obviously we still have to contain the plumes on Kennecott property and want to optimize as best we can. But there may be some reductions in pumping as we feel fit and -- just to optimize the system.

We, as well, can go back and we can hook people up to the municipalities. Hook them up to -- to the, you know, one of the four entities. I think the great thing about working with the Jordan Valley Conservancy District is they do have a distribution system that covers the entire area that has been impacted.

So we pretty much can get water to anybody, and good quality drinking water to anybody

that's in the affected area there. As well as we've looked at -- yeah?

AUDIENCE MEMBER: Can I bring you back close to his question?

MS. DOUGHTY: Sure.

AUDIENCE MEMBER: This model layer four, how many feet below the range is that, just in rough numbers?

AUDIENCE MEMBER: After you answer the question using this, and if he has a well that's a certain depth maybe you can -- perhaps you can answer that.

MS. DOUGHTY: Do you know what model number four is at?

MR. CHERRY: Off the top of my head I don't know. It's probably about 4 or 500 feet deep. But that represents the drop in the water level from the surface. From today's current water level that you measure the well, that is the expected -- the projected decrease over 45 years.

AUDIENCE MEMBER: And how deep is the zone in 12?

MR. CHERRY: Eighty feet.

AUDIENCE MEMBER: So when you are modeling shallow wells like this, would they be more

effective than this, or less?

MS. DOUGHTY: Well, the extractions that we're gonna see -- we are at the -- the locations of the extractions that we'll be pulling from range anywhere from 150 feet to about 450 feet, or the depth of what -- of the sulphate wells that we're extracting.

We should see, I guess, a reduction. The higher we get up, we should see less and less of the drawdown associated with it. But this is the water level that -- the principal aquifer that we see and with the drawdown we'll be expecting there.

AUDIENCE MEMBER: When will his well go dry?

MS. DOUGHTY: Where is his well?

AUDIENCE MEMBER: Mine is at 80 feet. Most of my neighbors are 2 to 500 feet.

MS. DOUGHTY: Are you in the location of that drawdown?

AUDIENCE MEMBER: No.

MS. DOUGHTY: You're outside of it?

MS. NIELSON: Perhaps, if I could suggest. There are going to, I suspect, be questions like this with specific wells. And maybe the ability to talk after the comment period, or to arrange a time

to specifically address that with Paula or John might be a way to specifically identify a well and be able to better understand where it's going to --

MS. DOUGHTY: I think, yeah, if you look at the mitigation options, one of them is that if it looks like we, you know, we very well may -- there may be a determination that drilling the well deeper may mitigate it. I mean, those will be evaluated at the time, based on your location and, you know, any other factors involved.

AUDIENCE MEMBER: My question is basically a financial question. I'd like to ask if Kennecott, for whatever reason, closed their operations, that would have an effect on the Jordan District?

MS. DOUGHTY: On the Jordan District?

AUDIENCE MEMBER: Yeah. On the projects you have going now.

MS. DOUGHTY: I think, as Dr. Nielson indicated, the bulk of this money actually is included in a trust fund that is held by the state Trustee.

AUDIENCE MEMBER: That's true. And you said over a 40-year period, so you've got your own investment put in, isn't it?

MS. NIELSON: Perhaps as Trustee I can

answer that a bit. The Consent Decree requires that Kennecott perform these services for a period of 40 years in the -- in the provision of quality water and the extraction and containment of the plume.

The project that we're looking at here is the mechanism for getting there. Kennecott will have the responsibility for doing that, and Jordan Valley is assuming part of the responsibility through the Zone B plan. But that will be a responsibility that they will need to continue to perform for the period that was required in the Consent Decree. For 40 years.

And so one way or another, that will remain a legal responsibility. The money will go to construct the plant and for the operation of the plant. But the legal responsibility will remain.

Other clarifying questions?

AUDIENCE MEMBER: Yeah, I got a clarifying one. I think what the gentleman was asking is who's backing the letter of credit? Who's providing backing for your letter of credit?

MS. NIELSON: The backing for the letter of credit is Kennecott. The letter of credit and the cash payments will be used to, in part, cover the cost of the Zone A and the Zone B plant, the operation of

those plants, and the assoc -- some of the associated transportation network for the water. But the letter of credit is provided by Kennecott.

AUDIENCE MEMBER: Okay. That means they had the money set aside?

MS. NIELSON: That's correct.

AUDIENCE MEMBER: You know how to get to it then?

MS. NIELSON: I have direct access, as the Trustee, that's correct. Thanks for the clarification. Another -- any other clarifying questions?

Mr. Dansie, did you have a question?

MR. DANSIE: I don't understand a lot of the aquifers or anything at this stage, and I don't pretend to tell you anything about that. So my question is in your cleanup are you gonna clean this water up and reenter it into the aquifer and leave it to balance that out? Or are you just gonna suck it out and let it continue to go out? I mean, do you understand what I'm saying?

MR. BAY: Let's try this microphone. Can you hear this okay? The plan is not to treat and reinject in the water, no. The plan is to extract and to treat to drinking water standards, and then deliver

that to the public. Some of that water will no doubt return to the aquifer as return flows, but there's no active reinjection.

MS. NIELSON: Any other -- maybe another clarifying question, and then I'd like to suggest we go to public comments so we have time for everyone.

AUDIENCE MEMBER: I have two clarifying questions before we go to public comment. One is I notice this agreement that's made with the Trustee, Jordan Valley, and Kennecott, it doesn't say who it will be signed by. Is this like an Enron, that there won't be anybody there to perform it when it comes time?

Because, I think British Petroleum is the parent company. We're concerned that they have a lot of assets, but those assets could be transferred and an inability to produce. This is a pretty serious document and there is a lot of ifs in it.

And I would ask the Trustee to see that whoever signs that has the authority, I think it ought to be binding beyond Kennecott. I know Paula is laughing that they don't have the resources to do that, but I'm sure they do. But I know that good lawyers know how to hide the land, and the water rights, and all the other things so when the time

comes, if something fails, there's nothing there to do it with.

I'd like you to address that when you get to that point. I've got one other question. I think this is a great plan that you've put up here on the board as to how you'll deal with mitigation plans, but I don't think it's in effect today. I don't think it's been done for the past 10 years, particularly with regard to water rights that we own.

I can talk to you personally on that more. Out in the southwest corner of the Salt Lake Valley this program has not been followed. And I don't think it will be later. It's a very vague program. It doesn't really cover the problems.

In other words, Paula has mentioned many times it's gonna go back to the municipalities or the areas that was affected. We've got areas in the southwest corner that have been affected. None of this has been put into effect, and none of the water has come back.

Mr. Bay mentioned that we'll determine this allocation of water based on population, on water rights, and so forth. The area out there where the municipalities will receive the 525 acres of water, assuming they're able to produce it, does not go back

to the area affected. It's 3 miles west of there.

I'm not sure that there's any provision in there that really covers that and deals with it adequately. It just simply doesn't. The water rights were in that area. And other -- the municipality of Herriman had no water rights at all in 1985-1995 when this Consent Decree was envisioned.

I think there's some major gaps there. And I'll go into that more in the other part when you can address those.

MS. NIELSON: Thank you very much. Let me emphasize here, clarifying questions may -- I want to provide an opportunity for those who have come tonight to present comments to do so. So if we can take this opportunity, if there are any questions on the presentation, and then we'll go on to public comment.

This gentleman over here. Any others besides? Okay.

MR. BELCHAK: I'm Tom Belchak. Richard, you made a comment about how the -- for example, South Jordan City was allocated 1,050 acre feet of water. And the -- I'm not clear -- it's not clear as to how the allocation occurred, because apparently it has been and continues to be set at 1,050 acre feet for

South Jordan City.

I got out of your presentation that population, possible growth projections, impact to water rights; is that what -- those were the three factors that I saw. And if you are able to comment, could you comment about what water rights in South Jordan were impacted to come at this 1,050 acre feet?

MR. BAY: Yes. The method is more fully described in Appendix F of the joint proposal. But let me just summarize. The three most important parameters were population in the -- in each of the four cities. Current --

MR. BELCHAK: In 1995?

MR. BAY: 2003.

MR. BELCHAK: 2003, thank you.

MR. BAY: Area of the -- area directly beneath the plume, affected areas, that lies within each of the cities in square miles. And existing municipal water rights held by any of the four cities within the impacted area. The affected area or the plume.

MR. BELCHAK: Is there a weighting factor as to which one --

MR. BAY: And -- and so when we first did this evaluation we looked at it in four different

methods. And those four tables are in Appendix F of the joint proposal.

Basically it was a weighted average, because only two of the cities had municipal rights that were within the affected area; Riverton City and West Jordan City. The other two didn't. And -- and so that was one of the three parameters. In a weighted-average fashion, we arrived at the allocations.

MR. BELCHAK: Thank you.

AUDIENCE MEMBER: My first thing is, Dr. Nielson, we are currently blessed with your able performance as Trustee --

(The speaker was asked to use the microphone.)

AUDIENCE MEMBER: Dr. Nielson, you're current -- we're currently blessed by having you as our able Trustee to look out for our interests. Does that position go with your position as Director of Department of Environmental Quality, or does that remain with you even after some other person?

MS. NIELSON: No. The position of Trustee is an appointment by the Governor of the State of Utah.

AUDIENCE MEMBER: And so if we get a different governor or something like that, a different

person will be appointed to be Trustee?

MS. NIELSON: That will be up to the new governor. But at this point I'm acting, and I will continue to act as the Trustee, until there's a decision to make a change.

AUDIENCE MEMBER: Thank you. One of the things that I came across -- not in the presentation but -- was that for all of these wells and the water that goes through the reverse osmosis they'll be testing the influent and the effluent to make sure that the wells are not actually drawing water out of adjacent plumes, or something like that.

Because evidently there's more than one plume in the valley, and we don't want -- there doesn't want to be migration of problems from Sharon Steel or something like that into another place. Who is the person who oversees the changes between this and makes decisions about when something needs to be adjusted?

MS. NIELSON: As this pumping is going forward, the Department of Environmental Quality is going to be monitoring the chemistry of the water that's extracted, will be monitoring adjacent areas, such as Sharon Steel tailings where we have separate monitoring wells, to make sure that that contamination

isn't moving, because it will require to maintain that on the site.

If there are problems that develop we'll evaluate those, work with Kennecott and the District, and determine the best way to solve those problems. But during the entire period that this cleanup project is going forward, the Department of Environmental Quality will have the responsibility of monitoring the work that is being done and ensuring that the project is operating as designed.

And to notify the parties and work through the Technical Review Committee that's been established for the program to evaluate those results and make any mid-course corrections we need.

AUDIENCE MEMBER: The Fish and Wildlife representative that commented on the discharge permit to the Jordan River noted that -- oh dear, I have misplaced my notes.

That the concentration of selenium in the -- of the discharge may raise the concentration of selenium in the Jordan River to 4 micrograms per liter, or something like that. And that there is evidence that there are wildlife impacts at ranges between 2 and 5 micrograms.

In light of that information, I'm curious

why the decision was made to discharge the water to the Jordan River as opposed to discharging it in the tailings ponds, as was indicated -- the plan in the early stages of the development.

MS. NIELSON: The plan for the discharge point I'm going to let Richard talk to, but let me talk for a minute about assuring the quality of the water that's discharged. That discharge from the Zone B plant is by a permit that's granted by a Division of Water Quality within the DEQ. And they will work with Jordan Valley.

Jordan Valley will be required to report the concentration of the waters that are being discharged to make sure that those concentrations are within the permit limits. And the Division will review that information, monitor their work, and make sure they adhere to that -- to that permit limit.

So the permit was issued recognizing that there are values that need to be protected in the Jordan River. And that the levels that are allowed in the permit would enable that protection of the Jordan River waterway to continue. But it will be monitored. And if there are any changes, corrections as required will be made.

I'm going to let Richard talk to the

decision. And then, in the interest of time what I'd like to suggest is that we go to public comment. And if there are additional questions, that -- I'll be happy to stay, as I know my staff will, after the meeting and address your questions, or find someone who can answer them for you.

MR. BAY: Thank you. The Utah Division of Water Quality gave a very thorough review of the discharge proposal, and studies over a year's time were performed. And many comments were considered, including those of U.S. Fish and Wildlife that you mentioned.

The resulting permit showed that the discharge could be well within the river parameters. And I'd like to refer to this slide showing, for selenium, the projected 20 micrograms per liter, compared with the permit limit of 48.5.

That will, of course, be monitored throughout the project, and up for renewal each five years.

MS. NIELSON: Let me talk for just a minute about the process now for public comment. There are a number of opportunities for you to provide comment to the Trustee during this public review period. One of them is to come to the podium this

evening. And what I'd suggest is that we allow five minutes per comment.

When you came tonight you signed an attendance list so that we can provide you with follow-up information. But those of you who were interested in speaking also signed a comment request record. And I will work through those commenters in order of signature, taking first elected public officials at the local level, then the state level, the federal level, and then go to this comment list.

If you don't want to speak tonight but you want to make sure that I receive a comment, or perhaps sometime after tonight you have a question or a comment you want to provide, you can do that by writing to the Trustee. And there is a fact sheet that's on the check-in table tonight which has addresses on it, on the back.

You can Email a comment to me, and there's an Email address on here. There are also comment sheets that look like this out on the table. And you should feel tree to take one of those if you'd like, write your comments down, leave it of course, and we'll consider it.

I'm not going to respond to comments this evening. But I will prepare a complete document of

all the comments that we've received verbally at the hearings, in writing, Email, fax. And I will provide responses to those comments and make that response document available on the web site, at the records office here at West Jordan -- at West Jordan City Hall, and at the record site of the Department of Environmental Quality.

And if individuals want copies, I'd be happy to provide those. That will be available after the close of the comment period on October 2. If you want to provide comments, please mail them, postmark them, or send them by Email with a transaction date that is before midnight on the 2nd of October.

And the response document will be available as soon after that point as possible. As soon as we're able to review those comments, determine what the responses are, and be able to provide those.

My objective is to receive your comments, understand concerns, recommendations, questions, support. Be able to review that. And make a decision on whether I should approve the proposal as it's provided in the presentation tonight, and more particularly in the accompanying documents that are available to be reviewed here in West Jordan, at the Department, on the web site, to decide if I need to

make any changes to this proposal before I approve it.

My objective is to understand and to be able to consider your comments. And so I very much appreciate the opportunity to do that. We also have a court reporter here this evening with Depomax. The transcript of this evening's presentation, from the point of the Power Point presentation through the comment period, will be available as soon as it's been fully transcribed and edited, reviewed, whatever it is that is done with transcripts.

Anyway, what is that, about two weeks? And we will make copies of that available to you on the web site, and also make hard copies available and put them at the records site. I think I have covered everything. Questions?

H1 MR. DANSIE: Dr. Nielson, is it possible, because of the length of this agreement between Kennecott, Jordan Valley, and the Trustee, and the -- there is a lot of information that we have had made available to us in the last, say since the first of September.

H1-1 Is it possible to request an additional 60 days to comment? This is a pretty serious matter. And we think that, based on the technical information that's there, the information in that agreement, and

H1-1 See the Response to Common Comment No. 1.

some of the clauses in there, we're concerned that -- well, we all have to have jobs and work too, to help pay the taxes for this program. We would like to ask for an additional 60 days beyond that time period.

MS. NIELSON: You have -- yes, you have the ability to make that request. The request should --

MR. DANSIE: I'm making that now.

MS. NIELSON: Okay. It has been received on the record, Mr. Dansie. I'll consider it. And if I decide to extend the comment period, I will make a public notification of that extension.

MR. DANSIE: And when will you do that?

MS. NIELSON: I won't do it this evening, but I'll consider the request --

MR. DANSIE: I understand. If you are gonna tell me that the clock is running, I've only got 17 more days or whatever number of days is left, that's really short. If I've got 60 days plus whatever there is, then that's a little better. Thank you.

MS. NIELSON: I appreciate that. There is also another public comment period which will be on September 25 at the Department of Environmental Quality's office on North Temple at 1950 West, and

that address is also in the information sheet.

With that I'd like to first ask the Mayor of West Jordan, Mayor Holladay, if is he here. Mayor, did you have any comments that you wanted to make this evening?

MAYOR Holladay: No. We're just glad that you guys -- you seem surprised that we've offered our building. We charge $1,000.

(The audience is laughing.)

H2 MAYOR Holladay: No, actually it's just half that. But we appreciate all the cooperation we've had with Kennecott and with all the work that's being done. And we're happy to see you here. We're very glad to be involved any way that we can. So thank you.

H2-1

MS. NIELSON: Thank you very much. Mayor Money, would you want to make a comment?

MAYOR MONEY: Yeah.

MS. NIELSON: I'm gonna ask if you, when you are making your comment if you would come up here to the podium. I'm going to put this microphone back in the stand. But realize that you do need to speak a bit closely to it so that everybody can hear.

H3 MAYOR MONEY: Thank you Dr. Nielson. It's a pleasure to be here with you tonight. It's

H2-1 See the Response to Common Comment No. .3.

good to see so many people here to comment on this. This is a -- this is a very monumentous thing that we're discussing here.

With regards to South Jordan, as you see in the map and so forth, that plume is directly under South Jordan. All of South Jordan is included within that plume. We do not have one city well in South Jordan. Every drop of water -- of drinking water that we get is from the Jordan Valley Water Conservancy District.

And that's very concerning to me as a Mayor. I was not involved in any of the discussions in 1995 as this process went forward. I'm sure sharper minds than mine have come to the decisions in the implementations that we have heard about today.

And so I'm trusting that group of individuals, that they have come up with a program that's going to work. I think one of my concerns is is this reverse osmosis, the cost of that, compared to the normal treatment plant that Jordan Valley water has.

I don't know what the additional cost is and who has to bear those, those additional costs.

And then I also wonder about the -- are we saying that within a period of 40 years that this plume is going

H3-1

H3-2

H3-1 See the Response to Common Comment No. 12.

H3-2 See the Response to Common Comment No. 6.

to be cleaned up to where we can drill wells, and we will not have to go through this additional expensive water purification that apparently we're gonna have to go through? Those are a couple of the questions I have.

H3-3 But anyway, I appreciate -- I support the plan. I appreciate Kennecott's involvement. I appreciate them stepping up to the plate. Let's face it, in 1912 when they started, and even in 1965, we didn't -- we didn't understand things like we do today. And it's tough to point fingers.

I'm involved in a landfill out near the International Airport. And when they -- when they say they met the standards of the time for these ponds, these evaporation ponds that they built, the standards of the time was to dig a hole, period.

And the same way with the garbage dumps, both Transjordan and the one I'm involved in out west at the airport; they just dug a hole and dumped it there. They didn't understand the problems then like we -- we understand them today.

H3-4 So I give credit to Kennecott, and the DEQ, and others for getting together and working up a plan to where we at least have a vision. We at least have a future for the use of this contaminated plume.

H3-3 See the Response to Common Comment No. 3.

H3-4 See the Response to Common Comment No. 3.

Hopefully at some point in time our children will look back to this time and say, a job well done, because it's cleaned up. Thank you.

MS. NIELSON: Thank you very much, Mayor. Mayor Evans with Riverton, did you want to make a comment?

H4 MAYOR EVANS: I'm Mayor Mont Evans, Mayor of Riverton. It's my pleasure to be here tonight.

H4-1 The City of Riverton certainly endorses this plan and we're very supportive of it. It's interesting, when I was on the City Council some 20 years ago we had Kennecott out and were discussing the pollution that was following.

And it was interesting to watch later as the Conservancy, at one point in time the Attorney General's office -- the legislative leadership, the Governor's office, and others had signed off on a plan that would have not cleaned this up. It was the Jordan Conservancy District, that appealed this all the way to the Supreme Court, that has brought us here today.

And I do applaud Kennecott for their efforts in moving it forward. And I especially appreciate -- do we have anybody from the Conservancy District here tonight? They did a great job. They

H4-1 See the Response to Common Comment No. 3.

honestly did. Because when everybody else in the state had signed off on this plan that they did not clean it up, why, the Conservancy District held their ground all the way to the Supreme Court of the United States. And they -- and we don't recognize public agencies and what they do sometimes.

H4-2 I -- we do have a caveat that we're concerned about, and that has to do with Riverton is not in the direct path of the main plume like South Jordan is, but our entire water system is drawn -- our culinary water system is drawn from the ground. And we're concerned about the -- as the drawdown occurs, about maintaining our -- what happens to our level of where we're pulling water out of the ground.

We obtain better water at certain levels. And as that level changes, why then it might present some problems to us. And I would certainly like that included in the record that those concerns are there. And it's my understanding that if that occurs, we do have problems, why, they'll be addressed as part of the ongoing reclamation.

Again, appreciate everything that's been done. Appreciate Kennecott, appreciate Jordan Valley, and the great progress that's been made in this area.

H4-3 And again, on behalf of the City of Riverton, the

H4-2 See the Response to Common Comment No. 10 regarding water rights, quantity and quality, and procedures for addressing concerns.

H4-3 See the Response to Common Comment No. 3.

citizens of Riverton, we endorse this plan. Thank you.

MS. NIELSON: Thank you very much, Mayor. Mayor Crane of Herriman.

H5

MAYOR CRANE: I don't have a lot to say

H5-1

tonight, except that Herriman is happy to be involved in this process. And I would like to thank, not only UDEQ, but Kennecott and the Jordan Valley for at least making efforts to mitigate the problem that exists with the contamination.

Our city may have less impact than some of the others, but certainly there is impact for the

H5-2

City of Herriman. And many of the residents that are here, who are on individual wells, I think are concerned about how it may affect -- this project may affect them in the future.

And most of the comment I have heard is concern about drawdown in our area. I am -- like Mayor Money, hope that mind is greater than might. And people that have been trained and have expertise to create a plan to mitigate the problem that exists in the southwest sector of the valley, I would hope that it works.

H5-3

It's gonna be a benefit to everybody, improve water services in our region if it does work.

H5-1 See the Response to Common Comment No. 3.

H5-2 See the Response to Common Comment No. 10.

H5-3 See the Response to Common Comment No. 3.

And we certainly support the effort to -- to get started at it.

MS. NIELSON: Thank you very much, Mayor. Are there other local elected officials who would like to speak? Any state elected officials?

H6 SENATOR HOGUE: I'm Representative Dave Hogue and I represent the south part of the valley here, which is part of South Jordan, all of Riverton, and Herriman in the area that we've been talking about this evening. And until the redistricting I had the West Jordan area and Copperton area as well, so I'm familiar with the issues here.

H6-1 My concern is that as we've grown here, we've grown into more of a metropolitan area and away from an agricultural area. And we're gonna see thousands of more homes going into the South Jordan area. And obviously this is going to mean a lot more water delivery.

H6-2 I was pleased to see the Jordan Valley District getting involved in it. Obviously that's going to come out of taxpayers' money for that investment, so we need to be a watchdog over that pretty closely to see what they're spending and what we're getting in return.

I would say it's probably the development

H6-1 The Trustee recognizes the issues regarding growth are availability of water in the Valley. It is not the objective of this proposal or the Consent Decree to address growth and the demand for additional water. However, it is the responsibility of the Trustee to restore, replace, or acquire the equivalent of the damaged groundwater resource for the benefit of the public in the Affected Area.

H6-2 See the Response to Common Comment No. 12.

of cheaper water is what they're gonna use that money for. Because what we're hearing tonight is that the water that's coming out of this is going to be cheaper water. And that it's going to the Jordan Valley. They're gonna distribute it.

H6-3 But another concern I have is the -- those that have wells, there's a few of them that made mention of tonight. Gradually we've pushed out a lot of the smaller folks in this area. And those that have had wells for years and years and years, they may end up not having wells ever again.

If they do, there ought to be some way of compensating them, to make sure that they are able to at least recover what they've put into that over generations of their families being out there with the wells.

But I'm pleased, too, that Kennecott and the state have come to the table on this, because a few years ago when they made that original settlement I was a little disappointed as well. In fact on those original hearings that we had, there was some comments made by the engineers that said those evaporations ponds evaporated every few days.

Well, doesn't seem possible to me. And to see those large evaporation ponds just disappear.

H6-3 See the Response to Common Comment No. 10.

But we know now where it was going to. And now that everybody is on board, hopefully we'll resolve that issue. Whether or not we'll ever cure the problem 100 percent, I don't know.

But obviously it's gonna be a big impact to this part of the valley, which is exploding in population. And it's something that we're going to continue to address is our water here in the south part of the valley. So I know as long as I'm up there at the legislature, I'll stay involved with it and keep an eye on what's going with the state.

H6-4

MS. NIELSON: Thank you very much. Are there other state elected officials? Federal elected officials?

All right, the first individual on the comment list tonight is Diane Hemingway. If you would come to the podium. Please identify yourself for the recorder. And if you are representing an organization, if you would note that also.

MS. HEMINGWAY: Thank you. Good evening. My name is Diane Hemingway. I'm the Environmental Projects Coordinator for United Steel Workers of America. Many of our members live in the Salt Lake vicinity and work at area companies, including the Kennecott mine, concentrator, refinery, and smelter.

H7

H6-4 The Trustee welcomes the opportunity to brief legislators on an ongoing basis. An initial briefing was provided to the Legislative Management Committee in November 2003, and the Trustee has offered to provide additional briefings as the project progresses. Information will also be available on the Utah Department of Environmental Quality website www.deq.utah.gov

United Steel Workers has long been committed to the health and safety of our members, as well as to the health of the communities in which our facilities operate. As a Union, we recognize that economic and environmental sustainability go hand in hand, and are achievable only through the protection of the very resources necessary for industrial, community, and personal survival.

We offer the following preliminary comments, which are based on only a cursory review of selected documents, given the short time frame. I won't elaborate or give details on the first point that I wanted to make, because the issue has already been raised. And for the sake of time I'll cut my comments short.

H7-1

But we have submitted a letter to the Trustee requesting a 45-day extension to the public comment period. And we have provided justification for that. Sixty days would be even better. We feel that it's necessary, given the large volume of documents, the seeming lack of adequate public notice.

And we believe that a request for extended public comment period is reasonable and justified. And that more widespread publicity of this project is warranted in an effort to engage more

H7-1 See the Response Common Comment No. 1.

members of the public.

I have divided my comments into topics. And I actually will be putting together even more comments to be submitted later, but this is the initial comments. The first concern is on the Great Salt Lake.

H7-2 The issue is, while the Great Salt Lake is a unique and no doubt fragile ecosystem, it does not appear that there has ever been adequate ecological studies or even a risk assessment of this system to assess the impacts of area industries, including the impacts of this project.

According to the project plan, waste concentrates from both Zone A and Zone B, quote, will be directly disposed to the Great Salt Lake via a, quote, concentrate discharge line if they cannot be disposed of in the impoundment for various reasons, such as mine closure.

The impacts of selenium and other toxic metals on aquatic wildlife are well documented, yet a dilution-is-the-solution approach has been taken with the above disposal option. Further, even if water quality standards for selenium of 5 micrograms per liter is met, effects on wildlife has been observed at levels as low as 2 micrograms per liter. And I've

H7-2 See the Response to Common Comment No. 9 regarding impacts on the Great Salt Lake and its ecosystem.

given sources of this information.

Failure to implement a precautionary approach to protect the food chain, including migratory birds dependent on brine shrimp, brine flies, and algae from the lake, may result in serious wildlife damage and costly future remediation.

H7-3 Is the current plan to discharge waste concentrate to the Great Salt Lake once the Magna tailing ponds impoundment has been -- has reached capacity? That is a question. I ask a number of questions here. So there is a concern about what happens when the impoundment has reached capacity, will we then be also discharging these wastes into the Great Salt Lake.

H7-4 Another point: Proper baseline assessment and risk assessment of the Great Salt Lake should be initiated and performed by an independent or otherwise third party, such as U.S. Fish and Wildlife Service. Funding of such a project might be obtained from any party seeking air or water discharge permits.

H7-5 New topic: Zone A. The issue is that, according to the fact sheet provided to the public, extraction of acidic waters, quote, will withdraw 2,400 to 4,000 acre feet of water in order to reduce the acid and metals contamination, end quote.

H7-3 If the tailings impoundment is closed, reaches capacity or is otherwise not usable, Kennecott and the District will identify an alternate disposal plan for the reverse osmosis concentrates. The discharges could go to the Great Salt Lake only if they meet water quality standards and if a discharge permit is granted. See the Response to Common Comment Nos. 7 regarding use of the tailings impoundment for reverse osmosis concentrate disposal.

H7-4 As indicated in Response to Common Comment No. 9, the DEQ Division of Water Quality has established the process to determine numeric standards for the Great Salt Lake. Selenium is the focus of the initial work. Some funding has been identified and additional funding will be sought for the work.

H7-5 In the fact sheet section entitled "Consent Decree," requirement No. 2 states that Kennecott was required to drill a well or wells into the low pH/heavy metals ground water plume and begin to remove contaminants. Other project documentation (NRD Consent Decree, Supporting Document, and the Joint Proposal) also references the requirement that under the 1995 Consent Decree, Kennecott was required to

This statement believes -- leads the public to believe that this project is proposed and that extraction has not yet begun, when in fact the extraction of acidic water actually commenced in August of 1997.

According to a letter dated 8/26 of this year, a Kennecott to Dianne Nielson, as of August 21, after five years of operation, 2,293.9 acre feet of acid water had been extracted, and a total of over 136,595 tons of sulphate had been removed. There is some question about why at least one of the wells, case 60, needed to be replaced.

Questions and concerns: Why was it not made clear in the fact sheet that pumping of the acid plume has been occurring for at least six years?

H7-6 Point 2: Where have the by-products and/or concentrates of this process been disposed to date?

H7-7 Point 3: Was well case 60 damaged by acidity -- by the acid water? If so, what assurance does the public have that destruction of wells will not be a common occurrence, and that they will be monitored appropriately and replaced to ensure ongoing remediation?

This is a special concern once Kennecott begin an extraction program to remove water from the low pH/heavy metals plume. Kennecott began pumping from the low pH/heavy metals plume in 1997 to extract on a have five year rolling average, 400 acre-feet per year, to address the need to gain containment of this portion of the plume and to begin removing the contaminants of concern.

The reference to a Kennecott letter to the State Trustee dated August 26, 2003, makes note of the total amount of acre-feet of contaminated water removed from the low pH/heavy metals plume since extraction began in 1997. The intention of this letter was to notify the Trustee that Kennecott was meeting the Consent Decree settlement requirement prior to the required anniversary date and was on task to meet the next removal increment ahead of schedule.

H7-6 The water that has been removed from the low pH/heavy metals plume has been primarily pumped to the Kennecott tailings pipeline for delivery to the North Expansion Impoundment in Magna, Utah. Kennecott has been and continues to neutralize the acidity of the extracted water by either using the neutralization potential of the tailings material or by adding lime to the tailings circuit. Water in the impoundment was and is currently recycled from the North Expansion Impoundment into Kennecott's process circuit during yearly operations or discharge from the impoundment under an approved UPDES permit.

H7-7 K60 was replaced because of its age, not because it was damaged by acid. The well was originally installed in the 1960s with a steel casing that typically has a 20 to 30 year life. This and other sulfate extraction wells are monitored and will be replaced when and if needed, just like any other well.

has attained the balance of their ILC -- and I will address that in another minute -- and/or after the 40-year time period, if the remediation is not complete.

Issue: The current plan is to dispose of treatment concentrates from the reverse osmosis plants, as well as the extracted acid core water to be piped to the Magna tailings impoundment.

H7-8

Questions and concerns: Point 1, has there been a study to determine the feasibility of recovering some of the soluble toxic metals from this waste stream? This should be considered as an option, as it may be a rich source of valuable resources, as well as future jobs.

MS. NIELSON: Ms. Hemingway, could you bring your comments to a close?

MS. HEMINGWAY: I will try.

MS. NIELSON: Okay.

MR. HURST: Ma'am, I'm the next speaker, Robert Hurst.

MS. NIELSON: Yes?

MR. HURST: I defer my time to my sister from the United Steel Workers of America. She can have my five minutes.

MS. NIELSON: Thank you very much.

The Final Remedial Design that was reviewed by the Technical Review Committee and approved by EPA and the State of Utah details the containment, extraction and groundwater-monitoring program. Over 300 monitoring wells are currently in place within and around the plume and are monitored on a monthly to annual basis. Data collected from this monitoring program will be used to evaluate the effectiveness of the containment and extraction program and make adjustments if necessary.

H7-8 Kennecott evaluated the possibility of recovery of metals from the acid/heavy metals plume water, however none were economically feasibile. Such extraction could be considered at a future time if it were economic.

(An inaudible comment was made from the audience.)

H7-9

MS. HEMINGWAY: Okay. In addition to reverse osmosis, were other treatment technologies considered? Was a treatment train or multiple types of treatment technologies considered, since the waste in this case may require more than one treatment technology and/or recovery technology before disposal or release to the environment?

One source of information may be the National Research Council, whose various committees published several reports on this topic.

Given the limited information available to the public on the web site, it is not possible to become familiar with the chemistry of the waste stream. However, of particular concern, toxic metals. For example, while still in the groundwater system, selenium and aluminum may not be readily available to the wildlife.

However, once on the earth's surface, they may become readily available as they enter the food chain, where they are known to bioaccumulate and cause harmful effects, especially in sensitive ecosystems.

H7-10

Next point: The impact of the acid on certain toxic metals, such as lead, tends to render

H7-9 Early on during the remedial investigation/feasibility study (RI/FS, CERCLA activities) Kennecott was operating a pilot nanofiltration plant to determine the feasibility of this technology to pretreat the water from the low pH/heavy metals plume prior to final treatment at the proposed Reverse Osmosis facility. A small fraction of the extracted water from the low pH/heavy metals plume was used in this pilot project to determine its treatability with this technology; concentrates from this pilot plant were directed to KUCC's tailings pipeline for disposal into the North Expansion Impoundment.

Both Kennecott and JVWCD have reviewed other technologies and proposals. The Joint Proposal enables other technologies to be implemented at a future time, provided it meets the technical requirements of the Consent Decree and Joint Proposal.

H7-10 See the Response to Common Comment No. 7.

them more bioavailable. This is a particular concern, as wind blowing across the tailings impoundment may distribute them through the environment and/or food chain, causing human and wildlife exposures.

Another issue: Under the NRD settlement agreement Kennecott will fund all operational, maintenance, and replacement expenses. However, the first five years the Trustee will annually release 15 percent of the $48.1 million -- which was originally 28 million -- in the ILC. At the end of the five-year period, Kennecott will receive the balance of the monies and of the fund.

H7-11

Questions and concerns: What incentive is there for Kennecott to continue treating groundwater once the balance of this money has been given to them? Given the history of groundwater pump-and-treat projects of a much lesser magnitude, it is not likely that the plume will be remediated for many decades. Perhaps well beyond the 40 years.

What happens if Kennecott files bankruptcy, sells the company, reorganizes, or uses any of the other tactics that workers, taxpayers, and shareholders have been painfully witnessing in recent years in this country, and indeed in the state of Utah?

H7-11 Kennecott is contractually obligated under the terms of the Project Agreement and the 3-Party Agreement to provide 3500 acre feet of treated water per year from Zone A and ensure that the Zone A Plant is operated for the Operational Period of forty years. JVWCD is contractually obligated under the terms of the Project Agreement and the 3-Party Agreement to deliver 3500 acre feet of treated water per year from Zone B and 1235 acre feet per year of municipal-quality drinking water representing the Lost Use water from the Zone B Facilities or from other sources available to JVWCD for forty years. Project Agreement, Sections 4 and 5; 3-Party Agreement, Section I.C. This is consistent with the terms of the Consent Decree, Section V.D.2.b (iii). If either Kennecott or JVWCD fails to satisfy its contractual commitments, the Trustee has all remedies available at law and in equity, including the right to recover damages and to seek specific performance. See Section VII.B of the 3-Party Agreement. If either Kennecott or JVWCD fails to satisfy its obligations under the Project Agreement, the

H7-12

Why is Kennecott not providing long-term trust funds that would better ensure commitment to the communities in which they have operated and made their profits? Taxpayers should not end up footing the bill for remediating the groundwater. A bond or trust fund should be established and secured to ensure that the groundwater is fully remediated well beyond the planned life of the project.

I will stop here. My comments are not well developed for further making them. But they do include more about Zone B, and drawdown impacts, and a number of other issues. Thank you for your time.

MS. NIELSON: Thank you very much. Mr. Hurst, you have approximately two minutes left if you wanted to make a comment.

H8

MR. HURST: I'm Robert Hurst. I am a citizen of West Jordan for over 20-plus years. I'm also a worker of Kennecott Copper for over 29-plus years. My concerns are that my sons, my granddaughter, they're both living here in West Jordan and they continue -- will continue to live here in West Jordan.

H8-1

My comment and my concern is who's gonna watch -- who's gonna be the watchdog over Kennecott that's going to watch them up there, that's going to

other has all remedies available at law and in equity, including the right to recover damages and to seek specific performance. See Section 14.2 of the Project Agreement. Under Section 17.9 of the Project Agreement, neither Kennecott nor JVWCD may assign its obligations without consent of the other. Additionally, Section 17.10 requires Kennecott or JVWCD to provide other assurances of performance if it disposes of any assets that would materially impair its continued financial viability or materially impair its ability to perform all of its remaining obligations under the Project Agreement.

H7-12 See the Response to Common Comment No. 12.

H8-1 See the Response to Common Comment No. 13 regarding oversight of this groundwater cleanup project. Regarding oil spills, Kennecott's operations are regulated under the Utah Groundwater Protection Act and the

keep polluting the groundwater? They have the world's largest truck industry up there at the mine. They're dropping oil every day. They're dropping diesel oil every day.

On my right we have over 500 years of service between these people out here. And every day we see contaminating of Kennecott that's putting on the ground that's going into our water. Who's gonna

H8-2 be the watchdog that's gonna watch Kennecott? Who's gonna be the person that's gonna take care of this if Kennecott folds under?

There's only 10 to 15 years of life left up there at that mine. Rio Tinto owns Kennecott, who is the world's largest polluting of -- mining industry in the world. Who's gonna watch them? They can just fold up this operation and take off. They're well known for that. Who is gonna watch them? That's what I want to know.

MS. NIELSON: Thank you very much. Next speaker is Mr. Ron Dansie, followed by Roger Payne.

Mr. Dansie?

H9 MR. DANSIE: May I borrow a pointer? And have someone flip that back to Chart A?

MS. NIELSON: Yeah. And what you do is turn it like this and you'll have a laser point if you

Resource Conservation and Recovery Act. Inspectors from the DEQ Divisions of Water Quality and Solid and Hazardous Waste regularly inspect the operations and take action when violations are identified. Kennecott is also required to report spills in accordance with state environmental laws.

H8-2 See the Response to H7-10, above.

need it. Or just -- yeah, there you go. Just make sure that you point it at --

MR. CHERRY: Which chart are you looking for?

MR. DANSIE: Excuse me?

MR. CHERRY: Which chart are you looking for?

MR. DANSIE: The very first one. I'm sorry, I think it was A.

MR. CHERRY: That one?

MR. DANSIE: No. Next one down. Let's go to the -- show the A -- Zone A and Zone B.

MR. CHERRY: Plume map?

MR. DANSIE: Yes.

MR. CHERRY: That one?

H9-1 MR. DANSIE: Yes, that will be fine. I'd like to say thanks to the Trustee for the opportunity to come here and make comments. And I would like to say thanks for the Jordan Valley and Kennecott for the efforts they are making. I think they fall short, but I think it is a good step in the right direction.

H9-2 I was appalled when Paula and Richard tried to tell me that one of the side benefits of this particular project was the use of public facilities that have been paid for by tax dollars. I think

H9-1 See the Response to Common Comment No. 3.

H9-2 See the Response to Common Comment No. 12.

Senator Hogue brought that out. We'll have to look closely at Jordan Valley and how they spend their money.

This is a benefit to everybody here in this area. But we also pay that to the Jordan Valley in our water rates, so I don't think it's a real benefit. The fact that Jordan or Kennecott Copper was gonna donate the land where the treatment plant is gonna go, I think that's great. However, the polluter in this particular instance is Kennecott. The largest in the United States. No one else.

Anyway, I don't want to be too negative. I want to be positive. But I want to get on with this. I think those kind of comments would be better left unsaid. I think you should talk about the things you're really doing, but don't try to fool us. We've been around too long.

I think that Paula mentioned some of the sources of pollution started in 1930s and went on in 1965. I think that we also have to recognize that the area -- I'm in Zone A over in Herriman, I'm not as concerned. I'm very concerned for the citizens down in here. But we're over near the Herriman area where I'm concerned.

I'm speaking for myself, and for my

family, and for the water rights that we own and the land that we own, which are significant in this area right here. This was -- pollution took place during -- from '65 on, to make precipitate copper. And consequently there was profits that flowed from it to make that. It amounted sometimes to a third of the production of copper at Kennecott.

H9-3 The area south of there, where we're at, was not in the plume, but there was hundreds of thousands of tons of sulfuric acid that was dumped on these dumps to the south. Not to make copper, not to sell it, but simply as a disposal. It was hauled by Hatchco Trucking for a period of 7, 8, 10 years.

And I sat in meetings at the mine where the mine superintendent got a phone call from the person at the smelter who said, We've got too much acid, we can't use it, we need to get rid of it, what can we do?

He said, Well, if you'll pay for the transportation, we'll let you dump it at the mine in the dumps. Not to get copper there, but just simply to waste it. And to get rid of it. Now, that is pollution in its greatest, in its most extreme source.

And we're sorry that that happened, and

H9-4 we hope that we can forget that. However, we can't

H9-3 The studies conducted as a part of the Consent Decree evaluated contamination caused by Kennecott's mining and leaching operations resulting in increased levels over baseline of total dissolved solids, including sulfates, and pH levels lower than baseline, among other contamination. The studies were used to define the area of contamination and to value the natural resource damage claim. See Attachment 10 of the Supporting Document to the Consent Decree. The Consent Decree did not identify an injured resource in the area suggested by the comment.

H9-4 See the Response to H9-3, above.

forget that our water has been affected in Herriman by that. Now, it doesn't show a plume out here in Butterfield Creek. Our wells are right in this area here. It doesn't even cover them in that particular plume. However, we believe that they are affected. And I think everyone recognizes they are affected.

H9-5 And Paula says, Well, we have this great plan when we start this program -- which we haven't started yet -- and we will let you -- we will help you determine how you've been affected and we'll get water back to you. But all 550 acre feet of water, that's gonna go to the municipality of Herriman. That's great, we're proud of that. Hope that happens well.

However, in 1995 this was brought up. Herriman didn't exist as a municipality. Herriman was a little town. There was two water sources: One, Herriman pipeline, and the other one was Dansie Water. We have had no water come back. We've had total dissolved solids go up to 950 instead of 250, or 300, or 400 prior-to-mine activity.

H9-6 So these are the type of concerns that we have with this particular program. I think they've done a good job of moving forward. But there are certainly not enough safeties and enough controls to assure that the people of this valley will be

H9-5 Assuming the water mentioned is that derived from the commenter's wells, such wells are located outside of the Affected Area defined in the Consent Decree. Concerns about impacts to the water quality or quantity of the wells can be addressed through the review procedure established by Kennecott, which is identified in the Response to Common Comment No. 10.

H9-6 See the Response to Common Comment No. 13.

protected long-term.

I think they've made good strides, and I want to compliment them on that. But this particular program, this agreement, which is a long one, covers a lot of things, but I think some of the provisions under it do not deal with what the Consent Decree calls for.

H9-7

The Consent Decree says we will get water back to the affected area. Well, they're trying to get water back to Herriman. But we're three miles west of Herriman. We're not part of Herriman. We're Salt Lake County. We are a separate water system. We're not a municipality, we're a public water system. And there's no provisions in here that cover that.

So I think this particular proposal is deficient because it doesn't get the water back to the affected area. Yet Mr. Bay said, Oh, well, we're allocating this based on the water rights of the municipalities, the plume that was underneath them, and all that's affected.

Herriman had no water rights. They had no water rights. Probably in 2002 they had bought some, but I doubt they had any wells that would pump any water out. This part of the plan is deficient, it's arbitrary, capricious, and without basis. And

H9-7 The Joint Proposal provides the greatest efficiency in use of the trust fund to provide water to the public in the Affected Area by delivering treated water to the four Affected Municipalities. The allocation made to Herriman was based upon the same criteria in allocating water to the four Affected Municipalities. Those criteria included population of the municipality, area of the municipality encumbered by the contaminated plume, and any municipal water rights held by the municipalities within the contaminated area. Unincorporated lands west of Herriman could, for example, receive the benefits by incorporating into the City.

should be rejected by the Trustee.

I appreciate the fact that you said you were the Trustee, and you were also the head of the Department of Environmental Quality for the State of Utah, which means you are the top EPA cop in Utah. The same as -- we think someday when the appointment is completed -- that Governor Leavitt will be the top EPA for the United States.

H9-8 We expect more from DEQ and the State of Utah with regard to the south end of this plume. Maybe we need to define a new plume, if that's not in that one. And this needs to be on the record.

MS. NIELSON: Thank you Mr. Dansie. Could you start to conclude your comments, please?

MR. DANSIE: I'll try. But I don't think we should be limited too tight, because this is a public hearing.

MS. NIELSON: Let me suggest this. I appreciate that, and -- but I'd also like to allow time for everyone else who signed up. I'd be happy to extend additional time to you at end of the period, after everyone else has had a chance to talk. If there's still time.

MR. DANSIE: But I'll be glad to end mine very quickly and do that. But I'll be at your

H9-8 The Consent Decree, defines the "Affected Area" as that area in the "southwestern portion of the Salt Lake Valley where surface and ground water have been injured by Kennecott's mining and leaching operations." Consent Decree Section I.A. The damages in the Consent Decree were calculated based upon restoring the safe annual yield of the Affected Area. The Consent Decree explicitly preserves any claims that the Trustee might have for injuries to ground water outside of the "Affected Area."

EPA and DEQ require that Kennecott continue to monitor ground water quality in the Southwestern portion of the valley, both inside and outside of the "Affected Area". That data has been made public through the CERCLA process, was presented in the proposal, and was made available at the public meetings. The data does not show any need to define a "new" or "additional" plume.

other -- I'll be (Inaudible) --

AUDIENCE MEMBER: (Inaudible) my five minutes.

MR. DANSIE: -- written comments. This is a major concern to me. It affects us dollar-wise, health-wise. I haven't even talked about the things with the other half, I've talked about only the things that affect me. And I would ask that, as Trustee, you look at it two ways: One, from the Consent Decree; and second, as the top EPA cop in the state of Utah.

Kennecott, State Engineer, Division of Oil, Mining, Gas, DEQ, has known what's been going on here for 30 years. We used to get reports saying, Well, don't get too concerned now. Kennecott's put up $5 million to do these things to see really what's happened.

And we appreciate that. But now that we know what's happened, and now we've got a plan to clean it up, but we haven't got a way to compensate for what has happened. Not just as individual claims, but as a degradation of state resources.

Thank you for your time. And I'm sorry if I was offensive to anyone on this, but those are the facts.

MS. NIELSON: Thank you very much,

Mr. Dansie.

(The audience applauds.)

MS. NIELSON: Roger Payne, followed by Wayne Lantz.

H10 MR. PAYNE: Thank you for the opportunity to make comment. My name is Roger Payne. I'm employed by the City of West Jordan as Manager of Utilities. I have been involved in this project for over the last four years or so.

I have opportunity to attend and observe the actions of the Technical Advisory Committee. And certainly recognize the expertise and the talents that have gone into the efforts and the study regarding this plan. They have been extensive. I have witnessed a lot of extensive work.

The City certainly has interest and concern in the protection of groundwater of the City's well sources that lie on the north edge of the Zone A sulphate plume, as these are an important part of the City's total water supply.

H10-1 However, we feel that Kennecott, in their efforts to do this cleanup project, are doing the responsible thing. Rather than leaving this problem, they're working towards a remedy to clean up the groundwater. And commend them on the effort and the

H10-1 See the Response to Common Comment No. 3.

type of expense that is going into the program.

We recognize the project results in significant benefits. Benefits that the City of West Jordan will be able to take advantage of. And the ability of a new source of water. Very clean, pristine water source at a high elevation within the city, which is a benefit.

And we are looking forward to being able to take advantage of that resource. The City of West Jordan then speaks in support of the plan, and wanted to make that comment tonight. That's all I have.

MS. NIELSON: Thank you very much. I apologize if I'm mispronouncing the last name. Is it Lantz?

MR. LANTZ: Lantz.

MS. NIELSON: Wayne Lantz, followed by Tom Belchak.

H11 MR. LANTZ: I just have a couple of quick

H11-1 comments. I guess the first one is that this doesn't just affect the southwest part of the valley, it affects the whole Salt Lake Valley. And the valley being now little bit more.

H11-2 The other thing is that I would like some additional time also. I think we need to have the period extended at least 60 days, just getting into it

H11-1 One of the goals for this proposal is to develop a source of water that is currently unavailable (due to contamination) for the benefit of the public in the Affected Area. Communities in the Affected Area are growing due to developmental pressure. As this growth continues, treatment of the resources will provide needed drinking water. Along with the provision of drinking water, the extraction proposal will assist in preventing the two plumes from migrating further and will assist in reducing the mass of contaminants over time. Absent containment, the two plumes would eventually make their way to the Jordan River and north, contaminating additional groundwater resources.

The State Trustee, Kennecott Utah Copper Corporation and the Jordan Valley Water Conservancy District all recognize the significance of this proposed project and the range of impacts if it is not implemented.

H11-2 See the Response to Common Comment No. 1.

and just a couple other things.

H11-3 The only other thing that I had is that I would hope that the ILC isn't only backed by the word of Kennecott. That there be another bank or something, or the money's in the bank somewhere, or the bank is backing that. I wouldn't just go on a word that says, Yeah, we'll go ahead and pay it.

MS. NIELSON: Thank you very much, Mr. Lantz. Tom Belchak, followed by Kent Ryan. Do you need a stand for that?

MS. DOUGHTY: Take down that other one.

H12 MR. BELCHAK: Can I put it on the side of that one somehow?

MS. NIELSON: Well, we can take this down and put it right in here.

MR. BELCHAK: I'm Tom Belchak. I didn't find a pointer yet, but -- thank you. I live in South Jordan. I'm a professional geologist. That doesn't mean anything. It's a license that can be granted by the state. I have to do it this year because we're able to be grandfathered, so they're gonna let the young man in.

There was a couple of bookkeeping -- or

H12-1 housekeeping I'll call it -- items. One is, in these documents the property is continually referred to as

H11-3 As required by Section V.D.2 of the Consent Decree, Kennecott provided the Trustee with an irrevocable letter of credit (ILC), by which the issuing financial institution agrees to pay the described amount to the holder (in this case, the Trustee) upon satisfaction of any conditions and presentment of the letter to the issuer by the holder. The current ILC is held for the Trustee by a bank registered to do business in the State of Utah. The replacement ILCs will be similarly held for the Trustee.

H12-1 Use of the term “Southwest Jordan Valley” is consistent with the Consent Decree and earlier EPA’s remedial project activities and

the Jordan Valley. But I would like all references to Jordan Valley to pertain to Jordan Valley, which is the Water Conservancy District. This is the Salt Lake Valley that we're talking about. And there's -- the Jordan River runs through it.

The river goes through it? Okay.

The -- so that's one of my requests, is the concern that the Jordan Valley Conserve -- Water Conservancy District is not confused -- that I'm not confused, that the Valley is owned by the Salt Lake Valley, not the Jordan Valley Water Conservancy District. A little statement there.

There have been about 30,000 days of pollution, roughly, from -- if we gave three weeks off a year for vacation -- from the pollution. And it continues. It's been about 18 years since 19 -- the early '80s, when the first groundwater issues were studied by the EPA.

And whoever initiated those studies, I'm just thankful, because this has been going on a long time. I -- in graduate school I went to the -- to the pit to do a study of the pit. And I was told by staff that -- I said, What are you gonna do with these dumps? They could just cave up, they're fairly steep, when you get your truck over the edge.

documents. To maintain continuity of the project documentation and EPA's remedial project documentation, the State Trustee will continue to use the referneced project title, Southwest Jordan Valley Ground Water.

Don't worry about 'em. We own everything all the way down to Redwood Road.

(The audience is laughing.)

MR. BELCHAK: It was not called Kennecott Valley then. It's still the Salt Lake Valley.

(The audience is laughing.)

MR. BELCHAK: So there's been about eight years since we've talked about the Consent Decree. I've had eight days to look at 500 pages of documents. I'm not satisfied that I've done an adequate job yet. Five hundred pages of very technical, legal, operational, water right issues, financial, and economic issues are addressed here. Financial and economic are quite a bit different.

H12-2 I'm requesting 90 additional days of public comment from the end of the public comment period as currently scheduled. We just don't have enough time. This is fairly serious. Ninety days would help. But hopefully it will move -- the project will move along onward.

H12-3 Kennecott, Utah Copper and its predecessors caused the contamination. I don't know that liability has been accepted or offered, but it's clear to me that a liability is there on the side of Kennecott.

H12-2 See the Response to Common Comment No. 1.

H12-3 The Consent Decree was entered into in satisfaction of the State's natural resource damage claim against Kennecott for injury to, destruction of and loss of surface and ground water resources. It also obligates Kennecott's obligations to extract contaminants from the low pH/heavy metals plume, complete source control measures, and pay as damages cash and provide an ILC to be held by the Trustee in a Trust Fund. These obligations have been satisfied. Kennecott has made great strides to eliminate sources to groundwater contamination and begin cleaning up the groundwater, expending over $300 million to do so.

My dad told me, If you break something, you fix it. Even though the kids broke my bike, I fixed it. Even though -- but, you know, dad helped.

H12-4 In this case I'm very disappointed that -- I was expecting a one-party agreement, in that Kennecott would be stating how they wanted to clean up their mess. Jordan Valley did not make the mess. Kennecott made the mess. The -- I was expecting a one-party agreement, with technical assistance from Jordan Valley, but it be a Kennecott agreement.

On just a cursory review I see a two-party agreement that has to do with the technical proposal, the Kennecott and Jordan Valley joint proposal. It's to be a Kennecott proposal under the Consent Decree. The second proposal is the Kennecott and the Jordan Valley operational agreement. That seems to be a Kennecott and Jordan Valley financial agreement.

I haven't -- it's -- we can wade through it, but it's happening pretty fast. It's been worked on for a while, but most recently very fast. The third party that I was expecting is the Kennecott, Jordan Valley, and Department of Environmental Quality. It appears to be a Kennecott, Jordan Valley, and Department of Environmental Quality. It seems to

H12-4 See the Response to Common Comment No. 12.

be in order.

There are several beneficiaries that are -- are coming up. It would seem that the -- Kennecott is in the process of going out of the mining business and into the land development business. So there are two entities that I know of, and there may be more, that -- the Kennecott Land Company and the Oquirrh Mountain Enterprises -- are involved in land development.

H12-5

The Consent Decree is on -- the 1995 Consent Decree states: Kennecott shall not receive or beneficially use any of the surface or groundwater resources provided to the public and which are developed or credit -- for credit, or developed by expenditures of the Trustee.

Someone asked about watchdogs, and I have a comment about that. So we really understand, from the Consent Decree, that any entity of Kennecott is not allowed to use one drop of water for beneficial use. That's stated in the Consent Decree and needs to be enforced.

As far as a watchdog, I have watched the Federal Reserve watch my money. And they're able to print it whenever they want the money. It isn't always my money, but they're able to print it.

H12-5 See the Response to Common Comment No. 11.

There's some deal worked out that you can print money. But you cannot print water. You cannot just say, Let it be. There's only one guy that I know does that. All right.

So, the point I'm making is that water is an incompressible fluid. It cannot be created or destroyed. The second law of thermodynamics, it just evaporates and goes to Colorado. What I'm proposing, for my fourth point, is that there is a tribune formed.

And I'll just read what a tribune is out of the Encyclopedia that I bought for my little boys in 1986. It really hasn't been outdated that much.

(As read): A tribune is an official in Ancient Rome. There were two kinds of tribunes: Military tribunes and tribunes of the people.

Sounds similar, you know, of the people.... Fill in the blank.

There were military tribunes, but there were tribunes of the

people, where officials elected to protect the rights of plebeians.

I stand here as a plebeian. A commoner. I have water rights. I'm concerned about them too, but I'm also concerned about the plebeians.

According to one account, the plebeians left Rome in 494 B.C. and refused to return until they were allowed to elect their own defenders --

MS. NIELSON: Mr. Belchak?

MR. BELCHAK: We're almost done.

MS. NIELSON: Okay.

MR. BELCHAK: The tribunes could defend citizens against unfair acts by officials.

In a sense, they could veto bills.

In the A.D. 1830s an Italian patriot named Delorensa (phonetic) took the title of Tribune when he

H12-6

H12-6 See the Response to Common Comment No.10.

led the common people in their fight for freedom from the nobles. Those who defend the common people are often called tribunals.

Thank you.

(The audience applauds.)

MS. NIELSON: Thank you very much. Kent Ryan, followed by David Schmidt.

H13 MR. RYAN: Hi, my name is Kent Ryan. I'm a professional engineer. I have done hydraulic engineering for some time. I'm a former employee of the Division of Water Rights. And I have a couple of

H13-1 questions, I guess. And that is, how many of us will be around in 40 years to check our hydrologic model or groundwater model to see if it's accurate?

And Kennecott was well aware, I think,

H13-2 before the year 2000, that they were polluting the groundwater. Why would they continue to use that water to leach their dumps until the year 2000?

AUDIENCE MEMBER: Money.

MR. RYAN: Kennecott, I know, owns substantial rights. Substantial water rights. They are intending to use these rights, along with Jordan Valley, to withdraw a substantial amount of

H13-1 See the Response to Common Comment No. 13.

H13-2 Kennecott began to construct various source controls in the early 1990s. The most significant source control activities were the replacement of the Large Bingham Reservoir and the installation of cut off walls along the eastern flank of the Oquirrh Mountains to contain leach water from the waste rock dumps. The installation of the cut off walls and replacement of the reservoir essentially eliminated additional contamination to the aquifer well before 2000 as demonstrated by down gradient groundwater monitoring. Cessation of dump leaching reduced the volume of contamination which the collection system manages on an ongoing basis.

groundwater. In reality, what should happen is that they should desist use of that water in other areas.

So, I know that they have a lot of rights that they have non-use claims on. And it would be interesting to me to see how all these water rights work, and if Kennecott is going to discontinue some uses in order to withdraw this other water.

Anytime you withdraw water and affect an area of groundwater that is projected to withdraw at least -- or to lower the groundwater at least 100 feet, to me that is an infraction of -- of water rights. And it will have a great impact on a number of water right users throughout the southwest part of the valley.

And it will probably have substantial -- more substantial impact than what is being projected, is what I feel. I have a well in the southwest part of the valley, and there is concern on my part that it will be impacted.

H13-3 So my questions are how will Kennecott and Jordan Valley, what rights are they using? And are any of their rights being currently used now that they will have to discontinue the use for the new use? I know there's a lot of us that -- as one person we don't have much power or much impact on -- against

H13-3 Kennecott and JVWCD are using their respective water rights.

huge entities, but collectively maybe we can have a little bit more.

H13-4 I would like to also to request an additional time to study the issues. I appreciate the opportunity of being here, thank you.

(The audience applauds.)

MS. NIELSON: Thank you very much, Mr. Ryan. David Schmidt, to be followed by Ross Herzog.

H14 MR. DAVID SCHMIDT: Well, I can see why all the cities are in favor of this. They're getting a real windfall. They're getting all this wonderful cleaned-up water at the expense of Kennecott, but also

H14-1 at the expense of the other people that -- I hear how it's gonna take care of the cities, but I don't hear how it's gonna really take care of the well -- the people that have wells right now.

These cities suddenly are gonna have this windfall of extra-clean water that's supposedly coming from a Kennecott right. And as Kent Ryan mentioned, I think those rights can be questioned, because I think they might be rights that were never used or have gone out of use.

H14-2 And that they plan on -- Kennecott plans on pumping and using all the water they've ever used

H13-4 See the Response to Common Comment No. 1.

H14-1 See the Response to Common Comment No. 10.

H14-2 See the Response to Common Comment No. 10 regarding individual well owner concerns

to run their operation. And they're using water rights that have probably lapsed for non-use. And they're gonna pump it and give it to the cities. They're gonna lower this -- they're gonna lower the water level. And the rest of us that have wells, it looks real fuzzy how we're gonna be compensated.

We have in West Jordan, right on the edge of this plume, we have wells that -- and water rights for a hundred acre feet. We have pumped that every summer. And if the water level goes down -- and for myself, I think it is gonna go down substantially, because we're already over appropriated.

We're appropriating more water, when already the State Engineer says you are way over appropriated. They have stopped all permits a long time ago. And yet they're gonna go back and take permits that haven't been used for years, and pump water, and give it to the cities.

And so that's gonna affect anybody that -- my request is when you talk about affected people you should be talking about the people that have wells. And if that water goes down to where they can't pump, then they need to furnish that water to us at whatever pumping -- whatever our pumping cost would be as though we were pumping out of the well, and

and the Response to Common Comment No. 11 regarding the allocation of treated water and related water rights.

deliver it through the municipalities.

Otherwise, those that are dependent on wells are gonna get hurt. Especially in the shallow wells; the hundred, 200-foot wells. And I think that the whole water rights system that Kennecott is basing this whole thing on needs to be questioned. Thank you.

(The audience applauds.)

MS. NIELSON: Thank you very much, Mr. Schmidt.

Ross Herzog, followed by Howard Schmidt.

H15 MR. HERZOG: My name is Ross Herzog. I'm a new resident to Riverton City. One of the first things I noticed on moving into Riverton was the taste of the water. It was quite lousy. I grew up on the east side. I'm used to the water coming out of the Big and Little Cottonwood Canyons.

H15-1 My big concern is what the taste and the quality of the water is that we're gonna be having from the groundwater from this contaminated water. I know that, through the osmosis and everything that they're talking about, I'm just wondering are we still gonna have good quality water for our dependents and their dependents?

H15-2 I'm already spending close to $40 a month

H15-1 The potable water supply produced from the project will have a quality comparable to the quality of Provo River water and eastern Salt Lake Valley groundwater currently available in Salt Lake Valley. The total dissolved solids (salinity) concentration will be approximately 250 mg/L and the hardness will be less than 100 mg/L.

H15-2 The drinking water produced from this project will be similar to the quality of

on potassium for my soft-water conditioner. How much more are we gonna have to put out because we didn't put lime and other chemicals in the water to take -- to soften our water? That's another concern that I have.

H15-3 And how long before they start raising the rates, saying that they need more money to condition our water? I'd like to know also the difference between having a water treatment plant and having the reverse osmosis. I'd like to know the cost difference, and also the quality of the water.

H15-4 And I'm also concerned, when Paula was talking she said that Kennecott has senior water rights. I would like to know more about those rights and how it concerns the other people who have well rights, water rights. And what they consider is secondary water rights. I think that's important to the other people here in the Valley as well.

And I'd like to turn the remainder of my time over to Mr. Dansie. He still has a few more things that he would like to talk about.

MS. NIELSON: All right. Could I suggest this, Mr. Herzog. We have one more speaker. I'd like to provide five minutes for him. And then find out if there are others who want to speak. And, provided the

the water currently delivered to residents in the Affected Area by Jordan Valley Water Conservancy District. The quality of water to be produced by this project will match the quality of the water currently being delivered by Jordan Valley Water Conservancy District from the Provo River. Some of the residents in the Affected Area currently receive water of lower quality that is delivered from groundwater sources under the control and operated by the Affected Municipalities.

H15-3 JVWCD and KUCC have established the cost allocations in the Joint Proposal in order to draw upon the trust fund for funding the portions of the project that pertain to groundwater remediation. The remaining net costs that JVWCD will bear, including the operation of a reverse osmosis plant, are compatible with the normal and current cost of developing and treating a water source for public water supply. Therefore, the water rates to JVWCD's member agencies will not be adversely impacted.

The treated water quality will will be blended or remineralized to reach a total dissolved solids concentration of 250 mg/L, as described in the Joint Proposal.

H15-4 See the Response to Common Comment No. 10.

court reporter is okay, we'll be able to continue comments till 9:30. Would that be okay?

MR. HERZOG: I thought I had five minutes.

MS. NIELSON: You do. But rather than allow Mr. Dansie to speak for three minutes and then have to interrupt him and bring him back again, I'd like to suggest that we hear the last individual who signed up. And then I'd be happy to come back and allocate the rest of your time. If you would identify yourself for the record, please.

H16 MR. HOWARD SCHMIDT: Howard Schmidt. I
H16-1 don't know a lot about this system, but it seems to me like if there are pollutants that are in the ground and we lower the water table, we're probably gonna leave the pollutants in the -- in the ground.

And it would make sense to me that water should be injected back into the ground to actually flush the system. That's how you would clean plumbing pipes. That's how you would clean other circumstances around. So that was one of the comments. But I think it would make sense to actually see water come back in.

H16-2 I'm concerned that, also, about the water levels being lowered for the private well owners. And

H16-1 The nature of the contamination is such that calcium sulfate (gypsum) and other minerals, have been precipitated in the aquifer. These minerals will be left as the water table lowers, and it will take a long time to flush out as described in the Remedial Investigation.

The concept of re-injecting clean water into the aquifer to further dissolve these minerals has been studied and has not been completely ruled out. However, returning clean water to the aquifer does not seem to be the best use of the resource at this point. Precipitation and infiltration will continue to recharge and flush the aquifer naturally.

H16-2 As referenced in the Response to Common Comment No. 1, the Trustee has established a Stakeholder Forum to provide

I would suggest that it would be -- part of the watchdog committee should be -- private water well owners should be able to form some sort of an organization.

I think the cities will -- will have a lot of impact and input with Jordan Valley, but I don't think the individual well owners will. And I think it would be very, very useful to have an organization of private well owners that would also have impact and say on -- on how this is working.

And I think it's a great program. I

H16-3 think it needs to happen. But I think we need more time to evaluate it. And I would request that -- a longer time, 60 to 90 days. Thank you.

MS. NIELSON: Thank you very much. I know Mr. Dansie is interested in presenting additional comment. Is there anyone here who has not had the chance to speak yet who would like to address us? Provide comment this evening?

Is there anyone else who would like to talk or present additional comment beyond what they were able to provide during the five minute period? Okay, Mr. Belchak and Mr. Dansie. Let me suggest this, are you --

(A recess was requested.)

information and receive information from well owners and others as the project proceeds. Further information addressing well owner concerns is provided in the Response to Common Comment No. 10.

H16-3 See the Response to Common Comment No. 1.

MS. NIELSON: Okay, let's take a five minute break. When we come back I suggest that I allow another five minutes for Mr. Dansie and five minute for Mr. Belchak. And then if there are other comments, questions, or anyone who would like to speak, we'll provide an opportunity to do that at that time.

(A recess was taken from 9:02 to 9:11 p.m.)

MS. NIELSON: If I could bring the hearing back to order, please. At this point I have two requests to be able to provide additional comment: Mr. Dansie and Mr. Belchak. Is there anyone else who would like additional time to speak this evening?

Okay. Mr. Dansie, I'd like to suggest that I -- that we provide an additional five minutes for you to speak, and five minutes for Mr. Belchak. And then if there are any concluding comments or questions, we can address those. Mr. Dansie.

H17

MR. DANSIE: Thank you very much for the opportunity to make a few additional comments. Five minutes is a short time for something that's taken 15 years to develop, and 10 years of lots of attorneys and time involved. So thank you very much.

H17-1

My concern goes a little bit more. You know, I've had geologists and water people tell me

H17-1 The aquifer cleanup will be substantially accomplished within the 40-year life of the

that it might take 800 to a thousand years to clean this plume up. I think 40 years is probably beyond my lifetime, but I'm hoping that this Trustee will take a look at that. I think 40 years is not adequate with regard to what goes on here.

I think Kennecott has been mining for -- or Kennecott's predecessors, and I'll address that in just a little bit -- since about 1860-1880. So that's about 120 years. So that's about a third of the time that they've been polluting that they want to clean it up, or at least they want to be absolved of any further responsibility.

H17-2

I want to just talk a little bit about that responsibility issue for a minute here. Kennecott was acquired two or three times in the last 20 years by British Petroleum and by -- I can't remember the other. But at least now it's owned by Rio Tinto.

Rio Tinto, I think -- I don't have firsthand information -- did an audit called a liability audit when they acquired the Bingham Canyon Mine and properties. So they were aware of what was happening. There had been -- in other words, the mining industry has top-rate geologists, chemists, and hydrologists, like Paula, that know what's happened

proposed project. Acid water will be removed from the acid plume and substantial sulfate removal will be accomplished in Zone A and Zone B. JVWCD anticipates the continued need for demineralization treatment in Zone B after 40 years. This is because the background total dissolved solids (TDS) concentration will too high for municipal quality drinking water provided by JVWCD. See also the Responses to Common Comments No. 5 and 6.

H17-2 Kennecott Utah Copper Corporation (KUCC) was the named defendant in the Consent Decree approved by the U.S. District Court in 1995 and remains the operator. Has all of the responsibility of the original owner. The Consent Decree and other environmental permits provide that, as part of any change of ownership and control, the new owner assumes responsibility.

and know what's going on.

I'm not saying they turn their head. I'm saying that maybe the rules weren't as stiff at that time. Nonetheless, the damage has been done. And when Rio Tinto acquired this property, which is the largest mine -- was the largest mine in the world, I think there's some larger now -- knew that there was some obligation that went with the properties.

I don't know how far they go back, but they certainly are not since 1930-1965. They at least go back to 1902, and I think before. And we have been shortsighted and blind sided by Kennecott on the environmental issues that stand out there now with regard to water, with regard to soils that were contaminated from previous mining operations. And I'm not happy with what's happened there at all.

And I think that, as the state Trustee looks at this, they should look at whether there's additional plumes or additional things. This is an important thing. We should not leave this area in the condition that it has been. It's been improved a little bit, but there are still a very lot of people being affected by the pollution that was caused by previous mining operations making large profits.

And I want to talk about that just a

little bit from the standpoint of who has to deal with that now. This is great. Jordan Valley has come forth, and we applaud. And they took Kennecott and went to the Federal District Court, to the Appeals Court, and got a favorable ruling to increase the amount of money to clean this up.

But let's also put this into perspective.

H17-3

Jordan Valley received money, and water rights, and benefits for their own individual claims as well. So they -- they've had an interest in doing this too. No one else could have done it, because it cost a couple million dollars.

We couldn't go back, as individuals in this room, and deal with the situation that Jordan Valley did. But they also benefitted from it, too. And that's good. But I think one of the major concerns is these cost projections that we've made, I hope they're accurate.

I think they've been done by experts, and I think they've been done as good as possible. However, one of the problems that comes to my mind is, so what? If it doesn't work, Jordan Valley can increase 4 percent, or 9 percent, or 16 percent their water rates. They could increase for the cost of service.

H17-3 The Consent Decree provides specific requirements regarding funding and water rights as part of the groundwater cleanup. See the Response to Common Comment No. 12.

We said, Well, this is one of the great benefits that we were gonna get was no one was making a profit. But there's no cap on what they have to -- what they can charge the -- increase the water rates to pay for this cleanup if Kennecott can't do it, or if it doesn't do it, or at least their portion.

So I would ask that we have a strong look, we have some auditors take a look at what money is being spent by Jordan Valley on this project and whether, down the road, we're just shifting the cost of polluting by Kennecott to the end water user.

In other words, why should this water have to be cleaned up at the expense of anyone that drinks it today when it was polluted by Kennecott, for profit, and just simply to avoid cost? So those are some concerns.

And I don't want to be negative with what Kennecott is doing today, because it's not the same people. But I think it's the same company, it's the same assets, the profits flow to the same organization. And I think that's why I'm concerned about it.

I believe that the Consent Decree ought to have Rio Tinto's name on it, not Kennecott. It just says Kennecott. It doesn't says its president,

its environmental manager, or anything else. It's vague. It's not adequate. It simply needs to be stronger. Enron, WorldCom, all those companies go out of business. Kennecott is no different.

Mining companies fail every day of the year and go out of business. Workers are laid off, and so on and so forth. The difference being profit. It's the cost to produce the pound of copper. And Kennecott is very vocal about that when it comes to their labor relations.

H17-4

Well, I think they need to be very vocal about how they're gonna pay for these costs down the road. I don't think they should be shoved onto Jordan Valley and shoved on back to me, and you, and everyone in this room that drinks water and buys it out of those pipelines.

The next thing I've got here is I've got a letter dated August 16, 1999. It's to Robert Morgan. It was hand delivered. It's from Kennecott Copper Company. It says: Proposal for restricted pumping in the southwestern Salt Lake Jordan Valley.

I'm gonna read this letter, but I'm gonna ask a question. Why should Kennecott receive preferential treatment, over anybody else that owns water rights in this valley, to help them clean up a

H17-4 See the Response to Common Comment No. 12.

problem that they caused?

Now, maybe we have to do it because the problem is there. But if they caused it, then they should pay the bill. And they should compensate the people for what's affected. I'm gonna read this letter.

(As read) Dear Mr. Morgan, Kennecott Copper Corporation hereby submits a request for the creation of restricted pumping zone in certain parts of the former management of Area 8 --

That's southwest part of Salt Lake County.

-- of the interim Groundwater Management Plan. The proposed restriction area over -- over flies contaminate -- overlies contaminated water in the principal aquifer of southwestern Jordan Valley, as documented in the enclosed Remedial investigation and Feasibility Study done under CERCLA and State review

(CD-ROM attached).

As part of its responsibilities under CERCLA and the Natural Resource Degradation Damage Settlement the State and Kennecott has completed source controls at its facilities to prevent degradation of groundwater -- further degradation of groundwater in the basin.

That's admirable.

Kennecott also has in place an extraction well for acid water in the groundwater basin. Kennecott -- groundwater plume, excuse me. Two extraction wells at the leading edge of the elevated sulphate plume in the Bingham Canyon, and an extraction well at the leading edge of the sulphate-contained water near Kennecott -- contaminated water near Kennecott water.

Kennecott is currently conducting a joint study with Jordan

Valley Water Conservancy District --

We've got the two parties right there, Kennecott and Jordan Valley. I think they're the beneficiaries, and maybe the cities are too. They've bought them off to some degree.

-- the feasibility of extracting and treating elevated sulfate groundwater and providing the treated water for municipal use.

Well, that's good.

Part of the effective remediation plan must include measures to protect the groundwater users and prevent further mitigation of existing contamination. Although much of the affected aquifer on Kennecott -- is on Kennecott property --

What does that have to do with? How do you keep water on Kennecott property? I would really

like to know that. You know, you tell me, Well, it's all on Kennecott property. Kennecott doesn't own from the Oquirrh Mountains to the Wasatch Range. It isn't all Kennecott property.

-- when Kennecott can control groundwater development -- where they can control it. Kennecott is particularly concerned about the future groundwater development along the outskirts of South Jordan, West Jordan and in the cities -- and in the Town of Herriman.

They're concerned about development. Why? Because they don't want to have to be affected in their pumping operations.

Privately owned water rights in these existing areas or communities may require diversion of external rights to areas of part of development requirements.

Unrestricted use of the water rights could draw the elevated

sulfate and total dissolved solids into the currently clean aquifer, causing additional damage to the waters and exasperating the groundwater condition.

Well that -- that's good, they're trying to control. But at whose expense? Not Kennecott's, the polluters. Not Jordan Valley's. They've already been paid for their assets and their water rights. It's you people that are here tonight that are concerned about your water rights and your drawdowns.

Kennecott would like to propose --

Kennecott. Why are they the king of anything?

-- would like to propose a series of restrictions on future use.

This is not the State in here. This is Kennecott asking the State Engineer to do this. Who

the heck do they think they are? Jordan Valley has already been paid for their water now, remember. Two foxes in this chicken house.

MS. NIELSON: Mr. Dansie --

MR. DANSIE: -- and well development in these areas. These restrictions would include:

Completion depth and pumping restrictions on wells drilled within 3000 feet of the known 250 milligram -- mg/L-sulphate concentration in the Herriman area as shown on the map.

Completion of depth pumping and restrictions on the wells drilled within 3000 feet of the north 250 sulphate concentration.

Who is Kennecott to come in and say, State Engineer, you do this?

MS. NIELSON: Mr. Dansie --

MR. DANSIE: They don't own the water rights. I'm sorry, I'll go on. I apologize.

Prohibition of new wells within

the sulphate isolation area and the operation -- evaporation pond until Kennecott installs the NRD A pump system, achieves the hydraulic contaminants of underground plume.

That's fine, they're trying to control it. But at whose expense? Not Jordan Valley's, not Kennecott's, but the water users. Anyway.

Appropriate completion depths and pumping rates will be determined on a case-by-case basis using the most up-to-date information on location and depth of contamination, aquifer properties, and user needs.

Kennecott will supply the information to the State Engineer --

Boy.

-- and any water upon request -- water user upon request. The restricted area will shrink the remediation and natural attrition

rate of the size of the contaminated zone.

That's great. Now, this is the part that's important and then I'll stop.

MS. NIELSON: Okay.

MR. DANSIE: Kennecott recognizes these restrictions may adversely affect the water rights of private water users in these areas.

Thank you for the admission.

Kennecott stands ready --

Now, how does this fit into the Consent Decree, Trustee and top EPA enforcer?

Kennecott stands ready to assist the affected property owners --

Huh.

In accordance -- in assistance

in setting and completing --

Excuse me, I mean, I lost my place.

-- in obtaining adequate water supply --

Huh. That's pretty good. Let's get that in the Consent Decree.

-- by certifying ad -- alternative water sources.

Where are they gonna come from, the rain? Utah Lake? Kennecott has water rights in Utah Lake.

-- and providing technical assistance in siting and completing supply wells, and providing supplemental financing in cases where the presence of the contamination causes an additional cost burden to the property owner.

I'm gonna give you this copy of this

letter, which I'm sure you already have, and ask the U.S. Trustee and his top EPA enforcer for this State require this to be done. Thank you very much.

(The audience applauds.)

MR. DANSIE: Do you want this for the record?

MS. NIELSON: Yes. If you want to give it to me, I'll make sure that it's part of the record.

H18

MR. BELCHAK: I'm Tom Belchak again, and I didn't get a chance to use the pointer last time. I had this very same letter that I was -- that Ron Dansie was reading from, and there are two comments. The ccs went to W.R. Williams, General Manager of Kennecott Utah Copper Corporation; M. Shoop, Associate General Counsel, Kennecott Utah Copper Corporation; and Dallin Jensen of Parsons, Behle & Latimer.

As water right owners we just don't have good representation. We're independent. I suspect that my group, Lance Consulting Group, is very interested in understanding this entire issue and being able to explain it to some of the private water right owners.

We've taken a look at the Salt Lake Valley. I really want those documents to say Salt Lake Valley. I've never heard this place referred to

H18

as the Jordan Valley. This red area that we see outlined on here is a -- a manifestation of this letter.

This letter was very successful because the -- it went to the quantity people, being the State Engineer's office and the Division of Water Rights. And the 3,000 feet from the known 250 milligram is the blue, roughly. And this map that we're seeing here that was presented this evening is quite a bit smaller than the maps I've seen that I have in my possession.

We can let that go. But watch what happens here with this yellow spot right here. This is -- this is the same red spot here, presented in very general terms. But if you -- if -- this is more specific. I had to go -- look hard for this particular red spot. But I'm seeing red.

I see black and white over here. And that's the size of the -- the Salt Lake. That's Antelope Island, in this very small picture. This area is 78 square miles. You can look at it real quickly, even on this little map on the Internet, and see two townships.

Six miles by 6 miles is 36 square miles. That's a township. Each one of these big squares are townships, 6 miles by 6 miles. There's 78 square

miles of yellow. I'm seeing yellow here. We can't see what's happening in the subsurface, but there's a lot happening.

And if you take the Salt Lake Groundwater Management Plan that was implemented in 19 -- in 2002 from the State Engineer's office, who regulates quantity. The Department of Environmental Quality deals with environmental quality. The two agencies are overlapping and providing some very good benefit to the polluter.

H18-1

We think this is wrong. There's incorrect logic here. We would like to see the polluter pay, and not the taxpayers and the private water right holders. There's something radically wrong with that idea. However, the private water right owners are not represented.

I look at Jordan Valley's checkbook on a monthly basis, and there's a lot of money spent on attorneys fees. And more so when this is going on. Very well represented. Jordan Valley has a Washington lobbyist that is paid well. His contract was up a little bit this year. He makes more than I do, for 28 hours a month.

There's something that needs to be done here. Every one of these people that own water rights

H18-1 See the Response to Common Comment No. 12 regarding funding of the groundwater cleanup and the Response to Common Comment No. 10 regarding the processes for addressing problems raised by well owners.

are either in the yellow or outside of the yellow. These people need to be represented. These -- the valley is over appropriated.

The State Engineer has made a determination through -- through some adequate study, that there's 165,000 acre feet of safe yield available. It's approximately three times over appropriated. Sometimes I've -- I've had quotes of six times over appropriated.

But there's quite a bit of water that's tied up in paper. It's paper water. We need H2O to live on. And I'm making a plea that something happens to unite the private property right owners that have a pertinent water right.

And I firmly believe it's not the state Trustee's responsibility. It's a responsibility of Kennecott to negotiate, in good faith, with all private property owners. Their land is impacted because without water your land is virtually worthless, because you can't bring people to the land. It's the people that want to buy the land.

H18-2

I think that's about it. There's quite a few questions I have. I think the 90-day extension is fair. I think 8 days to review the documents to make intelligent discussion, and I just haven't had it.

H18-2 See the Response to Common Comment No. 1.

This one particular page is the one page that I have out of the -- the joint proposal, which is about an inch and-a-half thick I suppose. I didn't take the time to count pages, I estimated about 500 pages.

Sixty days isn't enough. Ninety days would move it down the path of understanding a bit more. Thank you.

(The audience applauds.)

MS. NIELSON: I'd like to thank Jordan Valley and Kennecott for their presentation this evening. And to thank all of the commenters for their time, and comments, and their recommendations. I realize that there was a short period of time between the initial notice of request for comment on this agreement and this initial hearing.

The reason we did that is because we wanted to provide an opportunity to look at the maps, to discuss, ask questions, early on in the process, so that -- so that we could attempt to answer concerns and help to clarify issues.

We have provided an additional public comment period later in the -- in this period. It will be the 25th of September. It's at the offices of the Department of Environmental Quality. And it will be at 3:30 in the afternoon. It will follow the same

format that we've followed this evening.

There's also an opportunity to provide comment in writing. And to mail or fax that. To provide it over the Internet. Again, to provide it at the public comment at the end of the month.

I will take the request for additional time into consideration, and make a determination as promptly as I can.

Again, I'd like to thank everybody for their time tonight. Thank the court reporter for being so judicious in following our comments. And ask you all to drive safely home. Thank you. And we'll close the hearing.

(The hearing was closed at 9:34 p.m.)

C E R T I F I C A T E

This is to certify that the foregoing proceedings were taken before me, KELLY L. WILBURN, a Registered Professional Reporter and Notary Public in and for the State of Utah.

That the proceedings were reported by me in stenotype and thereafter caused by me to be transcribed into typewriting. And that a full, true, and correct transcription of said proceedings so taken and transcribed is set forth in the foregoing pages, inclusive.

I further certify that I am not of kin or otherwise associated with any of the parties to said cause of action, and that I am not interested in the event thereof.

_____

Kelly L. Wilburn, CSR, RPR
My Commission Expires:
May 16, 2005