SOUTHWEST JORDAN VALLEY GROUNDWATER CLEANUP PROJECT Natural Resource Damage Trustee Public Hearing Agenda

September 25, 2003

Utah Department of Environmental Quality

168 North 1950 West, Salt Lake City

REPORTED BY: SUSIE LAUCHNOR, RPR, CSR

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P R O C E E D I N G S

MS. NIELSON: Good afternoon. I'm Dianne Nielson. I'm the executive director of the Department of Environmental Quality and I also serve as the natural resource damage trustee for the State of Utah. I want to welcome you all today and thank you for coming to learn more about the project for cleaning up groundwater in the southwest Jordan Valley consistent with a project that is being proposed by Kennecott and the Jordan Valley Water Conservancy District.

Let me talk for just a minute about the process we're going to follow this afternoon. First, we'll have power point presentation, a summary of what the project consists of that will be presented by Paula Doughty with Kennecott, and John Cherry and Richard Bay with the Jordan Valley Water Conservancy District.

We'll take some time for any questions, clarifying questions regarding that presentation and then we'll begin the public comment period. When you

came today there was a sign-in sheet for attendance that will enable us to contact you if we have further information to follow up. There was also a sign-up sheet if you were interested in providing comment today. If you are interested in doing so and you haven't signed up, I would like to invite you to go back to the table by the door and do that so that as we walk through the introductions -- I'm sorry, as we walk through the identification of commenters tonight or this afternoon that we provide an opportunity for everybody who's interested to be able to speak.

The process we will use for public comment will be initially to ask each individual as they speak to keep the time of their comments to five minutes. I realize that there's a lot to be said and that you may want to address comments and recommendations or suggestions for more than that five-minute period, but in the interest of giving everybody an opportunity to talk within the time frame that we designated for the public comment, I would ask that you please hold your initial comment to five minutes. If at the end of that time you still want to provide additional public comment on the record, I'm going to ask that you stop at that point, sit down and let me proceed through the list of individuals who have signed up to comment, and

then at the end of that time we'll provide additional time for anyone who wants to provide additional recommendations or comments to the trustee.

I want to also make you aware of the fact, and I realize that many of you may already know of this, we have extended the public comment period for this issue by 30 days. What that means is the comment period will now run through November 1, 2003. That means that you'll be able to submit comments on the record in the hearing today, you can also submit comments by e-mail, by letter, or by fax, and the important consideration is that they be received at the address that is provided on the information sheets, which is the address here at DEQ, by midnight on November 1st. That means that the comments should either reflect a transmittal time, if they are e-mailed or faxed, of midnight November 1st or they must have a postmark by midnight November 1st. But we've provided the additional, extra 31 days with the hope that it will provide more opportunity for individuals to review the documents, ask questions, get answers and be able to provide comments to us.

Along with that extension we have also arranged for two public information periods specifically focused on providing information to

individuals who have private water wells or concerns regarding their wells and the impact of this project.

There were a number of questions at the first public hearing that we held regarding the impact that might occur or could occur to individual wells and what the process was for addressing that impact if it occurred. It seemed to us, as we talked about that after the hearing, that it would be helpful to hold a couple of information sessions on different days to try and make them as accessible for interested individuals as possible to specifically address those issues, and those two times will not be times when we're taking public comment or reported comment as we are today for the hearing. But there will be an opportunity to discuss the proposal and understand what the process is that is in place for dealing with individual water rights.

The trustee for natural resource damage does not have the authority to be able to resolve issues with respect to private rights or individual wells, but we do want to make that information available to you as part of the comment period so that you can more fully understand what the process is and what the remedies are if there are concerns or if there are problems.

On the back table there is a notice of extension of public comment and that notice also references the two times when we will be holding those open discussion sessions. One is Tuesday, September 30th, from 7:00 to 9:00 p.m. here in this room. The other is Wednesday, October 22nd, from 7:00 to 9:00 p.m. here in this room. But I would also encourage you, if you have questions at other times, if we can be of assistance, that you give us a call, let us know what the issue or the concern is so that we can provide the information to you.

I want to take this time to recognize Eva Hoffman, who's here with EPA region eight. Eva, will you stand up for a moment?

Thank you.

Eva has been the EPA representative responsible for the work that has been conducted at Kennecott both in the circle process that has been applied and in the associated work in reviewing the remedial investigation feasibility study establishing the record of decision and coordinating the cleanup work going forward from the EPA's perspective.

I would also like to introduce Doug Vagan, who is the co-chair of the technical advisory committee. Doug is an employee of the Department of

Environmental Quality. The technical advisory committee is the committee made up of technical staff from the state agencies, EPA, local government officials. There are environmental representatives on that committee. It is the committee that has been used as we've worked through the proposal, evaluated options, looked at the cleanup and reviewed the technical aspects of the documents that you're now reviewing in public comment.

I would like to provide a moment for Doug to introduce other members of the team who are here today and who are available to answer questions both today and any time that you may have questions and want to contact someone. So Doug...

MR. VAGAN: Thank you, Dianne.

Good day. I'd just quickly like to introduce the state team members on the TRC. With us this evening we have Dan Hall with is the Division of Water Quality and the Groundwater Protection Program. We have Chris Ambrodio with the Division of Water Quality UPDES program. We have Bill Mulmer with the Division of Water Quality, waste load allocations. We have David McCleary with the Division of Solid and Hazardous Waste. We also have Jared Manning with the state engineer's office, Division of Water Rights. We

have Frank Roberts with the Division of Drinking Water and we also have Wayne Headburg with the Division of Oil, Gas and Mining, Department of Natural Resources. We're all here and available this evening to assist and address any questions, or into the future as well.

MS. NIELSON: Thank you very much, Doug. With that I would like to begin with the power point presentation summary of this project and provide some information for you to better understand what's proposed and the basis for that proposal.

This is a map of the zone A and zone B sulfate plumes. Is this easily visible for everybody?

You will note two colored zones, one just up from Herriman, which is the zone A plume, and the different colors reflect sulfate contamination. The red part of that plume is the acid core or the most contaminated zone. That's not a zone that the trustee is dealing with in terms of the treatment and production of municipal quality drinking water. That is a zone that Kennecott is pumping and is responsible for extracting and removing from the groundwater so that it won't create further contamination.

There is another plume to the right by the word South Jordan which is the second sulfate plume. The objective of this project is to remove the sulfate

contaminated waters from the groundwater in this area, in the area that we call the infected area, to be able to have that water treated and provided to through the community drinking waters that are being provided by South Jordan, Riverton, West Jordan and Herriman to the citizens in this area. That's what is required in part by the consent decree that was signed in 1995.

My objective as trustee is to ultimately approve a plan that will be the best mechanism for extracting that water, treating it and being able to produce municipal quality drinking water, to be able to use that resource again by treating it and to limit the contamination ultimately, as you'll see through this presentation, to reduce the area of contamination so that in the future we will be able to extract clean water from these areas.

It is important to recognize that if the trustee were to do nothing at this point, if there were no cleanup plan for this area, what would happen is that those blue contaminated zones on the map, the high sulfate contaminated water would continue to move not just through that affected area in the groundwater, but beyond that area to contaminate additional water that right now is not contaminated with sulfate. And so it is important that we move

forward with the project and that we do it in a manner that limits the spread of contamination, that removes contamination and restricts the zone of contamination in the future and that provides municipal quality drinking water for the individuals in this affected area. That's the objective that we're attempting to reach through the proposed plan.

At this time I'm going to -- thank you, I almost forgot about that part. I want to explain to you the letter of credit which was the financing for being able to accomplish this.

In 1995 with the consent decree there were two components of funding that were established by Kennecott in accordance with the consent decree for the use of the natural resource damage trustee. The first was an irrevocable letter of credit and in 1995 that letter of credit was worth $28 million with a seven-percent annual increase. Now that letter of credit in September of 2003 is worth $48.1 million.

A second component of the payment was what was called lost use payment. This was a cash payment that was made to the natural resource damage trustee which has been placed -- was placed in an account where it remains. It was worth $9 million at the time it was received in 1995 and it is now worth

$13.2 million.

Those funds are being requested, the total of what is now $61.3 million are being requested to be used as part of this project to restrict the contamination in the groundwater and treat it and produce municipal quality water and Pauls Doughty and Richard Bay will talk a little bit more about that and the broader financial aspects of this project. But this money was provided specifically for this purpose and part of the proposal is that the trustee would use this money to be able to implement the proposed project.

At this point I would like to turn the time to Paula Doughty with Kennecott and then she will turn some time to Richard Bay with the District to talk about the proposal.

MS. DOUGHTY: Thank you. The purpose of the joint proposal that Kennecott and the District came to propose to the state trustee was that we did -- a lot of this Dr. Nielson has gone over, but we do seek to use all portions of the trust fund. We also want to complete all the obligations that have been outlined in the national resource damage claim as well as through CERCLA, and some of those include excising the contaminated groundwater from the acid

plume at a minimum five-year rolling average at 400 acre-feet per year. That requirement, it actually began in 1995 and we have been -- we have been fulfilling that requirement since that time. Also, that we would complete a series of source control measures that I'll go over in a minute; that we would produce 8,235 acre-feet per year of municipal quality water from the extracted water and from the plume and treat that by reverse osmosis treatment; also that we would deliver that water to the affected municipalities -- that we're going to do through the District distribution system; and that we would contain the sulfate contaminated groundwater at concentrations greater than 1,500 milligrams per liter on Kennecott property via the extractions that we're going to be doing, as well as that we prevent the spread of the contaminated aquifer.

Again, you saw this map just a minute ago. To get you oriented, this is the Jordan River here on the right side of the map. The area over here are the Oquirrh Mountains. The cross hatched land here is the property that is owned and controlled by Kennecott Utah Copper. Kennecott owns approximately 100,000 acres in the Oquirrh Mountains, obviously with some knolls of property that go out into the valley.

Mining in the vicinity of the Bingham pit began in the early 1860s, and obviously at that time it had nothing to do with Kennecott Utah Copper. Kennecott Copper actually became involved in 1935 when we purchased Utah Copper at that time.

There was leaching going on the waste rot dumps that when you look to the west of the valley you see. There was leaching going on beginning in about 1913 and when Kennecott purchased Utah Copper we went in to actually improve the collection systems that were already in place. So what we did is we constructed a series of evaporation ponds located in this area here, and there were about 25 evaporation ponds covering approximately 500 acres that were receiving water coming out of Bingham Creek here, and that was in 1936.

In 1965 we also went to improve the collection systems by constructing a reservoir in this area here. And although both of the sets of reservoirs were built to the standards of the time, quite frankly, there really weren't any standards of the time. The Clean Water Act didn't hit until 1997 and so there weren't really any regulations out there that controlled this type of activity and both of these sets of reservoirs did leak and did release

contaminants into the groundwater and those are what we're talking about here today.

The evaporation ponds are the primary source of the zone B plume that we're seeing here. It has sulfates that average roughly about 750 milligrams per liter. This outer contour here is the sulphate above 500 milligrams per liter.

The zone A plume here, as Dr. Nielson indicated, has a core acid plume to it that has sulfates greater than 20,000 milligrams per liter. Its acid pHs range from three and a half to four and a half and it is not involved in the joint proposal that we're talking about today. It is not the water that we will be extracting for treatment and providing it back to the affected communities.

The outer area here are sulfates, again, that are above 500 milligrams per liter and this is the area that we're extracting the water from for treatment.

The source control activities that we did, which I've kind of already gone over a little bit, is we went back in the mid 1990s and installed an east side collection system along the waste rot dumps in the base of the Oquirrh Mountains. So in a series -- and basically every drainage that you see along the

Oquirrh Mountains, the mountains there at the south where the waste rot dumps are, we constructed cutoff walls where we went down and drilled into bedrock and built basically underground dams to where water is percolating through those waste rot dumps. It is collected in these underground dumps and brought back into our processed water system.

We also replaced that large reservoir that was the source of the acid portion in the zone A. We replaced that, went back in, removed all the soils, removed the old reservoir and constructed a triple lined new reservoir system with leak detection systems, monitoring wells and so it's a state-of-the-art facility that's out there right now.

We also terminated active leaching of those dumps in September of 2002 and we continue to see the reduction in the flows that are coming out of the waste rot dumps today and there was a series -- I say series, a tremendous amount of contaminated soil that has been removed and excavated and put into repositories, protected repositories over the last 10 years. Actually, that started in about 1991. To date Kennecott has spent roughly about $350 million on those source control activities.

Also, the source of the zone B plume,

those South Jordan evaporation ponds, those as well were consolidated with some of the soils removed.

The proposal that the District and Kennecott have out there today is that -- it has three main components. We plan on constructing two reverse osmosis treatment plants. One, the zone A plant which is going to address the zone A plume and it is funded by Kennecott with a portion being funded by the District. It will be owned and operated and constructed by Kennecott on Kennecott land, and I'll show a picture of it in a minute.

We also out of that plant will produce 3,500 acre-feet per year of municipal quality water from Kennecott water rights and as that water is produced it will go back to the Jordan Valley Conservancy District for their distribution out to the public.

The second portion is the zone B plant which will be addressing that plume that is further to the east, a little bit closer to the Jordan River. It will be constructed, owned and operated by the District itself and Richard is going to talk about that in a minute when we get to the zone B section. It as well is going to be producing 3,500 acre-feet per year of municipal quality water from water rights

that are owned by the District now.

There's also a lost use component. When the natural resource damage claim was initiated it was determined that there was 8,235 acre-feet per year of water that was the damaged resource. The dollar amounts that Dr. Nielson went through were based upon that volume of water over a period of time and what they looked at was a treatment to that damaged resource and what that would be, and when they looked at it, they looked at reverse osmosis treatment and in the reverse osmosis treatment there is a component of the water that is lost.

So when you put 8,235 acre-feet of water through a treatment plan, not 8,235 feet of water comes out of it. There is a component that is lost to the treatment process and that is the lost use component here and that is also the portion of the trust fund that Kennecott paid that initial $9 million for that the trustee has put in an irrevocable letter.

The lost use component, the District as well intends to utilize that portion of the trust fund to make up that lost use component and they'll be producing between 1,235 and 2,300 acre-feet per year of water out of the zone B plant. This is kind of a joint plant here that will treat all this water. All

that water, again, is going to be delivered to the District's distribution system.

Out of the zone A plant we -- these are the various products that actually come out of the plant and the one here is the treated water and what we expect to see, the quality of the water that we expect to see coming out.

This middle column here is drinking water standards, and as you can see by comparing the product water to the drinking water standards, everything is well below any levels -- well below the drinking water standards out there.

There also is the waste or the by-product that comes out of that treatment plant which primarily is the concentrated pollutants and this is the quality of that water here. That concentrate or that by-product is going to be discharged into Kennecott's tailings line for transportation down to our tailing impoundment. We do have neutralization capacity in the ore that comes out of the mine and that neutralizes water and it mixes -- to tell you the truth, we actually discharge about 40- to 45,000 gallons a day of tailings to our tailings impoundment. We will see probably somewhere around 400 gallons a minute coming out here versus the 40,000 gallons a

minute of this quality, which will go into the tailings impoundment. We do have a permanent discharge off of our tailings impoundment and these are the permitted limits. So as you can see, we're well below our permitted limits as well off the tailings impoundment. There is a good portion of that water that will be recirculated back to Kennecott after the solids settle out of the tailings impoundment.

This is the location of the zone A reverse osmosis treatment plant looking west. You can see the waste rot dumps there in the background. This is a plant that Kennecott constructed many years ago as a demonstration plant and what we're doing is we're going to utilize the shell of that plant. Right over here is the Bingham Canyon itself. So it's just to the south of Bingham Canyon, up to the west there on the hillside.

This is, again, a little bit more cartoony picture of the zone A and zone B plumes here with the infrastructure that is either in place or will be in place. For the zone A plume, this is the site that we're going to be utilizing that shell that I showed on the previous slide here. That is the location there.

We have three wells here that are the wells that we're going to be extracting the sulfate water from the contaminated zone of the groundwater here and these wells have been used since the 1960s in Kennecott's process. So it's water that we've been extracting historically for use in our process systems up on the hill. But at the time that we get the reverse osmosis treatment plant completed and constructed, that water will be diverted to the plant so that we can make the drinking water for the public.

These locations here are the locations of the acid wells. Again, it's not part of this project but we are extracting the acid plume's water and that water as well is going to the tailings line for transportation down to the tailings facility there.

Project actions to date, that portion Richard Bay is going to go over in a minute.

These are the actions that have been completed to date. We have completed all of the source controls that have been identified and all those are up and running and operating. Those include the cutoff wells, the new reservoirs and whatnot. We've also being extracting the sulfate contaminated water at a rate of about 3,200 gallons per minute from the zone A plume. Again, that's been going into

Kennecott's process system to this date.

We've extracted -- we are currently extracting about 1,500 gallons per minute of the acid plume water and that is six times the natural resource damage minimum. The 400 acre-feet per year requirement that we have, we are extracting that acid plume at a higher rate than that.

And to date, just last year we extracted 98 million pounds of sulfate from the contaminated plume so we're well on our way to cleaning up the aquifer.

We have seen significant reductions of sulfate concentrates in the majority of the plumes, so we are seeing a contraction of the plumes from that initial map that we showed you and we've completed pilot testing on both the zone A and zone B reverse osmosis treatment plant. The District has completed their pilot studies as well as Kennecott has and definitely is a proven technology at this point.

The final remedial design was submitted to the EPA, DEQ and the technical review committee. There was a technical review committee that was established in 1991, I believe.

Is that right, John?

Anyway, the technical review committee was

established, I believe, in 1991, which has a variety of experts on it that include a variety of the regulators that Dr. Nielson had stand up earlier today. It as well had representatives from some of the environmental groups in the area, as well had community leaders surrounding the Kennecott locations as well as some educators and whatnot, and through that this process has gone on with kind of a review step all along the way by working with the technical review committee. So the final remedial design actually went to these groups at the end of 2002.

The design and construction of the zone A RO plant is under way and we anticipate that by the end of this year, 2003, that it will be at about 50-percent capacity. Unfortunately, that water will not be going back to the public for another couple of years as we are kind of phasing up the plant to full scale, but it is water that we are treating with reverse osmosis and it kind of allows Kennecott to do the operations and maintenance and work out any bugs prior to it going out to the public.

With that I'm going to turn it over to Richard.

MR. BAY: I would like to talk about the zone B and the lost use portions of the project. This

is the project proposed by Jordan Valley Water Conservancy District and Kennecott Utah Copper Corporation.

This photograph shows the location of the zone B combined with the lost use treatment plant with -- it's located in West Jordan and the plant would be in this area of land that has been acquired and is owned by Jordan Valley. The land use approvals have already been acquired from West Jordan City in the planning for that plant and the operations and maintenance buildings of the District on the left.

Looking back at this generalized map showing the facilities that are proposed for this project, Paula talked about the zone A, the western facilities. Of those, the treated water from the reverse osmosis plant in zone A will extend northward to about 102nd South and 70th West to a three-million-gallon storage tank that Jordan Valley currently operates in its system.

The zone B facilities shown to address the zone B portion of the plume include seven deep wells known as the zone B wells with two in the center of that plume area on 27th and 3200 West and then a group of five on 13th West street from 114th South to about 8700 South.

The collection pipes are shown in white collecting that deep well water into the plant site that we just looked at on the photograph.

In addition, the lost use portion of the project will be from the shallow aquifer, from these five shallow wells located just west of the Jordan River and also collected to the combined treatment plant building.

The treated water pipeline will extend westward on 78th South to the Jordan aqueduct, which is a large diameter treated water pipeline serving most of the west side of Salt Lake Valley and portions of the east side and the by-product pipeline will extend northward probably along 13th West to about 2900 South.

The distributions of those waters can be made through existing infrastructure that's also shown here in the tan colors and especially the zone A water at high elevation can be delivered in these areas through this pipeline on 5600 West that Jordan Valley operates to West Jordan, South Jordan, Herriman areas and Riverton, and then the Jordan aqueduct will be a main delivery source of zone B waters to the four cities, including Riverton City.

The reverse osmosis process is a membrane

process that uses pressure, water pressurized and driven through thin membranes to separate the ions in water and it results in two streams that Paula talked about, a larger stream that is more pristine and less saline, and a smaller by-product stream that is more saline with more ions known as the by-product or concentrate stream. This is an example of a reverse osmosis groundwater treatment plant in Colorado.

To give you an idea of how the treatment process will work and the quality of the waters that will result, this table shows some of the key parameters that are of note. For example, this treated water or product water column, just as the previously one that Paula referred to, shows the quality of some key parameters in the treated water, specifically the total dissolved solids and overall feel for the solidity of the water is shown as 250 milligrams per liter or parts per million or less. That is Jordan Valley's goal through an enhancement of the treatment process that Jordan Valley is funding and that brings the water to a near pristine quality on par with the Provo River that is currently imported and on par with the groundwater in the southeast and eastern portions of Salt Lake Valley.

Some other parameters of note: Sulfate,

the key ion to be removed from mining practices reduced to 56 parts per million and most of the parameters, especially the metals, to nondetectable.

The by-product stream, that second smaller stream involving about 15 percent of the flow coming into the plant has qualities shown here. And, again, taking a look at some noteworthy parameters, the total dissolved solids or overall solidity would be concentrated to about 8,300 parts per million, the sulfates concentrated to about 3,100 and selenium at 20.

This table also shows the standards that are applicable to these two sets of water qualities, for the treated water are the drinking water standards shown here. And as before, the water being in pristine quality is well within all of those limits.

On the right are permit limits of the discharge permit that has been issued for the zone B water by-product stream with the parameters that are permit related. For example, the 48.5, a very conservative parameter selected for selenium and the limit for TDS at 8,350 and, as you can see, the stream would be well within those permit limits as well as the other Jordan River standards that are shown here.

This next table similarly shows the lost

use qualities. The treated water you can see is very similar. Again, 250 parts per million solidity. There is, again, a sulfate comparable to the zone B deep groundwater and meeting all drinking water standards shown in this column, the by-product also quite similar with a TDS very comparable with, again, a selenium comparable and the concentrated sulfate about half of that in the deep groundwater and, again, well within the standards and the permit limits.

In allocating the water, the consideration is being given to the requirements of the consent decree that requires that the treated water will be produced for the benefit of the public in the affected area and so the proposal splits the deep groundwater in two halves. The zone A will have a specific allocation. The zone B will be more open.

The zone A water will be allocated specifically to the four affected cities that will distribute this to the public in the affected area. Those are West Jordan City, South Jordan City, Riverton City and Herriman City. The allocations of that zone A half of the treated deep groundwater, 3,500 acre-feet per year, are shown in this table at the bottom with the percentage allocations, the volume allocations in acre-feet per year and, in the final

column, flow rate allocations or limits in million gallons per day.

These allocations have been derived through looking at a series of methods that include three important parameters. One is the population that is affected in each of the cities, second is surface area of the city under which the affected area lies and the third is the holding of municipal groundwater rights in the deep aquifer by any of these four cities.

Taking those parameters and looking at them in various ways has resulted in this allocation to the cities. The zone A water allocations are important because in this proposal there is also a noteworthy discount or subsidy in the normal pricing of this water. It's available at very high elevation at the westernmost growing areas of these four cities, at an area where it's quite expensive for Jordan Valley to pump treated water from other sources to those high elevations and there is a formula that will be updated annually resulting in a discount initially in the range of 15 to 20 percent below normal wholesale rates and that gap could easily widen over time as that formula is followed and the water pricing is updated each year.

The other half of the deep groundwater and also that shallow groundwater resulting from the lost use component are allocated and reserved for the four affected cities, but without specific allocation. That water is available for contracting by those four cities so that they can then distribute it for the benefit of the public and it also has a cost efficiency that results from the funds from the trust fund and, as a result, the pricing of zone B water will be at normal wholesale rates.

I would like to comment that the trust fund in conjunction with the funds that will be provided in addition by Kennecott and by the District allow this water to be available to the public at prices that are neutral with respect to current pricing. It results in neither a profit to the District or to the District's member agencies, nor becomes a great burden to the member agencies of Jordan Valley because it allows the pricing of this water to fall within the current range of pricing and it reflects the cost that Jordan Valley would have incurred absent contamination to develop its groundwater rights in this area.

The schedule for the project could slide another month with the extension that Dr. Nielson has

mentioned, but it's anticipated with the public hearing, this second public hearing in September and now with the two in October -- or September and October, sorry, that if the final agreements reach final approval and execution in the fourth quarter of this year, that design and construction would immediately proceed, with construction being completed by the fourth quarter of 2006 and the facilities all in operation in early 2007. Zone A could easily be two years ahead of that, with completion in late 2005.

I would like to talk about how this proposal meets the requirements of the consent decree and exceeds those requirements. First, let me talk about some standards that the consent decree has established. It requires treatment of contaminated water and requires delivery of at least 8,235 acre-feet of municipal quality water per year to a local water purveyor. These are accomplished in this proposal.

This proposal provides a sustainable 40-year supply to the affected municipalities and to the public in the affected area. It provides it at reduced rates and prevents and reduces the spread of contamination, ultimately decreasing the size of the contaminated plume areas.

The project will restore the natural resource for the benefit of the public in the affected area and it replaces the water lost as a result of the membrane treatment process and restores that to a water resource available to the public in both zones A and B.

I would like to now comment on some additional aspects of the proposal that exceed and go beyond those required specifically in the consent decree and that are possible because of the economies of scale, the efficiencies and some of the assets made available by Kennecott and the District to this specific proposal.

There are additional contributions of lands and the water rights for this project, land for the plant sites and for some of the well sites by Kennecott and the District. This proposal provides an integration with the effort that the EPA is overseeing under CERCLA efforts to provide remediation of the acid plume area and diminishing of that plume size.

This project has a water quality enhancement in the treated water that goes beyond that required in the consent decree. The consent decree has a standard of TDS ranging from 500 to 800 parts per million and as we saw, Jordan Valley will fund the

additional process elements required to reduce the TDS, the solidity, to 250 parts per million in all areas of the project. It will use Jordan Valley's existing and future supply as a backup in case there's a pause or difficulties in operating the treatment plants for the benefit of the public and it uses existing treatment infrastructure to back up this project.

One of the other noteworthy aspects of the proposal is the funding that goes beyond that available in the trust fund made available through the consent decree. You will see from this table the irrevocable letter of credit amounts in this column allocated half to zone A and half to zone B with the total that Dr. Nielson mentioned currently at $48.1 million and the lost use portion, which is in a cash amount, currently totaling $13.2 million allocated to the lost use component.

Additional funds are provided by Kennecott and by the District, by Kennecott largely for operation and maintenance costs in zone A over the 40-year period with some additional contributions to the zone B portion totaling $19.3 million and by Jordan Valley additional contributions to fund the process enhancements and to provide funds to

supplement the funds over the 40 years operation in terms of operation and maintenance costs in each component of the project totaling $23.3 million in net present value over the 40 years, bringing the project total to just under a $104 million project. This is noteworthy in enhancing what the trust fund can accomplish in terms of a project to benefit the public.

Some additional benefits are the use of Jordan Valley's storage and distribution facilities. These are in place and are intended to deliver water supplies and this becomes a new supply to meet those purposes to benefit the public in this affected area. There's a commitment by Kennecott to accept and dispose of the zone A and also, if necessary, the zone B concentrate stream using the tailings infrastructure that Kennecott operates for mining purposes.

We think that Jordan Valley's experience and expertise in operating a major water system brings an economy of scale and a benefit to this project and the fact that Jordan Valley is a public agency that requires no return on investment brings to the project the use of the funds without a profit motive or profit component.

With the future growing population in Salt

Lake County we see future membrane treatment processes being important. This will gain experience early on for Jordan Valley and for all providers in the valley on the use of reverse osmosis to treat other waters.

Some of the issues that have been considered and have arisen from comments in the technical review committee and interested groups are shown here.

One of the questions has gone to what are the impacts to the shallow aquifer. This is a shallow zone that generally extends to 140 to 150 feet below the ground surface in the Jordan River Valley area and is separate from the deep principal aquifer.

The five lost use wells will operate probably about 100-feet depth each pumping ground water from this Jordan River shallow aquifer zone. Our modeling has indicated the drawdowns are well within the standards that the state engineer has set as reasonable, but beyond that they don't extend east of the Jordan River, the Jordan River acting as a hydraulic barrier so they can be contained locally.

The principal aquifer, the deep groundwater impacts have been considered. Kennecott has constructed a groundwater digital model and simulated the operation of this project. The

result -- you've probably seen the poster over here, this second poster on my left and what we find is that taking into account the steadily declining groundwater levels currently in the zone A area and the fairly stable groundwater levels in the zone B area, there will be some increment of additional drawdown that seems to be well balanced with the remediation purposes of this proposal which involve capturing, containing and shrinking the plume areas.

Of course, the migration and the movement of the contaminants in the groundwater has been a concern from the beginning and the modeling has enabled us to understand where those areas would move to and expand to without the project. The modeling shows that with the project operating in the deep groundwater zone, the zone A and zone B plumes are diminished dramatically within 40 years. We anticipate that Kennecott and the District will extend operating agreements and operate well beyond the 40 years, but just in the 40 years dramatic reduction is shown.

Concerns have been expressed about discharges of the by-product streams. These will be from the zone A, the zone B and the lost use treatment processes using reverse osmosis that concentrate the

ions in the water in those streams.

Kennecott and the District have performed many studies, have held many discussions with Division of Water Quality and permits have been issued that are well within the limits of the receiving bodies. Kennecott has received a discharge permit under the UPDES system for the zone A discharge into the tailing pipeline and to the Magna impoundment. Jordan Valley has received a discharge permit for the zone B combined with the lost use by-product stream to be discharged northward to the Jordan River at 29th South. Again, the limits are observed and the limits have been very conservatively chosen to be well within the standards set for the Jordan River.

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

MS. NIELSON: At this time I would like to ask if there are any clarifying questions that anyone has regarding the proposal and the information.

First over here and then here and let's -- if you want to stand and if people can hear you and if they have trouble you can come up here and use the mic.

UNIDENTIFIED SPEAKER: This is probably addressed to Paula. Is Kennecott Utah Copper the same

as Kennecott Utah Copper Corporation?

MS. DOUGHTY: Yes.

UNIDENTIFIED SPEAKER: They are the same entity?

MS. DOUGHTY: Yes.

UNIDENTIFIED SPEAKER: I mean, they are not a subsidiary anywhere, it's the same line?

MS. DOUGHTY: No, it's all the same.

MS. NIELSON: Sir.

UNIDENTIFIED SPEAKER: I have a question on the funding that JVWCD is providing. Where is that money coming from? Who supplies that money through JVWCD?

MS. NIELSON: Can everybody hear that question okay? Where does the money that the Jordan Valley Water Conservancy District is providing for this project, where does that come from.

MR. BAY: That money comes from revenues that will be derived annually from the sale of water for operation of maintenance costs. The capital portions will come from reserves generated through revenues and, in part, through bonding.

UNIDENTIFIED SPEAKER: So in layman's terms, is that my water bill that's supplying parts of that money?

MR. BAY: Yes.

UNIDENTIFIED SPEAKER: So my water bill supplies the money for you to give Kennecott to clean up their problem?

MR. BAY: No. The revenues provide ability to develop and deliver sources of water from all sources and that's how Jordan Valley has operated for 50 years and so this falls in the same scheme, the same method of generating capital, the same method of using annual revenues for operation and maintenance expenses, the same level of costs to the customers.

MS. NIELSON: I'll come back to you in a minute, Tom. I think I have two questions here.

UNIDENTIFIED SPEAKER: My concern here, I think this is a beautiful thing. Cleaning up the groundwater, that's beautiful. But I think the ugly part is discharging the water with all the contaminants down the Jordan River out in the marshes around the Great Salt Lake.

Now, the river doesn't carry this discharge to the Great Salt Lake. It disperses it out to thousands of acres of marshland where waterfowl congregate, have to eat and feed and drink in there. Now, I know it's been said that the contaminants, that the parts per million as it's being flushed down the

river are going to equal the standards, but also in the papers that I read, at the end of the day when this is through there's going to be 22,000 tons more of salts and 146 pounds of selenium that is going to be discharged total. This water takes it down, this water evaporates and it's gone, these contaminants are left out there in marshes where they're going to kill the marsh plants and make it a dead zone or it's just going to kill the birds that live there, I don't know.

They want it to go straight to the Great Salt Lake and it seems like the state continually wants to use the Great Salt Lake as a cesspool because nobody drinks the water out there. Well, then it's probably the best thing rather than the marsh where there's living things growing and wildlife there. I'm here with Mr. Jensen. He's the water master for the lower Jordan River and he's talked about another way to get this discharge out to the Great Salt Lake without running it through the marshes. It's never been explored and it should be looked at. However, I think the best way for it would be for Kennecott to pump it into their pond where they evaporate it, have it plastic lined, and after it's evaporated, take it out to the west desert and bury these contaminants at a HazMat site. That's all I have to say.

MS. NIELSON: Thank you.

Again, if we could keep comments right now to questions that you may have about the presentation. I want to be sure that we allow an opportunity for individuals who want to provide comments on the project to be able to come to the podium so we can get your name and your comment and the recorder can fully record them. But right now just if there are clarifying questions about the project.

Sir?

UNIDENTIFIED SPEAKER: It's sort of an extension of his comment, but this is a question. I don't understand why the zone A effluent is going to the Kennecott sedimentation ponds and the zone B effluent is being dumped into the river. Why aren't they both going to the sedimentation pond?

MR. BAY: Extending the zone B by-product stream would include a pump lift of well over 1,000 to 1,200 feet from the center of the valley up into the Oquirrh foothills and the great capital expense with a discharge pipeline extending west. It is just a cost-effectiveness question.

UNIDENTIFIED SPEAKER: 1,200 feet elevation?

MR. BAY: Yes.

UNIDENTIFIED SPEAKER: That's hard to believe.

MS. NIELSON: A question?

MR. BELLCHECK: Thank you. I'm Tom Bellcheck. This slide that we have on the screen now, is that a change from the slide we had in our last presentation or is it exactly the same? The top one where it says southwestern Jordan Valley aquifer.

MR. BAY: I think that's the same.

MR. BELLCHECK: I wanted to point out that I made a comment last time that Jordan Valley is the name of a special service district. This is our aquifer that we're talking about, the Jordan Valley aquifer. I think we've come to the agreement that it's the Salt Lake Valley on the surface and it's the Jordan Valley aquifer on the subsurface. Is that where we're at?

MR. BAY: No.

MR. BELLCHECK: We're not there?

MR. BAY: This is probably a technical point.

MR. BELLCHECK: Very important.

MR. BAY: Most hydrologists refer to Salt Lake Valley, in speaking about hydrology or groundwater systems as Jordan Valley, but it can be

Salt Lake Valley too.

MR. BELLCHECK: Can we change the document so that it says Salt Lake Valley when it refers to the Salt Lake Valley and when it refers to aquifer it refers to the Jordan Valley aquifer?

MS. NIELSON: We'll take note of that and the trustee will do that as we move forward and if the agreements are --

MR. BELLCHECK: I would really appreciate it just for clarification and communication purposes.

MR. DANZY: My name is Rod Danzy. I think I know the one answer. Paula said that 98 million pounds of sulfates had been removed from water in the last year. I assume that went to the Kennecott tailings ponds; is that right?

MS. DOUGHTY: Yes.

MR. DANZY: I've got three little points. The next clarification question is with regards to the national resource degradation trust fund. The words you used, you keep changing them just a little bit. You say the water is going to go back to the affected area and you said the natural resource degradation trust agreement required that it go back to the public water purveyors and then in the next slide you said municipalities and I believe that's something that

Kennecott and Jordan Valley have added since that consent decree and I think that needs to be reviewed again and you know the reasons why. But that's something I noticed in the presentation today. It's kind of weasel wording it just a little bit.

And then the other question that I had is with regard to the --

MS. NIELSON: Do you want me to answer the second question?

MR. DANZY: Yeah.

MS. NIELSON: It is not the intent of the trustee to be changing the terms and I apologize if I've created confusion in the process of doing that, Mr. Danzy. The terms in the consent decree are the terms that the trustee is responsible for applying to a solution. So if you have particular questions or concerns about them, I would suggest you take a look at the consent decree because that's what I'm going to look at when I measure this agreement and if you have questions after that, we've talked about this, I'd be happy to discuss it further with you.

MR. DANZY: The other question that came to my mind is with regard to the trust consent agreement that we're trying to fulfill. That's one of the obligations of this proposal, to fulfill the

consent decree. But I hear various words saying we're going to take care of some CERCLA, and I don't know the exact terms, I read this, and EPA requirements. So we're rolling all of those into one package there to end this Kennecott pollution problem. It's not just the consent decree, there's CERCLA requirements and other EPA requirements. I think you're telling me as trustee we're trying to meet the consent decree in this project and then we're going to roll in CERCLA and EPA requirements. I'm concerned whether we're meeting all of those and I would like to make sure that that's clarified as we go along. Would you clarify that, the requirements we're trying to meet that go beyond your responsibilities as trustee? Thank you.

MS. NIELSON: Thank you. I'll try to do this and if Eva thinks that I need to describe it differently, if there's something I need to add, feel free to let me know. Okay.

The consent decree includes requirements which the natural resource trustee is going to be implementing and it is those requirements that I'm considering as I review the proposals that are out for public comment regarding the treatment of the sulfate contaminated groundwater and the production of that

water as municipal quality drinking water to be provided to citizens in the affected area.

The consent decree also discusses some responsibilities that are not specifically the responsibilities of the trustee. That includes the east side collection system, which Kennecott has implemented, it includes --

MS. DOUGHTY: Just all the source controls.

MS. NIELSON: -- the source control measures that Kennecott has identified. It includes the requirement for Kennecott to produce water at a specific rate, or at least at that specific rate from the acid plume, from that red zone in the core. Those are not responsibilities of the trustee for natural resource damage, but they are responsibilities that have been included within the consent decree and that are also part of what is called the record of decision that was issued in December of 2001 -- 2002 Eva tells me.

There are requirements in the record of decision which was based on remedial investigation and feasibility studies that include cleanup of the Kennecott site and they go beyond the treatment of the sulfate contaminated groundwater. Kennecott is

responsible for those, but the responsibility in that case rests with the EPA and with the Department of Environmental Quality in conjunction with EPA in reviewing and ensuring that Kennecott meets those requirements.

But those are principally our requirements that come out of the consent decree and the record of decision and the authorities that the US Environmental Protection Agency has through a federal law called CERCLA.

The reason that these two projects are combined is because they both deal in large part with groundwater quality and we realized in the early '90s that if we were going to be effective in cleaning up the groundwater in the most efficient and cost-effective manner, we needed to be able to work together and develop those remediation plans for the federal law, CERCLA, and the remediation plans that the trustee would look for to clean up the groundwater. We needed to be able to move forward and plan for those together because we were dealing with the same groundwater aquifer.

So that's why some of these two responsibilities, in a regulatory sense, are combined. It's because of the nature of the contamination,

because there's some overlap. Normally in a CERCLA cleanup what would happen is that you would go through the US EPA requirements, the CERCLA requirements, and you would implement those based on, again, the record of decision and then at the end of the project you would come back and determine whether the natural resource damage concerns had been addressed and if they had not, you would move forward with the natural resource damage claim at that point.

That wouldn't have worked well in this situation because we were dealing with the same aquifer, with the same groundwater, with the same contamination. So we attempted to deal with them at the same time and make sure that the solutions that we were implementing would not have an adverse impact on the other requirements and that we could most effectively and in the shortest period of time and with the least total cost be able to solve the problem of groundwater cleanup.

Any other clarifying questions? Eva, did you want to provide a comment on that before we go to questions?

MS. HOFFMAN: Dianne did a pretty good job of explaining how all this works together, but the way I like to put it is a matter of objectives. The EPA

was interested in getting the contaminated water out of the ground, out of the aquifer before it could spread any further. We were interested in removing it and containing it so that it didn't contaminate more of the valley.

Now, what happened to the water afterwards was not so much of our concern, but this is where the trustee, because the natural resource was damaged, and they were interested in if some good should come of the water that we withdraw, that then they stepped in and said, hey, maybe we ought to be thinking about this together, taking care of EPA's objectives, which is just to get it out of the ground and to keep it from spreading, to then actually being able to do something to make it easier for the municipalities to use the water afterwards. So it made logical sense to combine forces to see if we could come up with one plan that did both things.

So in some cases the spacing of these wells was done for the purposes of the EPA, but the treatment may be done for the trustee. So that's kind of how it fits together. It's just two different objectives we're trying to achieve and put the two pieces together.

MS. NIELSON: Thank you, Eva.

MR. HINKLEY: Dave Hinkley, and we're one of the few farmers left in the northwest quadrant of this county and I'm wondering why the Jordan River was chosen and what other alternatives were explored before the Jordan water was chosen to be the site of the garbage.

We've got garbage dumps all over the west side, some of them being reclaimed, some of them being built, and for this to be dumped just before the North Point Canal water is drawn out and that canal water irrigates approximately 8,000 acres and are we spreading this or are we containing it? And that -- what other alternatives were explored? Thank you.

MR. BAY: Other alternatives considered were pumping to Kennecott's tailings pipeline. That was possible for the zone B deep groundwater, but not for the lost use shallow groundwater because of organics content. Discharged to the Great Salt Lake was considered.

We considered that -- we came up with the Jordan River in our evaluations because these ions would arrive in the Jordan River in a distributed fashion without this project through the natural flow of the groundwater systems as the deep and shallow groundwaters all drained to the Jordan River and also

because it could be done well within conservative standards accepted for the Jordan River.

MR. HINKLEY: How does that change the salt content of the Jordan River, it's content today, which it flows a lot of salt anyway?

MR. BAY: Well, it concentrates at a single point a discharge which otherwise would arrive in the Jordan River in a distributed fashion as the groundwater systems drain to the Jordan River.

MR. HINKLEY: Why 29th South instead of below 21st South? Why not 20th South?

MR. BAY: Do you want me to go ahead and answer these?

MS. NIELSON: Let me suggest this, Richard. If you can provide a short answer now -- I understand that this is an issue for which there are questions and probably even beyond the questioning you've asked. I would like to suggest that this might be a better time to receive the public comments this evening. Richard will be here after the hearing, as will other members of the technical review committee, and can talk with you further then and provide answers, but I want to make sure, also, that we have sufficient time for comment tonight. But I do want to make sure we get an answer to your questions.

MR. HINKLEY: Thank you.

MR. BAY: Maybe just for sufficient flow rate in the Jordan River.

MR. HINKLEY: See, that's before the North Point Canal comes out of the Jordan River so you're cutting that flow rate in half basically by going down the serp and down the Jordan. So you want to spread it down the serp and down the Jordan River.

MS. NIELSON: Let me suggest, just to make sure we capture that fully, are you already signed up for comment tonight?

MR. HINKLEY: No.

MS. NIELSON: Well, if you would like to, remind me before we conclude the comment period tonight. If you want to make those comments on the record, I'll make sure we have an opportunity to fully capture them with a microphone.

Are there any other clarifying questions before we go forward?

MS. DEFRATIS: I'm Lynn Defratis, Friends of Great Salt Lake and probably Richard or maybe even John Cherry, you had made a statement about the principal impacts of the deep water on the deep water aquifer when you were talking about zone A and I was wondering, you mentioned some models that Kennecott

has used to determine, I guess, drawdown over an extended period of time. Richard, you made mention of some increment of drawdown on the deep water aquifer. What is some increment of drawdown, not having a relative understanding of what kind of drawdown is currently happening, and what kind of drawdown could we expect to happen? What does that mean?

MR. CHERRY: Let me point to this map here. This drawing that we have right here, this is our drawdown map based on an odd flow model. It came out of the USGS model. USGS looked at this. But what this map represents is 45 years from now this shows that the water level will be lower than where it is today based on the current pumping that's going on right now in the valley as well as the remediation program.

So, for example, in the year 2047, as shown down here at this line right here, we would expect the aquifer to be 10 feet lower than it is today, 45 years from now. So if you want to take the time to look through this and I would be happy, after we're done here, to answer any specific questions. Also, this is a good map for people to look at. The private well owners, if you have concerns about that, look at where your well falls in relationship to this

and you should be able to see, at least according to the model, what we would predict those levels to be at in the future.

UNIDENTIFIED SPEAKER: What's the year on that model?

MR. CHERRY: This shows projections to 2047.

UNIDENTIFIED SPEAKER: What is the year the model was created?

MR. CHERRY: It's based on this year.

UNIDENTIFIED SPEAKER: 2003?

MR. CHERRY: 2002-2003. 2002 data.

UNIDENTIFIED SPEAKER: 2002, thank you.

MS. NIELSON: Thank you, John.

Did you have a question, sir?

MR. HARTVIGSEN: David Hartvigsen. I have a quick question about the water rights that are going to be used. Richard indicated that the water rights, or at least some, were coming from Kennecott and one of the slides said that they were Jordan Valley's water rights and I would just like to have that clarified, where they are coming from, and I would like to know if there is a listing of the water rights that will be used in some of the documentation somewhere.

MR. BAY: Yes. The project proposal that's available on DEQ's Web site has a section talking about the water rights and it lists those by water right number. Generally, Kennecott will provide all the water rights for the deep groundwater in zone A, the 3,500 acre-feet. The District will provide all of the water rights under municipal groundwater rights in the deep principal aquifer for zone B and the District will provide the water rights for lost use in the shallow aquifer and those are made available through some irrigation shares in the Utah and Salt Lake canal company and through an improved change application that the District holds.

UNIDENTIFIED SPEAKER: What were those totals again? 3,500 zone A, 3,500 zone B, and how much for lost.

MR. BAY: Between 1,235 and 2,300 acre-feet per year for lost use.

UNIDENTIFIED SPEAKER: 1,200 to 3,500.

MR. BAY: 1,200 to 2,300.

UNIDENTIFIED SPEAKER: Okay.

MS. NIELSON: Thank you, Richard.

I'm not seeing any other questions. I'd like to suggest that --

UNIDENTIFIED SPEAKER: I have one

question. My question is, being that we pooled this project into a lot of governing agencies, is there any regulations that have been put in place to oversee and to also notify all of the new growth that's happening out in this area in zone A and zone B? It's an area that is having a lot of commercial as well as residential growth in it and as we talk about the lands being contaminated and not wanting to spread that, what type of protection is in place right now so that this doesn't expand. In 40 years it all sounds like it might be great, but in the real time right now what's in place and what's happening so that this doesn't progress anymore?

MS. NIELSON: Okay. Let me clarify that the contamination we're talking about here is contamination to the groundwater, to subsurface water. There is not contamination on the surface of the land. The water rights, I'm understanding from Richard's discussion and depending on how water rights and what water rights may go or, perhaps, don't go with new development, but the water rights we're talking about in terms of the extraction of the water in zone B are basically Jordan Valley Water Conservancy District rights and the rights in zone A are Kennecott water rights.

Now, I don't know, John, whether it's easy to bring up the map and basically talk about where Kennecott's lands are. There's some portion of this area that is not subject to the development. John, can you define roughly what that is?

MR. CHERRY: Yeah. If we look at the map here, this area that's hatched in here, this is all Kennecott land and we control the development in those areas. Project Sunrise -- or project Daybreak is down here in this area and they're working with the District specifically on water production issues down there.

MS. NIELSON: Now, in the past there was some contamination along Bingham Creek that I think has been fully cleaned up, remediated at this point and so there is no surface contamination remaining.

Jason in the back and then Tom. One question and then we're going to go to Tom.

MR. GRONWOLD: My name is Jason Gronwold. One question I have is what happens if during the cleanup project, the groundwater, drinking water standards change for the contaminants that you're attempting to clean and then the second question I have is for the long-term maintenance of the cleanup project itself. Is it anticipated that there is a

point in time at which the cleanup will be done and no longer will need to be maintained or is there a longer term concern over whether or not the contaminants would continue to leach and contaminate into the aquifer?

MS. NIELSON: Okay. I'm going to take a crack at the first one and let Paula or John do the second.

Regarding the first proposal on production and municipal quality water, that's defined based on the drinking water standards right now. There are not specific standards, tables of standards in the consent decree. It is municipal quality drinking water. So if the drinking water standards change, it will be the responsibility of Kennecott and the District to produce drinking water to meet that new standard. The same goes for any discharge permits, the MPDS or UPDES discharge permits. If the standard changes in terms of discharge it will be the responsibility of Kennecott or the District to be able to meet that standard.

With regard to cleanup and the mechanisms in place now to capture contamination off the tailing --

MS. DOUGHTY: Okay. Was that what your

question was off our tailings impoundment or the sources of the contamination that we're seeing?

MR. GRONWOLD: I guess I'm wondering if those tailings will eventually filter into the aquifer as well.

MS. DOUGHTY: The tailings that some of this water is going to down to the north? No, there is an artesian effect there at the tailings impound. We've been depositing tailings in that area since the turn of the last century and there are groundwater permits that are regulated, there's a series of monitoring that goes on around the perimeter of the impoundment as well as all the waters that go to the impoundment and that will continue long after Kennecott operations exist.

But for purposes of the location up here, all those sources have been removed. That's all the source controls that were part of the cleanup.

MS. NIELSON: Tom, did you have a final question?

MR. GRONWOLD: I'm ready to go to public comment, but I thought there was a reasonable question here about the surface contamination and there is some surface contamination that's currently being moved. It's approximately 2.2 million cubic yards. It's

important to state that, I suppose.

Now, the lady also asked the question is there any oversight on the cleanup of the soil and I suppose someone at DEQ is watching that carefully to make sure the 2.2 million cubic yards aren't moved and there is the groundwater.

Now, the question is, with regard to oversight, is there oversight in the process as to state unequivocally where the water goes once it gets into the distribution system and I question if there is any oversight because I read in the document -- which is hard to get through, but I'm working on it -- I see that there are two parties to be on the oversight and part of the question would be a clarifying question is why is there not a public -- a member of the public on the oversight committee? It would appear there is not.

MS. NIELSON: That was a lot more than one question.

Regarding the regulatory responsibilities, the Development of Environmental Quality and the EPA have the responsibility. EPA because the US EPA is the regulatory authority for CERCLA. Department of Environmental Quality because we are the entity in the state that has responsibility both for the Clean Water

Act in terms of surface impacts, but especially for the state groundwater protection law.

MR. GRONWOLD: So are you saying it's the US EPA then?

MS. NIELSON: No. It's the US EPA for the CERCLA cleanup responsibility. They are the principal entity responsible for all of the cleanup work associated with CERCLA and DEQ works with them to make sure that that work is constructed, oversighted and monitored properly. But the groundwater contamination is regulated under a law that is a state law. It is not a federal law. That's the Utah Groundwater Protection Act.

And so regarding the groundwater contamination, it is the State of Utah and the Department of Environmental Quality, division of water quality that has the authority for the groundwater cleanup and staff from that division that have reviewed these documents would be responsible for the monitoring and the assurance of the cleanup and the other requirements as part of the plan, if it's approved. They are also the division that's responsible for the surface discharges under permit, the UPDS or UPDS permits.

UNIDENTIFIED SPEAKER: So a clarifying

question to my clarifying question. The EPA is supervising the 2.2 million cubic yards under CERCLA or is it a private act? Who is supervising and who makes sure that 2.2 million cubic yards of soil that are contaminated with sulfate, arsenic and lead are moved out of the area that the homes are going to be built on top of the water?

MS. NIELSON: Eva?

MS. HOFFMAN: We did an initial cleanup, supervised Kennecott'S initial cleanup back in 1994 of this area that you're talking about and that was at the time when Kennecott thought that the land would be enough real land. Since then Kennecott has wanted to change the land use and they have submitted to us a different operation and maintenance plan and are further cleaning up the area and this is done under an operation and maintenance plan that has been submitted and approved by EPA and is also, I believe, submitted to DEQ as well. So your answer is that I guess I'm responsible.

UNIDENTIFIED SPEAKER: I've got one more, just a short clarifying question, I apologize. It comes back to what Tom's been talking about and what Eva's been talking about.

Paula made the statement that prior to

1977 there was no requirements on water being discharged from mining operations, 1965 when they built the reservoirs and 1936. I question that and I'm concerned that if there aren't some regulatory requirements, that we can revert back to that today. In other words, the big reservoir leaked. I think in 1965 there were requirements, common sense if nothing else, and I am concerned that we do need more oversight with regard to that. In other words, DEQ and the agencies were there but we do have a big plume as a result of something happening and I'm concerned about it.

MS. NIELSON: And then to clarify, the environmental laws that we're talking about right now, CERCLA, the Clean Water Act, Utah's Groundwater Protection Program are all laws that are in place now and to the best of my understanding, unless Don tells me wrong, were not in place prior to 1977.

And I would like to just take a moment before I open the hearing to introduce Don Ostler. Don is the division director for the Division of Water Quality for DEQ.

Okay. I want to take an opportunity at this point to open the hearing and again to remind you that what we will do -- what I will do is provide each

speaker up to five minutes to speak. I will interrupt you when we get to five minutes so that everybody has an opportunity to talk and if you want to say something additionally, I'm going to ask you if you would please be seated at that time and then at the end of the list of individuals who have indicated they would like to provide comments, I'll be happy to allow you additional time to make further comments.

I realize that there may be some interests with individuals providing some of their minutes and I would ask that instead of doing that, that we please respect the individuals who have signed up take up to the five minutes right now and then I'll provide extra time at the end if you have further comments that you want to make.

Let me just read a statement here so we've got the correct information right up front on the beginning of the hearing.

I would like to call this hearing to order on September 25, 2003. The hearing was advertised in the Salt Lake Tribune and the Deseret News on Tuesday, September 2, 2003, and Sunday, September 7, 2003. Since this is a public hearing we will have with us a court reporter from Depomax to transcribe this proceeding. The transcript from this hearing, once

prepared, will be available for review at the Department of Environmental Equally located at 168 North 1950 West in Salt Lake City. That's the location where you are here. Those wishing to review the transcript are welcome to contact the DEQ records coordinator at (801) 536-4121 to arrange a time to review the document. A copy of the transcript will also be placed in the information repository located in the West Jordan City recorder's office at 8000 South Redwood Road in West Jordan and the transcript will also be made available on the DEQ Web site www dot DEQ dot Utah dot gov by a link under the header issues to watch.

The comments raised today will not be addressed directly today as you proceed with public comment. As state trustee I will address these comments at the end of the comment period, provide a comment response document which will also be posted on the DEQ Web site and hard copies will be available at the Utah Department of Environmental Quality and at the West Jordan City recorder's office. This document will be drafted at the end of the public comment period and will provide the response from the trustee to the official comments that I receive during these public hearings by e-mail, by fax and in written

correspondence by midnight on November 1st of 2003.

I would like to begin this hearing first by asking if there are elected officials in the audience who would like an opportunity to speak and provide them a first opportunity. First, are there any local elected officials, any state elected officials? Or any federal elected officials? Okay. Seeing none, I'm going to proceed now on the comment request record in the order that people signed in and if I incorrectly pronounce your name it's because my eyes aren't reading your signature as you intended and so please don't hesitate to correct me.

I think the first individual is GM -- is it Ziter.

MR. ZOLER: Zoler.

MS. NIELSON: Mr. Zoler.

MR. ZOLER: And I've already sang my song, so I guess I'll waive.

MS. NIELSON: Okay. Is there anything further that you would like to share with us?

MR. ZOLER: No, I pretty well said it in that earlier comment.

MS. NIELSON: We'll go on to the next individual then. And let me just ask as you come up if you would speak from the podium and make sure that

the microphone is kind of close so that we can totally hear your comments in the back of the room because sometimes the acoustics in here are a little bit difficult.

The second person I think is Lynn Jensen.

MR. JENSEN: We can't move the podium over here, can we?

MS. NIELSON: I can give you this and I'll let you speak right into that if that would make it easier.

H19

MR. JENSEN: My name is Lynn Jensen. I'm the lower Jordan River water commissioner.

MS. NIELSON: Excuse me, Mr. Jensen. You need to hold that by your mouth so the recorder can fully hear you.

MR. JENSEN: My name is Lynn Jensen. I'm the lower Jordan River water commissioner. I take care of the water from 21st South down into the great Salt Lake through all the Dutch bluffs to Farmington Bay and to the water users, irrigators and everybody that uses the water. My job is to see that the water gets distributed and it's our job when there isn't hardly any water like when the drought's down, to see there's plenty of water.

I would like to ask just one question here

before you continue and I would like to talk to the young lady from Kennecott. You take water into Kennecott from 90th South in the Jordan River. It's the north Jordan canal; is that true?

MS. DOUGHTY: I'm not exactly sure.

MS. NIELSON: I think you're going to have to ask the question and if you're going to respond we need to put you on the microphone.

MS. DOUGHTY: Okay.

MR. JENSEN: You don't know if that's right or not?

MS. DOUGHTY: From 90th south and the Jordan River, I believe that's true.

MR. JENSEN: It's the north Jordan and it gravity feeds to Kennecott and they use the water at Kennecott, right?

MS. DOUGHTY: Yes.

H19-1 MR. JENSEN: This gentleman said they have to lift water 1,200 feet to get to Kennecott. The tailings aren't that high from ground zero out there, is it? Anyway, that was the question.

H19-2 I'm all for this project. The only thing I don't like is putting it in the lower Jordan. No matter how you look at it, you're adding salt. If it goes out, if you flush it down the river with a big

H19-1 If the reverse osmosis concentrate were pumped from the Zone B treatment plant uphill to the west to Kennecott's tailings pipeline near the Oquirrh Mountains, JVVCD has indicated that the pump lift would be 1,000 to 1,200 feet. See discussion in the text of this public meeting, page 40 of this transcript. If a concentrate pipeline is routed north from the Zone B treatment plant and west to the North Tailings Impoundment, at the north end of the valley, the pump lift is much less.

H19-2 See the Response to Common Comment No. 8.

storm that's fine, but in these wetlands you can't flush them. It's serious. Just like Morton Salt, they put the water in, it evaporates and leaves the salt and then they harvest it. That's what we've got in these wetlands. You can't get rid of it. You can't flush it. There ain't enough water to flush it. If you flushed it from one headgate across and link together it would just cut a channel, which it does, and leaves all the rest of the area undisturbed. Over 40 years you're talking, my gosh, you ain't going to have any wetlands out there.

I guess it looks like everything is in cement here, already put in cement and you can't change it. But I had a lot of questions, but five minutes, I guess my time is about up. Thank you.

MS. NIELSON: I know we said that I wasn't going to provide comment, but let me just simply provide a clarification. Everything is not cast in cement. The reason that we're holding a public comment hearing is so that I can receive your comments and your recommendations, understand what the concerns are and what the opinions are so that I can make a final decision and it is possible and within the authority of the trustee to accept the entire proposal, to ask for revisions and changes to it based

on comment. This is not a hearing on the decision that has already been made and I very much appreciate your comments. Thank you.

The next name I think is -- it looks like maybe JW -- is it Athen?

MR. ATHENS: Athens, excuse me. I think anybody can hear me.

MS. NIELSON: The problem is the recorder can't and she's the most important person that needs to hear you because she's going to capture your comments.

H20 MR. ATHENS: My name is Jack Athens and I'm president of one of the 10 or 12 duck clubs around the south end of the Salt Lake and our major concern is what happens to the stuff that comes out of this

H20-1 treatment plant. It seems to me it -- as has already been mentioned, that saying you have to elevate the effluent 1,200 feet to get to the tailing ponds just doesn't make sense. But be that as it may, our major concern is the long-term effects of salts, heavy metals, whatnot that will be deposited in the marshes of the Great Salt Lake.

H20-2 I'm on very shaky ground here, but my recollection is that the salt in the sea has had this problem over many years. They have selenium

H20-1 See the response to H19-1, page 67 of this transcript.

H20-2 High salinity, not selenium concentrations, limits the aquatic life in the Great Salt Lake to brine shrimp. The wetlands of the Great Salt Lake host a variety of waterfowl. Utah has established a selenium standard for fresh water rivers and lakes in the state. The Division of Water Quality

approaching terribly toxic levels and wildlife can't exist there anymore.

In addition, I would like to compliment the various speakers on the quality of their presentations. They've been informative and enlightening and brief. Thanks.

MS. NIELSON: Thank you very much.

Lynn Defratis and she will be followed by I think Wayne Lantz.

H21 MS. DEFRATIS: Thank you. My name is Lynn Defratis. I'm the president of Friends of Great Salt Lake. Friends is a nonprofit organization that works on behalf of the preservation and protection of the Great Salt Lake ecosystem through education, research and advocacy.

I would like to thank the Department of Environmental Quality for extending the commenting deadline to November 1st on an extremely complex issue and one that is very, very important as evidenced by the turnout here today.

From a Friends of Great Salt Lake perspective, we certainly try to be mindful of the fact that Great Salt Lake is a terminal lake. It is the recipient of everything that comes downstream and although there are ongoing studies about the chemistry

and the recently established Great Salt Lake Water Quality Standards Steering Committee are working to establish a numeric selenium standard for the Great Salt Lake. See also the Response to Common Comment No. 9.

of the lake and the physics of the lake, the depth of the field of research about the lake is still quite shallow, if you will.

H21-1 Our concern from a watershed perspective with that relationship of Great Salt Lake receiving everything is the fact that as we look at this project, and specifically with the zone B plant and I guess the selection because of cost to send the contaminants into the Jordan River, it's disappointing that given the fact that we are able to do so many incredible things technologically, that for some reason our shortsightedness in this instance is embarrassing and I would like to encourage or emphasize to the Department that I believe a provision or a revision for the project to more strongly consider channeling the contaminants from zone B back into ultimately the tailings repository is a much more prudent long-term decision, I believe.

Again, I want to thank you for extending the comment period and thank you for this opportunity to speak.

MS. NIELSON: Thank you very much.

Mr. Lantz.

H22 MR. LANTZ: My name is Wayne Lantz, L-a-n-t-z. I'm representing LANCE Consulting Group,

H21-1 As indicated in the Response to Common Comment No. 8, the plan to discharge reverse osmosis (RO) concentrates to the Jordan River has been withdrawn. Discharge of (RO) concentrates from the Zone B aquifer to the tailings impoundment is a prudent long term decision. As noted in Response to Common Comment No. 7, concentrates from any RO treatment of the shallow aquifer cannot be deposited in the tailings impoundment.

LC, and that's spelled L-A-N-C-E.

I want to address a couple of things and

H22-1 the first thing I would like to address is the irrevocable letter of credit, or the ILC as it's called. I have some concerns on that. In the consent decree it says it was originally in 1995 at 28 million, now up to 48 million, and my concern is that we're breaking that ILC into two separate ILCs and we're changing the terms of consent decree, one, by creating two ILCs and the one is we're changing how we're getting paid the interest on that ILC. If we take a look at it -- and the other thing is the time. It's 30 days. As soon as this thing is signed, within 30 days we've got two separate ILCs.

One of the things that concerns me is, according to the agreement, that's the agreement among the trustee for natural resource for the State of Utah, Jordan Valley Water Conservancy District and Kennecott Utah Copper Corporation, and that is we're going from an agreement that requires Kennecott to pay -- or the ILC to accrue interest at seven percent to go to a fund, the PTIF fund, which is the Public Treasurers Investment Fund, which right now is giving one point -- let's see, what it is -- 1.5 percent annually. It doesn't make sense to me.

H22-1 See the Response to Common Comment No. 12 regarding the requirements of the Consent Decree with respect to the Trust Fund. In accordance with the Consent Decree, Kennecott can convert the ILC to cash, creating a cash trust fund without any required interest rate. The Consent Decree does not prohibit the establishment of the two Irrevocable Letters of Credit (ILCs). Nor does the Consent Decree prohibit establishment of the proposed interest rate for the ILCs.

Let me read a letter from the Utah State Treasurer, Ed Alter, and it's the Utah Public Treasurers Investment Fund quarterly update dated June 30, 2003. It says, "The fed lowered the fed funds target an additional 25 basis points to one percent on June 25, 2003. The June PTIF does not fully reflect this change in rate but as portfolio turnover and prices in the next 90 days, we will see the impact of lower interest rates on the rate paid by the PTIF. We do not anticipate an upward movement of interest rates in the future."

H22-2

So basically we're taking a seven-percent yield, which I think if you have an investment seven percent is a pretty good, safe return, and we're taking it down to one percent. I don't understand that. Even if we take a look at it and say, well, it could improve, we would have to go back over 10 years because this is going to be an average based from June to July or July to June of the previous year, we have to go back 10 years even to get to the rates we're getting right now and that's in the public report. So like I said, that does not make sense. Seven percent sounds pretty good.

So if we did that, based on the last year's yield, we would be getting 1.9 percent on that

H22-2 The 7% interest rate has been an important tool , increasing the value of the trust and our ability to cleanup the groundwater. The Trust was well designed to meet these needs. Now it is time to put the money to work. Now the measure is not the interest rate but the rate of cleanup. The money and the interest and the additional money commited for the Joint Prosposal needs to be put to work to clean the aquifer and provide municipal-quality drinking water.

The Replacement ILC's do contain a 10% cap. The 3-Party Agreement has been modified to provide that if the interest rate goes above 10% and the Bank does not adjust the full increase, Kennecott shall obtain additional ILC's or provide cash for the difference. See paragraph II.B. of the 3-Party Agreement.

irrevocable letter of credit. That may not make any difference anyway. According to the agreement that's proposed, it can't go over 10 percent in the irrevocable letter of credit, the IRC can't be increased more than 10 percent in a year. So even with the Public Treasurers Investment Fund, even if it went up to 12 it wouldn't make any difference, we'd still be stuck at 10.

H22-3

One thing that does make -- or concerns me a little bit also is the cost overruns on any of these projects would be borne by Jordan Valley Water Conservancy District or, in essence, it would be borne by the people who receive the water from Jordan Valley, from Jordan Valley water and because they can't go back, according to this agreement, to the trust fund to get any more money.

So by separating these two ILCs for zone A for Kennecott, zone B for Jordan Valley, rather than keeping them together, because in the document it says that the trustee can commingle the funds for investment purposes as long as they keep track of it, why would you want to separate it when you can keep track of it anyway at a higher rate and anticipate or if you have a cost overrun not be able to gather it because Kennecott has used up their portion or,

H22-3 The amount of money in the trust fund is fixed by the Consent Decree. JVWCD has performed engineering studies to provide a reasonable level of confidence in the cost estimates. The remaining risk of price variability resulting from bidding conditions lies within the normal range of risk that JVWCD incurs in any infrastructure or water supply project. See also the Response to Common Comment No. 12.

according to the agreement, as long as they provide the water, there's $48 million which we really don't have to spend, plus interest, because it can be radically reduced as long as they can provide the water.

So essentially Kennecott is getting off by paying $9 million cash to construct this and as long as they give us water, that's it, and it affects a lot of water right owners and it's just not fair. I don't think Kennecott should get a reduction in anything. They're the one that caused the contamination and the pollution and they should not receive any reduction on the ILC. In fact, it should be called due and the $48 million put in there and be used for what needs to be done and possibly given to Jordan Valley, a reduction to Jordan Valley water users in their rates and not by increasing the rates.

MS. NIELSON: Mr. Lantz, could you bring your comments to a conclusion?

MR. LANTZ: I'm doing that right now. Thank you.

H22-4 So anyway, they shouldn't be able to get any of that money back because they're the ones that caused the contamination in the first place.

The only other thing that I see, that the

H22-4 See the Response to Common Comment No. 12.

H22-5

trustee is going to keep the interest for oversight, which is in the agreement also, management oversight, and I'm assuming that would go to the State, not the trustee personally, although she would probably like it, it would go to the State. So the interest isn't even being used for the construction project.

The only other thing I would suggest, I mean, I've looked through all of the documents and there's a bunch and we've tried to notify the people that were affected in the area and we had a meeting last night and these are all the records that I got back from people who couldn't be delivered to and I used the water rights division's database to mail

H22-6

these out and this is what I got and so I would ask that the time be extended an additional 30 days beyond the November 1st date and, in addition, provide another public hearing, not just two informational hearings. Thank you.

MS. NIELSON: Thank you very much, Mr. Lantz, and let me please clarify for the record that none of the money goes to the trustee personally and the trustee is responsible and an appointment by the State of Utah and the money is used on the project and a small portion of it to pay for the State employee staff to help with monitoring the program.

H22-5 The funding does not go to the Trustee personally. The Trustee is an appointed position working for the State of Utah. As indicated in the Consent Decree and the 3-Party Agreement implementing the Joint Proposal, the funding is provided to enable the Department of Environmental Quality to conduct oversight of the operations and maintenance of the project.

H22-6 See the Response to Common Comment No. 1.

The next speaker is David Hartvigsen to be followed by Debbie Garner.

H23 MR. HARTVIGSEN: I'm David Hartvigsen of the law firm of Smith Hartvigsen representing the Salt Lake Suburban Sanitary District Number one. The District is part owner of the central valley water treatment plant. We appreciate the opportunity to make comments and to learn more about the project.

H23-1 The main concern that we would like to express here is that the UPDES permit that was discussed appears to be based on the flows in the Jordan River as they stand now, but there is a very real possibility that much of the flows not only from the central valley treatment plant but the south valley treatment plant upstream won't be available to help dilute some of this brine water.

The reuse laws in Utah are such that those water discharges could be terminated -- discharges into the Jordan River could be terminated at any time pursuant to the reuse statute and other rights and we think that that ought to be factored into the process and appropriate adjustments made as necessary. Thank you.

MS. NIELSON: Thank you very much. Debbie Garner to be followed by Bruce -- I think it's Wadell.

H23-1 As noted in the Response to Common Comment No. 8, there will be no discharge of Reverse Osmosis concentrates to the Jordan River under the revised proposal.

H24
H24-1

MS. GARNER: Thank you for this time and I do want to say that I do appreciate the project. Our well was contaminated in 1986, so I think 17 years, it's about time it happens. I am -- to say appalled

H24-2

is not really adequate, first of all, that my funds in paying a water bill that when I moved to the area was not even part of our financial plan, to have that resell of a water bill in acreage be the payment used to help Kennecott clean up their failures I think is very appalling and I'm very against that.

H24-3

One thing that I haven't heard addressed in these hearings, and it's the first one I've been to, is of any of these funds that have been set aside to take care of this project, I've yet to hear that any of these funds are going to be delivered to any of us that have had substantial losses due to the asset that we lost in our homes, the complete tearing out of basements, the restructure of foundations that had to be taken care of, the loss of use of a well and the loss of possibly a farmer who may have contamination down the road.

I have yet to hear any type of compensation that will come to us and I really feel it is owed to us. Many of us couldn't afford the things that needed to be done. It rendered our properties

H24-1 See the Response to Common Comment No. 3.

H24-2 See the Response to Common Comment No. 12 for information on how the Joint Proposal is being funded.

H24-3 Several residents in Riverton commented on basement flooding that occurred along 11800 South in the early 1980's allegedly due to leakage from Kennecott's evaporation ponds. The State has obtained a report written by the Utah Geological Survey, dated April 1985, that investigated the source of shallow groundwater that flooded the basements of homes along 11800 South in South Jordan and Riverton. The report notes that precipitation during 1983 and 1984 was nearly double the ten-year average. This resulted in increased stream flow, both in terms of quantity and duration, and an increase in water levels in lakes, ponds, and water-retention structures. Infiltration of this excess surface water caused a rise in the water table in the shallow, unconfined aquifer. Reports of basement flooding and septic tank failures from high groundwater increased throughout northern Utah during this wet cycle. The report concludes, "Direct precipitation, stream flow, unlined canals, flood irrigation, septic tank absorption fields, and upward leakage from the deep unconfined aquifer all probably supply water to the shallow unconfined aquifer"…resulting in the flooded basements. Although it is noted that it is possible that leakage from Kennecott evaporation ponds contributed, no direct evidence was found during the study.

pretty much useless in the fact that we had basements and couldn't develop them, couldn't resell -- and I would like that addressed by the trustee too.

I think Kennecott has a great obligation to us. In meetings that we held with Kennecott back in 1986 we were pretty arrogantly treated. One suggestion from Kennecott personnel was that we should build a slide and have an indoor pool. Another one told us that they retain a lawyer full time and they would outlive and outdo us, so knock ourselves out, and I would like to see some compensation happen because of that.

There are many of us that went without and did without for a long time because of this damage, not to mention all of our landscaping that we've redone over the years by the contamination of the water into our grounds.

MS. NIELSON: Thank you. Bruce Wadell followed by I think Mr. Bowles.

H25 MR. WADELL: Thank you. I'm with the US Fish and Wildlife Service and I work on environmental contamination issues. What I have pretty much here is a very short prepared statement and we will be providing written statements at the end of comment period after we were able to get responses back on our

The Trustee's responsibility under the Consent Decree is to restore, replace, or acquire the equivalent of the resource (groundwater) for the benefit of the public in the Affected Area. The Joint Proposal does this by providing municipal-quality drinking water to the public. However, the Consent Decree does not resolve individual claims and does not enable the Trustee to address those claims. Those authorities remain with the individual well or property owner. For additional information, see the Response to Common Comment No. 10.

comments from the first discharge permit comment period and then as we learned more about the project and things.

H25-1 The Service certainly supports cleaning up the groundwater. We think that it's great to recover the beneficial uses there. One of the attendees, I think he's left, over here, asked about what are the

H25-2 other alternatives that were considered as far as the Jordan River being the terminus, so to speak, for the salts and the other contaminants and I suspect there's more in the audience that would like to hear the answer to that than just that one individual. So I hope that can be distributed somehow.

H25-3 The Service understands that a discharge permit has been issued and the Service also believes that cleanup should not result in damage to other additional uses. Wetlands, additional uses surrounding the Great Salt Lake are protected with numeric criteria under class 3(d) of the state water quality standards. The Service, in preparing comments on your discharge permit, evaluated the pathway of this water at various locations through the surplus canal to where water would flow into Farmington Bay. Based on water conductivity readings, it appeared that the amount of salt in the water became up to two to

H25-1 See the Response to Common Comment No. 3.

H25-2 There is no discharge of reverse osmosis treatment concentrates to the Jordan River uder the revised proposal. See the Response to Common Comment No. 6 regarding additional options provided in the Joint Proposal.

H25-3 Jordan Valley Water Conservancy District has withdrawn the discharge permit. See the Response to Common Comment No. 8 for additional information.

two and a half times more concentrated as the water traveled down gradient through the wetlands. So I guess the issue on that one is where is the appropriate place to be measuring the water quality of the project, at the pipe or where other additional uses might be impacted by it?

H25-4

I think the issue on that primarily is that it appears that through the conservatives we've heard this evening, use of the standards, it looks like the water quality will be very close to what the water quality standards are and there's very little room for mistake in that.

Let me get back to my prepared comments here. So unless monitoring of the affected wetlands or the likely affected wetlands and wildlife is performed, we may never have these adverse impacts documented or discovered. The Service believes that there has been inadequate evaluation and consideration of the current wetland conditions as it occurred in the discharge permit.

The Service, myself, we do not want to overstate what the potential problems are, but we don't wish to understate what the potential problems are either. The Service believes that implementing this part of the proposed project could impair the

H25-4 Water quality discharge permit limits are measured at the point of discharge but are established in order to maintain water quality beyond the point of discharge. In this case, there will be no discharge of treatment concentrates to the Jordan River, as indicated in the Response to Common Comment No. 8. DEQ Division of Water Quality is initiating studies to establish a numeric selenium standard for the Great Salt Lake, as described in Response to Common Comment No. 9, an focused on the health of the Great Salt Lake ecosystem.

wetland and the wildlife productivity in the future.

So to address the question that has also been brought up here recently on another subject, it's concerning the future scenarioss of the valley, once the proposed project is approved and built, the ability to deal with adverse changes in flows, which was just mentioned, and contaminated levels in the Jordan River seem improbable.

Adequate contingency planning for the future would seem to be prudent, especially considering that increase in population growth, vehicle usage, industrial development and other similar changes will likely have a negative impact on future water quality and quantity in the Jordan River for downstream wetlands.

MS. NIELSON: Thank you very much.

Mr. Bowles -- or, I'm sorry, Ms. Bowles to be followed by Mr. Callister.

H26 MR. BOWLES: My name is Khyva Bowles, and spelling's K-h-y-v-a, last name, B-o-w-l-e-s. We live at 3846 West 11800 South.

H26-1 In 1986 Kennecott put in their evaporation ponds on 118th just above 4800 West -- or 40th west. A month after they were put in and water was put in those ponds we had groundwater coming up in our

H26-1 Please refer to the response to comment H24-3 provided in this hearing document.

basements. It didn't just run in. It's a purged area, it shot up the walls and so we had to spend over $3,000 putting in a sump pump in the basement -- or outside of the basement. We cut around and put a drain line in to have it outside. We had dug 14 feet down to get below the house. It still didn't stop it. It ruined our well. Down through the years our well progressively got worse, but at this time it was terrible. We were sick. We would wash our clothes and it would leach out color out of the clothes. When I showered I was covered with a solid rash.

We contacted the Board of Health. They came and had Kennecott put in bottled water. But at the meeting it was our problem, with Kennecott, not theirs. But the Board of Health made them bring in bottled water. Then they put in the culinary water and surprisingly when I showered I did not have a rash any longer.

We had -- in 1996 the sulfates were still 844 MDLs. They had an advisory group and Kenneth Alcama was head of the environmental health, Dr. Harry Gibbons was Salt Lake County Health Department and Robert Malone was environmental coordinator. Now, Kennecott brought a hydrologist in from Texas to tell us that we were nuts, that this was our problem, but

it was a month after they put in their settling -- their evaporation pond this happened. When they cleaned it up it quit. They realized the old pond leaked, which we told them from the beginning their pond was leaking, but they finally decided, but they didn't tell us that, I got if it from the advisory counsel that they had to discontinue that and construct new ones. So be careful on your evaporation ponds, they line it with clay and it will leak. Thank you.

MS. NIELSON: Thank you very much.

Edward Callister to be followed by Tom Bellcheck.

H27 MR. CALLISTER: I appreciate the opportunity to speak here. I'm actually grateful that responsibility is taken to clean up, although I don't want to kill a dead horse and there's been a lot of discussion about where that cleanup should go.

H27-1 I live next to -- or at the time lived next to the Bowleses. We shared the same well. My family drank that water, our animals drank that water and our yards were watered by that water. I don't want to beat a dead horse again, but we did try to do some discussion with the Kennecott group and it appeared that it was a Band-Aid effect to me where

H27-1 Please refer to the response to comment H24-3 provided in this hearing document.

they were just trying to patch something over. We were trying to get a lot of different things, measurements of water from one area to the other. I personally too had to do the same thing, I had to chisel out my basement, I put in a sump pump. That didn't take it. I vacuumed about 300 gallons of water a day out of my basement. We live in an area where we have septic. My septic tank got filled up, it backed up into my basement. That's a health issue, I believe, and I believe that I was a recipient of something that shouldn't have been there and should have been taken care of. So that's all I have to say.

MS. NIELSON: Thank you very much.

Tom Bellcheck to be followed by RW Doughty.

H28 MR. BELLCHECK: I'm Tom Bellcheck. I have a procedural question, if it would be okay?

MS. NIELSON: Uh-huh.

MR. BELLCHECK: I represent as a tribune quite a few people and I have their comment cards here. In terms of procedure, how would you like to handle it?

MS. NIELSON: Let me suggest that you use this five-minute period to provide those, if you want to read them into the record, and then if you don't

get through them, we could provide additional time after everyone else has spoken. If you want to just provide them to us in writing, we can accept them as written comment and will include them in the record.

MR. BELLCHECK: I would like to read them into the record.

MS. NIELSON: Okay. Well, why don't you do five minutes and then we can --

MR. BELLCHECK: If I get a chance, I have my own personal comment.

MS. NIELSON: Okay.

H28-1 MR. BELLCHECK: Larry Brown, Riverton, Utah; Bill R. Colter, Riverton, Utah; Paul Butterfield, Riverton, Utah; Clide Woods, South Jordan, Utah; LaRue Woods, South Jordan, Utah; Catherine Crowton, Riverton, Utah; Jay Butterfield, Riverton, Utah are all concerned about quality and quantity of water.

Merrill Coombs has water shares, and Will B. Jacob, he would be very happy to have the quality of Deer Creek water all the time. He would like to have Deer Creek water all the time.

Duane and Afton Richardson: We use our well as our primary source of water for our home and our daughter's home next door. We do not have other

H28-1 Kennecott and Jordan Valley Water Conservancy District have established procedures for responding to individual well owners concerns regarding the quantity and quality of the water, as discussed in the Response to Common Comment No. 10.

access to water. West Jordan.

H28-2 George Shawl lives in Erda. We have a well in Erda. How soon will we be faced with the same thing?

H28-3 Clark and Khyva Bowles: Has quite a bit of experience. You just heard from Mrs. Bowles.

Jay Mack Yates in South Jordan says do what is needed to protect our well rights.

Dave Schmidt says, we must have representation in these negotiations among the parties to the consent decree. We are water right owners.

Howard Schmidt says thanks.

Susan Frampton said she our postcard.

Michael Hawk says, we do have rights. How may we enforce these rights because why should it matter how long you have owned the well. I want to be a part of this, but work schedule interferes with the ability to attend any meetings.

Nathan Coombs: The State of Utah is in the business of theft and deceit.

Loretta Wilcox: Let's give them what for. Let's see if some of these people will come to our homes and talk to us. Ask about resentment from neighbors.

H28-2 The Trustee is not aware of similar contamination in the Erda area of Tooele County.

H28-3 The Consent Decree, which was established in 1995, addressed natural resources damage (groundwater contamination) but did not settle any third-part (individual well owner) issues. Nor did it give the Trustee the authority to resolve individual claims. Kennecott and Jordan Valley Water Conservancy District have established procedures for responding to individual well owners concerns regarding the quantity and quality of the water. Also see the Response to Common Comment No. 10.

Dion Bateman is concerned about quality and quantity.

Richard Nielson from South Jordan: Will pumping water out of the 14 wells cause further distribution of the more highly contaminated water? Does the first in time first in right apply to the 14 wells to be developed by Jordan Valley? If the wells deplete older wells, shouldn't they have to shut the newer wells down?

Mrs. Nielson, they both -- well, South Jordan. Does South Jordan City have any interest in trying to protect the individual rights of the property owners?

The answer to that is no. I'll answer that.

How do you envision these 14 shallow wells proposal affecting the existing deeper wells.

Otto Jones has a great request. This one makes a lot of sense. I represent a group called TNT which stands for True Neighbor Tribune and Otto makes a comment saying, we would like the state to provide TNT -- we would like the state trustee to provide a list of all underground water rights located in the unconsolidated alluvial fill in the Salt Lake Valley. Is that possible?

H28-4 As indicated in the Response to Common Comment No. 10, Kennecott and JVWCD are using their water rights for this project. Utah water law will apply to all operations.

H28-5 Question noted; however the Trustee cannot speak for South Jordan.

H28-6 Kennecott and JVWCD have evaluated the extraction of contaminates and related drawdown, as discussed in the Response to Common Comment No. 10.

H28-7 The Trustee does not have that information; the Utah Divison of Water Rights maintains information regarding water rights owners.

MS. NIELSON: You've asked the question.

H28-8

MR. BELLCHECK: Kent Brian says, the source control measures have dammed up recharge areas in the Oquirrh Mountains and have impacted recharge to our aquifer. Not only has Kennecott impacted our water quality, but also Kennecott operations are now diverting our water quantity.

Okay, I guess I've got a chance here then. I have a letter here from the City of South Jordan. It's addressed to me at my home in South Jordan. It says, "Dear Tom, on behalf of the citizens of South Jordan we wish to extend to you our sincere appreciation for your efforts on behalf of our community. We found your water presentation both informative and insightful. We anticipate the implementation of some of the counts that you presented as we move forward in addressing these concerns." And that's a nice letter. I say thank you.

There's 10 words that I'm going to issue the definition for.

MS. NIELSON: Mr. Bellcheck, you've got about 30 seconds left right now.

MR. BELLCHECK: Okay. Equity, verbatim, tribune, talent, constitution, occupant, construe,

H28-8 The source control measures are required by the Consent Decree in order to capture contamination which would otherwise be transported into the groundwater in the southwest portion of the valley. The water managed through the source control measures is required by the State Engineer to be associated with water rights that Kennecott has designated for that purpose.

syntax, vigilance and the final word is be-he-lawn-teh (vigilante, Spanish), which is a Spanish word for a member of a vigilance group. Thank you.

I would like to finish later.

MS. NIELSON: Okay. RW Doughty followed by David O. Hinkley.

H29 MR. DOUGHTY: My name is Richard W. Doughty and I'm speaking on behalf of the Utah Chapter of the Sierra Club. I'm going to be very brief. There are individuals in the club who have much more expertise on this than I, but I felt it was important to make a personal appearance.

I want to applaud the project in terms of

H29-1 detoxifying that water. The problem is with the effluent end of the Jordan River. It's a combination of high-tech 21st century technology with Stone Age technology. I mean, we've been dumping effluent into the streams since, I suppose, the caveman days and we're still at it apparently and that's my concern as that's one of the concerns of the club. I thank you for the opportunity to speak.

MS. NIELSON: Thank you very much.

David Hinkley to be followed by T. Rodney. Oh, I'm sorry, by T. Rodney Danzy.

H30 MR. HINKLEY: I hate to be repetitious,

H29-1 As indicated in the Response to Common Comment No. 8, JVWCD has withdrawn its discharge permit and will not discharge reverse Osmosis concentrates to the Jordan River.

but I wish there was a map of the valley. Going from this proposed cleanup into the lake, there are numerous canals, there are numerous Salt Lake City sewer ditches running into the canal. Why don't they put it into the sewer ditch. It goes right through the property I own.

H30-1

This Jordan River is an artery that must not be contaminated with someone else's trash. We give it enough ourselves. I spoke before about that fact, other alternatives and hopefully in the next meeting or so we can find out. This putting this discharge before the 21st South division with the surplus canal, which is put into the canal and there is a split of 50-50 between the Jordan River and the surplus canal. So what have you got? When you get ahead you've got more gallons of water so that they can dilute the particles per liter.

MS. NIELSON: Hold the mic up. The court reporter can't get your comment.

MR. HINKLEY: I really should quit. But it does need to be explored to everybody's advantage, not to Kennecott's, not to the valley, just the whole -- we're all neighbors and, you know, you've got Lee's Creek that goes into the surplus or into the lake that there's no vegetation hardly at all right

H30-1 As indicated in the Response to Common Comment No. 8, the Joint Proposal has been revised; reverse osmosis concentrates will not be discharged to the Jordan River. Instead JVWCD will build a pipeline and transport the concentrates to the Kennecott tailings impoundment or possibly the Great Salt Lake, as described in the Response to Common Comment No.6.

there on Kennecott's property. It comes right out of their tailings pond. Thank you.

MS. NIELSON: Thank you.

Mr. Danzy to be followed by Bill James.

H31

MR. DANZY: My name is J. Rodney Danzy. I would like to thank Dr. Nielson for extending the comment period. We may have to ask for an additional extension with regard to the water rights. I would like to thank Kennecott and Jordan Valley for the information they have provided, some I have some questions about, but I think that we're trying to at least work toward good things here.

I would like to categorize some of my comments into three areas. Good: The pump and treat plant proposal is good. We need it. It's five years late now. With regard to that, it's as a result of -- what's the proper word -- I guess pollution of underground water by mine operations. The organization that's responsible for this is not a poor company. They are a world-class company called Rio Tinto in London. That's the good part.

The bad part is the cost to clean this up is being passed on to the rate payers, the people that are drinking water in the Salt Lake Valley and will for the next 40 years, 100 years or 400 years. That's

H31-1 See Response to Common Comment No. 1.

H31-2 See Response to Common Comment No. 3.

H31-3 See the Response to Common Comment No. 12 regarding funding for the cleanup.

who's going to pay the bill for this, not Kennecott. Kennecott is going to put in 48 million. They said they already spent 350 million to take care of the east side collection system and clean that up, but that's good.

So anyway, the bad part is the rate payers and the water drinkers will be paying this bill. I have a report that I studied that came from Bruce Kestler and he indicated that water in the Oquirrh Mountains, in his report this was done for Jordan Valley Water Conservancy District, was pretty pristine prior to mining activity. Someone may want to take a look at it sometime, maybe 250, 450, 600 TDS and low sulfates. Anyway, that's important.

The ugly part is that the water treatment program I don't think meets the consent decree and I'm talking about Southwest Salt Lake County zone A area. It doesn't get the water back to the area that's affected. It doesn't get the water back to the public water rights that were affected. When I say public, there was only two water purveyors in the Herriman area, Danzy Water Company and the Herriman pipeline. None of the water goes back to them, it goes to Herriman City.

If you look at the report from Jordan

H31-4 The Consent Decree requires that the damages obtained from Kennecott must be used to "restore, replace, or acquire the equivalent of the natural resource for the benefit of the public in the Affected Area as provided under Section 107(f) of CERCLA." Consent Decree Section V.D.1 and 4. The Joint Proposal explains how the water from the Zone A and B plants is to be distributed to the municipalities that are within the Affected Area. The proposed distribution of water in the Joint Proposal is consistent with the requirements of CERCLA and the Consent Decree. These issues are also addressed in the Response to Common Comment No. 11.

Valley Water Conservancy District, Herriman bought no water a year ago because they didn't exist. They bought some this year because now they do exist as a city. The water rights simply do not get back to the area affected that the water rights were affected. Even though the distribution has affected area, water rights affected, public, and the area that may be contaminated as a result of the plume.

So those are concerns that I have and I think they haven't been totally dealt with yet. There was no city in 1995 when the consent decree was envisioned. We've talked about the water quality in the Oquirrh Mountains prior to mining activity. Someone said it started in 1935, 1903, 1869, it's still mining activity. Profits were made from the ore bodies and so on and so forth. There ought to be a moral obligation if not a legal obligation to deal with those.

The consent decree cleanup is not the total picture here. The total picture is CERCLA, the EPA and all the requirements that require mining companies and other companies that pollute to deal with the problems that they've caused and I don't think that's been adequately dealt with here.

I believe that the water from plant A

should go south over to the Herriman area, not east and back up to the Herriman area and then not even cover the area west of Herriman which is three miles west of the town and closest to the Kennecott operations. It doesn't get back there under this program. It simply doesn't get there. Whether it's legal under the consent decree, whether it's legal under CERCLA, whether it's legal under the EPA requirement, or whether it's just a moral obligation for a large world-class mining company to do what they ought to do. It hasn't been dealt with. We hope that it will be, we believe that it will be and we ask the cooperation of the trustee and the EPA and the CERCLA administrators and the DEQ to follow through.

This is a green state. We've got a person that's going to go back and probably head the EPA and we hope that he will help enforce this type of activity here at the state to be a showplace. He's proud of this project as being something that he's proud of and I think he should be. I think it's a good start, but it simply doesn't go there and do what ought to be done.

H31-5

Jordan Valley ought not to be able to charge whatever they need for the water and then pass that on to the water rate payers to help clean up a

H31-5

pollution problem the rate payers didn't cause. That ought to come from the cost of mining or whatever that operation was that cleaned it -- or causes the pollution.

MS. NIELSON: Mr. Danzy, could you bring your comments to conclusion?

MR. DANZY: Thank you. I would just simply like to make one brief comment, and then I'll ask for some time additional later, that Jordan Valley Conservancy District be required to account to the taxpayers and to the rate payers as to how they're spending their money with regard to costs in rate and costs in money that they've already received from Kennecott. They've been settled with, they've received millions on the part of the public and we hope that those costs won't be spent back now to clean up water that's not their responsibility.

I'll stop and then go back at the next go-around. Thank you.

MS. NIELSON: That's fine.

Bill James.

H32 MR. JAMES: Thank you, Executive Director Nielson. My name is Bill James. I work for the Utah Division of Wildlife Resources, which many of you may realize is housed within the Department of Natural

Resources, a fellow agency with the Department of Environmental Quality and while we will make our comments in writing and through specific appropriate channels, as is our custom, I would like to point out for the benefit of those of you who are working on this issue that we do have certain interests as an agency, as a specific division.

Three particular areas of expertise apply. One is that we've been charged legislatively with the mission of insuring the future for protected wildlife, and that includes a whole lot of things out there, particularly brine shrimp and a number of migratory birds.

We're also a pretty significant landowner in this particular project site. Farmington Bay wildlife management area and some of the surrounding area which we manage cooperatively total some several thousand acres and that doesn't even account for the dozen or so privately owned land and cattle companies and other duck clubs. So we have the interest of the landowner who happens to be located at the terminus of the Jordan River as it moves through the state canal.

Lastly, I would say that we have some experience with particularly selenium toxicity and its impact on wetland communities because of our

experience with the Stewart Lake wildlife management area, which has been the site of several hundred thousand dollars of expenditure to reclaim damage which occurred through a much different process, but which nonetheless involved selenium.

Probably at this point that's sufficient and just to direct our comments toward the issues of selenium, transport through the wetland is likely to be the predominant issue which we address. Thank you.

MS. NIELSON: Thank you very much.

That's the conclusion of individuals who have signed up to speak today. Is there anyone here who would like to speak who has not spoken yet?

Okay. Would you come to the microphone and identify yourself, please.

H33 MR. HYLESON: I would just like to add on a little bit to Mr. Doughty's comments. My name is Mark Hyleson and I'm with the Southwest region office of the Sierra Club and we will be submitting written

H33-1 comments. But just to make -- one point is we really appreciate the cleanup, it is a good thing, but moving

H33-2 it to a place where you have hundreds of thousands of different accommodations of species of birds that are traveling across the hemisphere, putting selenium in that type of water system in a bad thing. So if it's

H33-1 See the Response to Common Comment No. 3.

H33-2 See the Response to Common Comment No. 8 regarding JVWCD's decision not to discharge to the Jordan River. Also see the Response to Common Comment Nos. 6 and 9 regarding the additional options

just a mater of cost to take the treated water -- or the contaminated water somewhere else, that should be the expense. I'm pretty sure Kennecott doesn't need to do a bake sale to come with more money, to come up with a better idea. We shouldn't have to throw salts on ranchers' crops out by the lake. There should be a better idea, more alternatives and that's what we would like to ask for to be studied, not put terrible water in the Jordan River, but to properly treat it. Thank you.

MS. NIELSON: Is there anyone else who hasn't yet spoken who would like time to speak?

Okay. Seeing no one, Mr. Bellcheck and Mr. Danzy have asked for additional time.

Mr. Bellcheck, I would like to --

MR. BELLCHECK: Could I just have a few moments to prepare?

MS. NIELSON: Mr. Danzy, would you like to go first? If you would like to come back up to the podium and let's say an additional five minutes and then Mr. Bellcheck.

MR. DANZY: Thank you.

MS. NIELSON: Thank you.

H34 MR. DANZY: Thanks for the opportunity to make a few more comments and I'll try to be as brief

for management of reverse osmosis concentrates and for further information about selenium studies and the Great Salt Lake.

as possible. I'm here for Danzy Water Company as owner and manager, or one of the owners of Stock Mutual Water Company, a stockholder in Herriman Pipeline Company, stockholder in Herriman Irrigation Company and partial owner in water rights and as a taxpayer and citizen.

H34-1 I believe that one of the additional concerns that causes me quite a bit of concern is that the mining of water in the southwest corner of Salt Lake County that can result as a result of the pumping for zone A. We realize there's a model that's been done and we appreciate that. That's good technical information and we appreciate that information. However, we also know that models are only as good as the data, and the data changes each year and we would ask that that model be updated, that we would have an opportunity to look at the model itself and determine whether we believe there's additional mining that's really going to take place there. I realize the technical experts have looked at it and I say that's good.

H34-2 We think one of the alternatives to mining that area quite as bad as we think will happen -- we've been impacted already as a result of the activity out there. We believe that one of the

H34-1 As indicated in the Response to Common Comment No.2, over 300 monitoring wells in the Zone A and B plumes and over a decade of data from these wells have been used to evaluate the contamination and model and evaluate the cleanup plans. The Technical Review Committee has reviewed those plans and will continue to review and evaluate the progress of the aquifer cleanup during the 40-year period. It is also noted in the Response to Common Comment No. 10 that the deep (Principal) aquifer has been over extracted historically and that the extractions continue, unrelated to Kennecott's remediation plan.

H34-2 While bringing water from a source outside the Affected Area might meet demands for additional municipal drinking water in the Affected Area, it would not curtail the spread of existing contamination within the aquifer.

possibilities would be to bring water in from the Jordan River for Utah Lake water, I don't know whether it would have to be treated or not, and not mine the southwest area. That just doesn't make a lot of sense to the people that have water rights out in that area.

H34-3 I noticed in this presentation that we skipped the issue of how we were going to deal with individuals that were impacted and I realize there's going to be additional hearings to do that. We hope they will be expanded and there will be a proposal, kind of like there is with legislation. We'll pass this legislation or this proposal, but we need to tie it to the fact that something additional will happen with regard to water rights.

I think the intent is to do right by everyone here, but I think the problem comes when you see over a period of time a lot of changes that don't happen and then the people are left with the end problem and I think we ought to try to avoid that. I think we ought to make the project good and move forward, but I think there has to be more waste -- there should be something tied to this proposal that protects the water rights there, maybe it's even bringing water in from Utah Lake to replace that water for treating it and I realize it might have to be

H34-3 The Response to Common Comment No.10 includes the procedures which have been established by Kennecott and JVWCD to address individual well owner concerns.

treated before you can treat it again, but I think that's very, very necessary when you figure the impact on the southwest quadrant.

H34-4 I think people are trying to do the right thing, but I think it has to be done at the expense of the organizations or the people that benefitted from the degradation and so forth and I think that's not 100 percent accurate in this proposal. I think there's more work that needs to be done on it.

Thank you very much. I appreciate the time to make comments and thanks for the opportunity.

MS. NIELSON: Thank you, Mr. Danzy.

Mr. Bellcheck.

H35

H35-1 MR. BELLCHECK: I forget my schedule, but I know the extension goes to the day after Halloween, I think. Election day is the 11th, I think it is, of November. I lost my schedule. But I think we need until the end of November to finish some of this. It's hard to get through this.

One thought I had most recently that's of rather concern -- a very major concern, is that if the contamination in the zone A is clearly there as an acid plume, the zone A source is the Bingham. We know the source, there's one source, it's Kennecott. There are two injection points into the aquifer. One is the

H34-4 Under the terms of the Consent Decree, Kennecott has established trust funds to address the damage to the groundwater aquifer. See the Response to Common Comment No.12 regarding Kennecott's liability and the trust fund.

H35-1 See the Response to Common Comment No. 1.

Bingham leaker at the mouth of Bingham Canyon and the second is the South Jordan evaporation ponds. Some of the testimony that we've been hearing today suggests that a lot of that water didn't evaporate, it went into people's basement. We're a little concerned about that. It shows that there's a pretty high volume of water that went into that aquifer, there was not much evaporation going on.

H35-2 So now the problem is we've got soil impacted. The soil is 2.2 million cubic yards that are going to be removed under EPA oversight, as I understand it, and it will be removed to Copper Notch and the haul road is being built now and it soon will be moved. If some of it has been moved already, that's good. We'll want to see the bill of ladings on 2.2 million cubic yards and that surface contamination should be cared for at the end of that.

That surface contamination sits on top of the aquifer. That's our aquifer. We the people have rights in that aquifer and plan to enforce those rights.

H35-3 The question about the zone A plume, again, is acid plume and I see two separate treatment processes. One would be to withdraw the acid, and I hope we have some really good stainless steel wells

H35-2 The soils and sludges are being moved by Kennecott pursuant to EPA, DEQ and Utah Division of Oil, Gas and Mining. There is an Operations and Maintenance Plan for the South Jordan Evaporation Ponds as part of the CERCLA removal approved by the EPA. The plans include post-removal sampling; removal statistics are being compiled for the removal action and will be provided to the regulatory agencies following completion of the removal action.

H35-3 The extracted water from the acid core plume is pumped directly to the tailings pipeline. The wells used for the acid core extraction will require replacement over time, which has been

that will last 40 and 50 and 100 years or we're going to be replacing wells very often. We'll want to look at that real carefully to make sure that it keeps working. The source is clear, we have zone A and zone B source. Not to confuse the issue, there are two points of injection, one source, the source is Kennecott. Kennecott broke it, Kennecott needs to fix it, not Jordan Valley. That's an opinion.

Now, back to the zone A. It's real hard to get through this document, but I want to point out something I'm very concerned about on zone A contingencies. If, notwithstanding all reasonable efforts by Kennecott, the zone A plant is not complete and operational by January 31, 2009, six years from now, either party may terminate this project agreement as to the zone A plant prior to January 31, 2010. So we've got a year to cancel the operation of the plant -- according to this document, I don't know what other things are going on, it's hard to read this document -- provided that it isn't finished.

Now, if it doesn't get finished, then, paraphrasing, it says that the project agreement terminates. That's called leaving an out. We're very concerned that Rio Tinto is going to bankrupt Kennecott and then we, the people of the United States

H35-4

factored into the cost structure of the project. The extraction of acid plume is not part of the treatment project for municipal quality drinking water.

H35-4 Under Section 4.1 of the Project Agreement, Kennecott is obligated to construct and operate the Zone A Plant. Kennecott makes the same commitment to the Trustee in Section I.C.1 of the State Agreement. The Project Agreement provides an outside date by which this must occur, and states in Section 4.2.a as follows:

> If, notwithstanding all reasonable efforts by Kennecott, the Zone A Plant is not Complete and Operational by January 31, 2009, either party may terminate this Project Agreement as to the Zone A Plant prior to January 31, 2010, provided that the Zone A Plant has not become Complete and Operational prior to the date of the notice.

If the Project Agreement terminates as to the Zone A Plant because the plant is not Complete and Operational by the outside date, Kennecott will have expended considerable sums to construct the Zone A Plant but it will receive no reductions to the Zone A ILC and the Trustee may convert it to cash for use consistent with the terms of the Consent Decree. See Sections III and VIII.B of the State Agreement. Additionally, JVWCD is released from its agreement to take the Zone A water and deliver it to the Affected Municipalities.

of America, get to pay for the cleanup.

For those words I brought out earlier is equity means justice or impartiality. Verbatim means word for word. Tribune is an officer of the people or a raised platform. It can be a stump somewhere and it would still be a tribune. Talent is a weight, a coin, or a sum of money of varying value or it could be something that a person possesses in their mind. Constitution is a frame or structure or temperament or organic fundamental laws of the state or society. Number six, an occupant is one who possesses. We plan on possessing our aquifer. Number seven is construe, it means to interpret or give syntax to. When writing a document one has to look at the syntax. Syntax is that part of grammar which teaches the proper construction and arrangement of the words in a sentence. I don't write because that's a difficult thing to do. Nine is vigilance, which means watchfulness.

The vigilante groups in the westerns got always a bad rap. The word is be-he-lawn-teh (vigilante, Spanish), which is a Spanish word. It means a member of a vigilant's group and we really are watching, we want to be a part of the process.

We respectfully request a period of time

H35-5

so that we can have a happy Thanksgiving, that's -- the 26th is the Wednesday before Thanksgiving, want to make it through Halloween, we want to make it through Election day and we want to have the ability to comment further. This is the last official public comment period. I mean the period continues, this is the last official public hearing. We very much respectfully request a mid November public hearing and then we can go on with our lives for Thanksgiving. Thank you.

MS. NIELSON: Thank you, Mr. Bellcheck. Is there anyone else who would like to speak?

Seeing none, the hearing is closed. Thank you very much for coming today

(Whereupon, the hearing was concluded at 6:40 p.m.)

H35-5 See the Response to Common Comment No. 1.

REPORTER'S CERTIFICATE

STATE OF UTAH)
) ss.
COUNTY OF SALT LAKE)

I, Susie Lauchnor, Certified Shorthand Reporter, Registered Professional Reporter and Notary Public for the State of Utah, do hereby certify that the foregoing transcript, consisting of pages 2 to 106, was stenographically reported by me at the time and place hereinbefore set forth; that the same was thereafter reduced to typewritten form, and that the foregoing is a true and correct transcript o those proceedings.

Dated this 25th day of September, 2003

SUSIE LAUCHNOR, CSR, RPR

My Commission expires:
June 5, 2005