STATE OF MICHIGAN

STATE OFFICE OF ADMINISTRATIVE HEARINGS AND RULES

In the matter of:	File Nos.:	GW1810162 and MP 01 2007
The Petitions of the Keweenaw Bay Indian Community, Huron Mountain Club, National Wildlife Federation, and Yellow Dog Watershed Environmental Preserve, Inc., on permits issued to Kennecott Eagle Minerals Company.	Part:	31, Groundwater Discharge 632, Nonferrous Metallic Mineral Mining
_____/	Agency:	Department of Environmental Quality
	Case Type:	Water Bureau and Office of Geological Survey

D R A F T T R A N S C R I P T

HEARING - VOLUME NO. XXXV (35)

BEFORE RICHARD A. PATTERSON, ADMINISTRATIVE LAW JUDGE

Constitution Hall, 525 West Allegan, Lansing, Michigan

Friday, June 27, 2008, 8:30 a.m.

APPEARANCES:

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JAMES JANICZEK

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Lansing, Michigan

Friday, June 27, 2008 - 8:32 a.m.

MR. EGGAN: Judge, we have a visitor with us this morning at counsel table that you probably don't recognize from these proceedings but may recall from other proceedings. This is Kenneth Gold to my right. Kenneth is a partner -- one of my partners, and I asked him to join us briefly today.

JUDGE PATTERSON: Welcome. Mr. Reichel?

MR. REICHEL: I'm ready to proceed. But Mr. Predko has indicated he has a procedural issue he wants to raise.

JUDGE PATTERSON: Oh, okay.

MR. PREDKO: Your Honor, we do have one procedural issue I've placed on the bench there in front of you. It's a bench memorandum that I don't intend to argue today but just want to mention. And the subject is rebuttal testimony. Based on statements made by Petitioners' counsel, we do expect they intend to offer some rebuttal testimony. And we outlined in the memo why we don't think that rebuttal is appropriate here but, if it is appropriate, that it should be restricted to its proper scope. And on those lines, what we would ask for today is that the court set a deadline next week, and I propose Tuesday of next week, by which Petitioners would at least identify who they

plan to call, the subject matter and the proposed order, number one, so that we can prepare for those witnesses and, number two, so that we could possibly have a conference possibly in chambers and then maybe on the record about rebuttal testimony and the subjects that will be covered and the issues that are outlined in the memo. And like I said, that will, number one, give everybody fair notice of the rebuttal testimony and, number two, it will allow us to decide issues regarding rebuttal testimony prior to expending time and money on those rebuttal witnesses.

JUDGE PATTERSON: Mr. Eggan?

MR. EGGAN: Your Honor, we just got the bench memorandum last evening. And we, as a group, have really had time and really had no time to go through the memo. I think a lot of --

JUDGE PATTERSON: Nor have I obviously.

MR. EGGAN: Yeah. I think what -- a lot of what -- Mr. Predko makes sense in terms of conferring about it and advising the parties or discussing among the parties who is going to be called and a schedule for doing so. So I think a lot of that makes sense. What I hope is that, after we review this over the weekend, we can have a conference. We can discuss this on Monday with you or Tuesday, whatever is convenient to you.

JUDGE PATTERSON: Okay.

MR. PREDKO: Yes. Well -- and the purpose today was not to argue the fine points of the memo.

JUDGE PATTERSON: Right.

MR. PREDKO: That's saved for sometime next week. But the purpose today was to at least set some sort of deadline before we take our week and a half break by which Petitioners would at least identify the witnesses and subject matter on which they plan to have them testify.

MR. EGGAN: And I think we can do that. I think we're very willing to do that. So I think that makes good sense.

MR. HAYNES: Your Honor, if I may, I fully agree with Mr. Eggan that it's appropriate for us to notify Respondent and Intervenor of who our rebuttal witnesses will be. And I think that the cast of characters will be known to them. And certainly for us to tell them what the subject matter of the rebuttal is is perfectly fine, and we will be prepared to do that perhaps not Monday or Tuesday but, you know, sometime to give them enough notice to prepare.

MR. PREDKO: Well, the only issue we have, your Honor, is that there may be argument about whether certain testimony is appropriate. And so we would ask that it be done Tuesday or possibly at the very latest Monday morning so that we could at least have that discussion before we go on our week and a half break.

MR. EGGAN: Did you mean at the very latest Wednesday morning? You said Tuesday and then dropped back to Monday. Do you mean Wednesday morning?

MR. PREDKO: Yes. If I said Monday morning, I misspoke.

JUDGE PATTERSON: Yeah. You said Tuesday or at the latest Monday morning.

MR. PREDKO: It would be clever bargaining but I misspoke.

MR. EGGAN: Noted by all.

MR. PREDKO: Today would be fine, too.

JUDGE PATTERSON: I think we really don't know if we have any problems at this point. Talk among yourselves and see where you are.

MR. EGGAN: Yes. We will. And that's --

JUDGE PATTERSON: If there is disagreement or a problem, we can deal with that.

MR. EGGAN: I was going to raise another issue while we're discussing procedure, and that is what you have in mind in terms of post-hearing briefing. We are getting hopefully to a point where we can see the end of these proceedings. We would like a sufficient time period to be able to provide meaningful post-hearing proposed findings of fact and conclusions of law and briefing.

JUDGE PATTERSON: I would certainly encourage

that.

MR. EGGAN: Do you have a time period in mind in terms of --

JUDGE PATTERSON: I usually leave that up to you, what you need.

MR. EGGAN: Okay. That's another issue that --

JUDGE PATTERSON: So think about that.

MR. EGGAN: -- that we should be talking among ourselves about.

JUDGE PATTERSON: Yeah.

MR. REICHEL: I would agree with that, your Honor. I think counsel should confer on these issues and see what we can agree on.

MR. EGGAN: Very good. Thank you.

JUDGE PATTERSON: I assume that's -- I assume it's something you can't fly out in a couple days after the hearing. Frankly I'm in no hurry.

MR. EGGAN: Okay.

JUDGE PATTERSON: You know, set a realistic deadline that you can live with.

MR. REICHEL: We would agree, your Honor. Kennecott is obviously in more of a hurry than --

JUDGE PATTERSON: Right. Understood.

MR. REICHEL: -- the rest of the folks here. And if we can put that issue on the docket of issues that we

discuss before we go on our break, we would appreciate that.

JUDGE PATTERSON: Okay. All right.

MR. EGGAN: Yeah, we would, too.

MR. HAYNES: And I think all counsel for Petitioners will be here next week probably Monday. So that might be an appropriate time to discuss that.

JUDGE PATTERSON: But again I'll leave that up to you as to how much time you need to do that.

MR. PREDKO: Thank you, your Honor.

MR. REICHEL: Are we ready to proceed, your Honor?

JUDGE PATTERSON: It's delaying the inevitable for me.

MR. REICHEL: I'm sorry?

JUDGE PATTERSON: It's delaying the inevitable for me. My real work is starts when that's over. You ready?

MR. REICHEL: We're ready, your Honor.

JUDGE PATTERSON: Okay.

MR. REICHEL: At this time, Respondent calls James Janiczek.

REPORTER: Do you solemnly swear or affirm the testimony you're about to give will be the whole truth?

MR. JANICZEK: I do.

MR. REICHEL: Good morning, Mr. Janiczek.

MR. JANICZEK: Good morning.

JAMES JANICZEK

having been called by the Respondent and sworn:

DIRECT EXAMINATION

BY MR. REICHEL:

Q Could you please state your full name and spell your last name for the record?

A My name is James Richard Janiczek, J-a-n-i-c-z-e-k.

Q Mr. Janiczek, you work for the Department of Environmental Quality; correct?

A That's correct.

Q In the Water Bureau?

A That's correct.

MR. EGGAN: Mr. Reichel, before we get too far, I do need to place an objection on the record pertaining to Mr. Janiczek's testimony. Your Honor, this morning we received a record in these proceedings were paper outlines. We received at about quarter after 8:00 this morning a proposed outlined slide show presentation related to Mr. Janiczek's testimony, 67 pages long, 67 slides. Again my understanding from conferring with Mr. Reichel previously was that Mr. Janiczek is primarily a process witness and will be talking about the process of the Part 31 permit approval in this matter. And it just makes it impossible to prepare for a witness when, on the morning of the hearing, we receive a 67-page slide show of what the witness is going to testify about. And so I'd like to place that objection

on the record and express my concern about it. On behalf of my clients it's -- with all due respect to Mr. Reichel, it just -- it really impacts our client's ability to respond effectively to it.

MR. REICHEL: If I may respond, your Honor --

MR. HAYNES: I join in the objection.

MR. REICHEL: Well, I first want to understand if the objection is to the witness testifying or the use of this -- anticipated use -- we're getting the cart before the horse. But we have marked for identification as Respondent's proposed 216 as a demonstrative exhibit, a series of slides that Mr. Janiczek is prepared to testify that he prepared to assist in outlining his testimony.

First of all, as the court will see if we are allowed to use this document, the vast majority of these slides consist of a review of the relevant sections of the statute, review of a series of provisions in the Part 22 Rules which outline the rules, both procedural and substantive, that Mr. Janiczek and his staff considered in putting this permit together. And, of course, the thrust of the petition filed in this case is that the department allegedly failed in multiple respects to follow its own rules. Mr. Janiczek is both the -- will testify that he was both the permit -- he actually signed the permit and he was the one, he will testify, who coordinated the process by

which the permit was put together. These are -- these procedural slides, which we don't intend to spend a lot of time on, are simply intended to summarize in a visual way some of the rules that he and his staff considered. And with respect to the details -- and then there are a series of slides that talk about the process specific to this permit that Mr. Janiczek and his staff followed who was assigned to look at what, chronology of that. And then finally the last section of the slides, which is a relatively short set, describes specific to this permit some of the key provisions of the permit and are intended to allow him to explain how those provisions including effluent limitations were established.

It is nothing -- there is nothing new in this that could conceivably be a surprise. They're merely intended as a -- essentially a visual aid, although I -- and I indicated to counsel I regret the fact that I was not able to provide earlier to today. I submit, your Honor, that, as we go through these, assuming we're allowed to do that, it will become very apparent that there is nothing new or surprising here. And indeed again I can't seriously believe that counsel is objecting to testimony by this witness. If the objection goes to the use of these slides, I guess that's another matter. But these are simply a visual aid and an outline, your Honor, nothing new.

MR. EGGAN: Yeah. I will clarify that I'm not objecting to Mr. Janiczek's testimony. He was listed as a witness. We were not -- we did not believe that the recitation of his testimony was particularly helpful. But I think Mr. Reichel can understand the concern that any lawyer would have when they arrive at court on the morning of the witness' testimony and they receive a slide show presentation 67 pages in length which, as I say, I think is a record in this, that outlines information we've known and Mr. Reichel has known that Mr. Janiczek would be testifying in this case since April 1st. Why couldn't we have had this slide show two months ago, let alone 20 minutes ago? And so again on behalf of my clients, I have to express our concern that this kind of -- this is the kind of thing that has happened over and over in this case and which has really impacted our ability to effectively prepare for the cross-examination of a witness in a matter where we had no discovery.

MR. HAYNES: Your Honor, it really goes to the question of surprise. Because certainly if -- and I assume that Mr. Janiczek prepared these slides or had his staff prepare the slides. That assignment was probably given to him or his staff some days ago if not weeks ago. Just to prepare 67 pages would take some time. And knowing that he would be testifying, it seems to me that counsel would

have -- has an obligation to have presented these slides, which took, no doubt, a long time to prepare and type up and proofread and all of that -- we could have had this before 8:15 this morning.

So I don't object to Mr. Janiczek testifying. But again we have, as Mr. Eggan pointed out, 67 pages of quite dense material. And it is impossible for us to do more a most cursory of reviews of this material to try to understand how it's supposed to help Mr. Janiczek in his testimony.

MR. REICHEL: Your Honor, I stand on my previous comments. And I don't believe that any of this material is objectionable for the purpose for which we intend to use it. In the event that, as we -- if the court were to allow us to use these, if there is some point in this presentation that the Petitioners believe there is some surprise, I suppose -- well, I won't presume anything about this. But I honestly believe, your Honor, that there is nothing of a surprising nature here.

JUDGE PATTERSON: Mr. Bracken?

MR. BRACKEN: Yeah. Just a few observations, your Honor. And, of course, you're well aware I haven't been here every day. But it strikes me that obviously there's nothing wrong with Mr. Janiczek testifying to this. And if he had walked up there and testified with notes he had

prepared just like these slides, there would be no objection to that, of course. And all this is really is a demonstrative exhibit, as I understand it, to assist him and to assist us to move forward on the direct examination. Every party in this case has used these slide shows from what I can tell. And I haven't been here every day. And, in fact, I also recall that the Petitioners, one slide in particular that Dr. Maest used, was not even prepared by her until the night between her two days of testimony. And that was introduced not as a demonstrative exhibit but as a substantive exhibit. So it strikes me that, first of all, all we're doing here is trying to assist all of us in moving through this gentleman's testimony in a logical manner doing nothing different than we've done for witnesses on all sides of the case from my observation.

JUDGE PATTERSON: You know, I don't see that it's any different than what we've done previously. So I understand, Mr. Eggan, your concern with these demonstrative exhibits. You've expressed that. And I've ruled on that in the past. Bottom line for me as an assistance to me as a trier of fact to understand the testimony. And I don't think it's any different than if he testified and went to the board and drew these things as he went along. Based on Mr. Reichel's assurance that none of these present any new or surprising evidence, I will allow the use of them.

MR. REICHEL: Thank you, your Honor.

MR. EGGAN: Thank you, your Honor.

Q Mr. Janiczek, before we get into -- just to follow up on a comment I made earlier, I believe this is already in the record. Mr. Janiczek, were you, in fact, the person within the DEQ who signed the Part 31 groundwater discharge permit that is one of the issues in this case?

A That's correct.

Q Okay. And did you, in fact, oversee other DEQ staff who were involved in the review process?

A That's correct.

Q Before we get into the development of the permit and some of the issues in this case, I'd like you to briefly review your educational background and your professional work experience.

MR. REICHEL: Your Honor, I would note for the record that Mr. Janiczek's resume, Respondent's Exhibit 10, has already been admitted pursuant to stipulation of the parties.

Q So, Mr. Janiczek, could you please first describe your formal academic training?

A I have a bachelor of science degree in geology from Wayne State University.

Q And since you obtained that degree, have you taken any additional courses related to geology or hydrogeology?

A Yes. I have taken graduate level courses in hydrology and groundwater modeling at Western Michigan University and I've taken short courses through the National Water Well Association in groundwater modeling.

Q And, Mr. Janiczek, when were you first employed as a geologist by either the DEQ or its predecessor agency the Department of Natural Resources?

A I began with the department in April of 1978 as a staff geologist in the solid waste program.

Q And without going into a lot of detail, what were your responsibilities initially?

A Initially I was assigned review of the geotechnical aspects of the solid waste disposal facilities. At that time, it was Act 87 later becoming Act 641.

Q So basically solid waste management issues, geotechnical aspects of landfills; is that correct?

A Correct.

Q And did your responsibilities change over time? Or what was your next role within the DNR?

A That group evolved into the geophysical investigative team. We did statewide geophysical investigations looking for groundwater contamination, buried barrels, using electrical resistivity, ground penetrating radar magnetometer, different surface geophysical methods for establishing contamination of groundwater.

Q And what was your next position as a geologist within the DNR or DEQ?
A My next position was as district geologist in the Grand Rapids district office. The responsibilities there included evaluation of groundwater purge and treat systems relative to preventing the advance of contamination plumes and some involvement in the treatment and discharge of those contaminated waters.
Q Okay. What was your next position with the DNR or the DEQ?
A Next position was lead worker in the permits -- at the time it was the permit section hydrogeological review unit. And that was a supervisory position or semi-supervisory position for three geologist who were responsible for doing geotechnical evaluations relative to groundwater discharge permits.
Q Okay. And looking at your resume, you assumed that responsibility -- is that correct? -- in 1986?
A That's correct.
Q So beginning in 1986 you were specifically involved in geologic aspects of groundwater discharge permits?
A That's correct.
Q And have you continued to be involved in that type of issue since that time?
A That's correct.
Q How, if at all, have your responsibilities in that regard

changed over time?

A I was -- I became the chief of the hydrogeologic review unit with the permit section in -- it was 1987, 1988, which meant I had direct supervisory responsibility first for a group of geologists and later through reorganizations within the section also supervising soil scientists and toxicologists.

Q Okay. And have your responsibilities further changed or have you described -- I take it, sir, your job titles have changed with various bureaucratic reorganizations; correct?

A Correct. In 2002, the department reorganized once again. At that time, what was the permit section became the -- was merged into the permit section of the Water Bureau. The -- we went from a section to a unit. I was then the unit chief of the groundwater permits unit. Now I supervise a group of geologists, soil scientists and permit staff that are responsible for evaluating groundwater permit applications and ensuring that discharges as a result of those are not injurious to the waters of the state.

Q Okay. So to -- Mr. Janiczek, what role, if any, did you play in the development of the -- referred to as the Part 22 Administrative Rules promulgated under Part 31 that deal with regulated groundwater discharges?

A I was the -- the Part 22 rules -- the original Part 22 rules were issued in 1980. About 1990, the department began efforts to update those rules. And there were a series of

three committees, work groups, that were responsible for developing a new set of rules. The work group that begin in 1996 was the third and finally successful work group that actually got a new set of rules passed. Those rules were promulgated in August of 1999. And I was the staff person -- I was one of the staff persons assigned to the work group. And primarily Rule 2221 relative to hydrogeology, Rule 2223 -- Rules 2223 and -24 relative to monitoring of discharges and groundwater monitoring and Rule 2237, lining systems for wastewater holding lagoons were the ones that I had primary responsibility for.

Q In that regard, did you actually assist in the drafting of the rules?

A That's correct.

Q And were you -- would it be fair to say you were the department's key technical person on the development of those parts of the rules?

A For those rules in particular, yes.

Q And did you also participate and follow development of other aspects of the rules?

A Yes.

Q Since -- and I think you said those rules went into effect?

A August of 1999.

Q Okay. And since they've gone into effect, have you -- what role have you had with respect to their implementation?

A From 1999 through 2002, I was the hydrogeologic review unit chief. And therefore I had the responsibility for approving the technical staff's evaluation relative to hydrogeology for permit applications for those facilities that required hydro studies be conducted as part of the permit application. Since 2002, I have been delegated the authority to sign permits, and therefore I've had direct supervision over generally the entire permit review process.

Q And with respect to those -- since the current rules went into effect, with respect to those permit reviews or authorization reviews that have involved a hydrogeological study, in what percentage of those permits have you had a role either directly or supervisory in reviewing the department's evaluation of the hydrogeologic aspects of the proposed discharge?

A As the hydrogeologic review unit chief in '99 and later the unit chief over the entire program in 2002, I've had to approve virtually every hydro study that's come out of that group.

Q And to put that in some perspective, can you give me an order of magnitude as to the number of permits?

A On the order of -- with individual facilities, 3- to 500. And that would be -- some of those have been duplicates in that the permit process is such that permits are reviewed every five years. And so for initial reviews, we would

require fairly extensive hydrogeologic information. At re-issuance, we will look at -- we will re-review the information, ensure that the initial work done was adequate, review the compliance record of the facility and then also approve the hydro study as a -- or the hydrogeologic evaluation as a result of the renewal application.

Q And so to summarize, sir, would it be fair to say that you've been professionally employed by the DEQ or its predecessor agency as a geologist for approximately 30 years?

A Slightly in excess of 30 years, that's correct.

Q And you've had specific day-to-day involvement in hydrogeologic aspects of proposed groundwater discharges for approximately 22 years?

A That's correct.

Q As was alluded to earlier, Mr. Janiczek, in preparation for your testimony today, you put together a series of slides to help provide some background to your testimony; is that correct?

A Yes, I have.

Q And those have been marked for identification as Respondent's proposed demonstrative Exhibit 216. One of the first issues, Mr. Janiczek, is I'd like you to briefly address some of the key provisions of the statute that is Part 31 under which this permitting occurs that relate to

the process that brings us here today. First of all, are you familiar with a section of the Part 31 that prohibits discharges of injurious substances?

A That's Section 3109. 31.09 says the discharger may not directly or indirectly discharge anything into the waters of the state that may be injurious for any of the protected uses of the waters of the state.

Q And is there another section that requires a person proposing to discharge waste or waste effluent to get a permit or authorization from the department?

A Section 3112 of Part 31 requires that any person who discharges waste or wastewater into the waters of the state has to have a permit from the department.

Q And is there another part of the statute that authorizes or provides some authority to the department to establish standards for such discharges?

A Correct. Section 3106 of Part 31 requires -- or gives the department the authority to set pollution standards for discharges into the waters of the state be it groundwater or surface water. That authority rests with the director of the Department of Environmental Quality. And currently I am the person designated by the director to establish permit limits to ensure that discharges are not injurious for groundwater.

Q For groundwater discharge?

A For groundwater.
Q And as you've testified earlier, there are some Administrative Rules that govern the issuance of groundwater discharge permits. Have you put together a slide that sort of summarizes different aspects of those rules?
A That's correct.
MR. REICHEL: Can you please bring up slide 3?
Q What's the purpose of this slide, Mr. Janiczek?
A This is just to give an overview of the -- broke the process into three categories; the permitting process, the standards to ensure groundwater discharges are not injurious, and then the rules relative to measuring compliance with those standards. The first set, Rules 2208, which are the Administrative Rules, Rules 2218 through 2221 are the requirements for the information -- part of the information that must be provided with the permit, -33 through -37 deal with land application and storage requirements. The standards to ensure discharges are not injurious come from Rule 2204, which is a broader statement of standards. And Rule 2222 with specific groundwater standards and then compliance with those standards are Rules 2223 and -24 deal with sampling requirements and 2227 deals with compliance responsibilities for a facility if they were to violate a permit condition.
Q And, Mr. Janiczek, have you put together a series of slides

that flush out in a little more detail some of the key provisions of the rules that are outlined in this slide?

A Yes.

MR. REICHEL: And can we go to slide 4, please?

Q Now, does this have to do with the permitting process; is that correct?

A This is still part of the permitting process, that's correct.

Q And again I don't necessarily need you to read all of this. But is the purpose of this slide to -- what is the purpose of this slide?

A The purpose of the slide is again just to demonstrate where each part of the process falls into relative to the rules. Rule 2208 references the Part 21 Rules, which are the rules that deal with the administrative process. Rules 2218 through -21, -23, -24, -33 and -36 are technical information that's required as part of a permit. And -37 again covers the design criteria for the storage of wastewater.

MR. REICHEL: Can we go to the next slide, please?

Q This refers to Rule 2208.

A Correct.

Q And what are the topics that are covered by that rule?

A These are the general topics that are -- that are covered under the Part 22 Rules, things like the permit application, how we process, how we public notice, the general

administrative issues relative to permit review and issuance.

MR. REICHEL: Can we go to the next slide, please, number 6?

Q This talks about Rule 2218. Could you tell Judge Patterson or briefly review what you understand to be some of the key elements of this rule as they relate to the development of groundwater discharge permits?

A 2218 is critical in that this is the rule that covers the basis of design for the wastewater treatment system. This is the rule that requires a discharge management plan, so it describes requirements for how the facility will manage their discharge, and it also has a requirement for an operation and maintenance plan so that -- providing guidance for the operator as to how the facility will be operated to stay in compliance with the conditions of the permit.

MR. REICHEL: If we can go to the next slide, please, number 7.

Q This refers to Rule 2220.

A Correct.

Q Again without reading the slide, could you please briefly review for Judge Patterson what some of the key requirements of this rule are as they relate to developments of discharge permits?

A The Rule 2220 is relative to waste characterization. It's

impossible to design a treatment system unless you know exactly what the quality of the wastewater is coming into that system. And this is the rule that governs how that -- how the waste is to be characterized. Of particular note here relative to the Kennecott facility is the second bullet, "If the facility is not yet operating, the discharger shall characterize the anticipated discharge using the best available information."

MR. REICHEL: Can we go to the next slide, number 8, please, which talks about Rule 2221?

Q Could you briefly review for Judge Patterson some of the key provisions of this rule as it relates to this site?

A Rule 2221 is the rule that governs the hydrogeologic study. Discharges to groundwater are required, of course, not to be injurious. In order to ensure that that occurs on a long-term basis, the rules require that an adequate monitoring system be established in the groundwater to monitored long-term compliance. The hydrogeologic study is required up front to define the characteristics of the groundwater such that that monitoring system can be put in place to make -- to ensure long-term compliance with the rules.

Q Mr. Janiczek, I'm sorry. Did you want to --

A Go ahead.

Q I wanted to ask you specifically about the fourth and the

fifth bullets on your slide here and requirements of the rule with respect to the types of information that are required to be included in the hydrogeologic study.

A Yes. The basic information required in a hydrogeologic study includes the depth to groundwater, groundwater flow direction, groundwater velocity and, as describe in the rules, a three-dimensional flow path to -- and that gets to knowing where in the aquifer to monitor to measure if there are violations of the groundwater quality standards, mounding, interconnection between aquifers and the existing and background groundwater quality, which are all factored into the development of permit limits in long-term monitoring. The key point here and in the development of the rules is that it was never intended under this rule to require numerical modeling to demonstrate those characteristics.

Q If you don't have a model -- numeric model, how do you determine a three-dimensional flow pattern?

A Through the -- through the establishment of hydraulic and hydrogeologic parameters through the use of monitoring wells. The three-dimensional flow path implies that you understand the horizontal and vertical gradients within the aquifer. Those can be evaluated and described through the use of wells that are located very close to each other, each one having a screen set at a different depth within the

aquifer. That screen measures the potentiometric surface at that location over the screened interval. And what that allows you to do is is to plot whether or not movement within groundwater is horizontal, as is the case in the -- in areas of -- away from recharge and discharge areas or vertically downward or vertically upward.

Q In other words, talking about putting wells in the ground, measuring water elevations at different locations and developing an understanding of the potential for -- an understanding of how water will flow both vertically and horizontally?

A Correct; that's correct. That can be accomplished by analyzing field data rather than going to numeric modeling. In fact, of the approximately 1,000 facilities that we have under permit currently, there was only one facility that actually did numeric modeling, and that was to evaluate a very complex pump system for manipulating groundwater flow.

Q Now, one of the other things that you referred to a moment ago was mounding. And there's been some testimony on this. But could you briefly reiterate for Judge Patterson what the issue of mounding is and how it relates to a groundwater discharge such as this?

A Rule 2204(2) requires -- has a condition that says that you cannot create ponding or pooling or have runoff from the facility. The mounding evaluation is critical to make sure

that, when wastewater is discharged to the ground, that the resulting mound that is going to occur as a result of adding that extra water to the groundwater flow system -- that the rise in that water table does not intersect the surface, that it's always safely below the ground level.

Q So as to avoid this ponding, pooling, et cetera?

A Correct.

MR. REICHEL: Okay. Could you go to the next slide, please, number 9?

Q This refers to Rule 2221(6). Could you briefly describe what this rule provides and how it pertains to this case?

A 2221(6) is the -- is the ability of the department to waive any or all of the requirements of this rule, the rule for hydrogeologic study, based on the specific site conditions. The department -- our program regulates discharges from 50 gallons per day up to a million and a half gallons per day. And so this rule gives us the flexibility to evaluate the data in the field to determine just how much data is required to accomplish the purpose of the rule, and that is to understand the hydrogeologic conditions such that mounding will not occur and we can get rid of the wastewater without having it run off onto adjacent properties and that the long-term groundwater monitoring system will be adequate to measure compliance with groundwater standards.

Q Is another way of putting it, sir, that this rule authorizes

you and your staff to adjust the hydrogeologic --

MR. EGGAN: Your Honor, I would ask these questions be non-leading.

MR. REICHEL: I'm sorry. I'll restate.

Q I believe you -- to what extent, if any, does this rule allow you and your staff to adjust the -- or the application of the rule requirements for hydrogeo studies to the circumstances of the particular proposed discharge site?

A The intent --

MR. EGGAN: I'm going to continue to object. That's just another way to ask a leading question. I would ask that the questioning of this witness be non-leading, your Honor.

JUDGE PATTERSON: Can you rephrase it?

Q Do the rules allow the department to adjust their requirements on a site-specific basis?

A This rule in particular gives the department and the technical staff person responsible for conducting the review the ability to evaluate the amount of information and the type of information that is presented on a case-by-case basis pertinent to the conditions in the field.

MR. REICHEL: Can we go to slide 10, please?

Q This refers to land -- excuse me -- Rule 2233. What is that rule about and how, if at all, does it apply here?

A Rule 2233 deals with land treatment of wastewater. And what

this -- what this rule indicates at least in 2233(2) is that, if a discharger is looking for credit for additional treatment after discharge by means of land application, that they must use slow rate or overland flow processes. What that means is that you apply wastewater either at a low enough rate or, if the soils are -- have lower hydraulic conductivities, that the water is applied so that it maintains residence time within the upper portions of the soil column so that treatment is accomplished through the plants, soils and soil microorganisms.

Q In the circumstances of this permit application, is this something where the permit applicant, as you put it a moment ago, sought credit; in other words, indicated that they proposed to have treatment actually occur on the ground?

A No. This is -- this facility is designed under -- pursuant to Rule 2236 which is the rule that deals with rapid infiltration. And that is the type of discharge here. And the department gives no credit for treatment as described crops, soil or soil microorganisms in a situation where rapid infiltration is the method of discharge employed.

MR. REICHEL: Let's go the next slide, please, number 11.

Q Referring to Rule 2233, what is this rule about and how does it apply here?

A This talks about the design of the system, how to -- the

types of information that need to be used to evaluate the application rates. It talks about design so that the water is evenly distributed. All the requirements here are established so that the discharge area maintains a long-term efficiency for the ability to accept wastewater without violating the ponding, pooling and runoff requirements of Rules 2004.

Q Mr. Janiczek, a moment ago you referred to rapid infiltration. Is there a rule that specifically deals with that subject?

A Rule 2236, as I mentioned before.

MR. REICHEL: Okay. Could we go to the next slide, please?

Q Is that what's discussed in slide number 12?

A That's correct.

Q Again I don't want to have you repeat this -- what you've already testified to. But what types of soils does rapid infiltration typically apply to?

A Granular soils, usually outwash sands, which is what we find at the Kennecott site, glacially -- glacial melt water deposit soils. We don't have many surface gravel deposits but -- so it would be permeable granular soils.

Q And -- okay. And was this rule considered in the development of this permit?

A Yes, it was.

Q Okay. I want to turn to a second topic under the rules that you talked about earlier, and that is provisions in the rules that provide standards to prevent discharges that are potentially injurious to the waters.

MR. REICHEL: Would you go to slide 13, please?

Q What is the point of this slide or what did you want to communicate to Judge Patterson about this?

A The key point here is that generally for purposes of the program compliance is measured in groundwater. When the rules were developed through the late 90's, we modeled them somewhat after the Wisconsin groundwater laws, which in effect establish -- and I think they use the term action and compliance limits. But in effect you determine a set of limitations in the effluent that are designed to achieve groundwater standards. The compliance -- the point of compliance in the rules is in the groundwater.

Q And then are there other rules -- and I think you touched on them earlier -- but other rules that are specific sources that guide you and your staff in developing standards for discharges at particular facilities?

A That's correct.

MR. REICHEL: Can we go to slide 14, please?

Q The first reference there is to Rules 2204(2). Could you briefly describe what that rule provides and how it may relate to this site?

A Rule 2204(2) has three conditions in it that deal with standards. The first is the discharge shall not be injurious for any of the protected uses of the waters of the state. That's 2204(2)(a). 2204(2)(e), the discharge shall be protective of surface water. And then 2204(2)(f), a discharge shall not create a facility as would be defined under Part 201.

Q And what do you understand that to be? What does that mean?

A That means that the concentration of the substance in groundwater cannot exceed the generic residential criteria under Part 201.

Q And so a generic residential criteria, as you understand it, would mean what? I mean, what sort of --

A Those are risk base criteria that, if exceeded, would require the remediation of groundwater.

Q If you know, to the Part 201 generic residential for groundwater take into consideration possible exposure to drinking water?

A That's correct. The generic residential criteria are designed -- are the -- the Part 201 process looks at different pathways for exposure. The generic residential criteria are the pathway for drinking water.

Q And so under this rule, this 2204(2)(f), what does this rule then mean with respect to groundwater quality?

A That means that a discharge -- the concentration of the

substance in groundwater as a result of the discharge cannot exceed the 201 generic residential criteria.

Q Okay. This slide also has a reference to Rule 2222(2). What is that rule about and how -- and how, if at all, does it apply in this situation?

A Rule 2222(2) is the rule that deals with the establishment of limits for nitrogen and phosphorus. Nitrogen, in particular, is pertinent relative to the Kennecott discharge. What that rule says is that discharges containing substances capable of being treated by the actions of soil, some soil microorganisms and plants have the following limits. And the limits are described in the rule. As we discussed earlier, this discharge is a discharge by means of rapid infiltration. No credit is given for treatment after the discharge. And because of that, we felt that, rather than 2222(2) applying in establishing the limits for nitrogen since no treatment was taking place due to rapid infiltration, that Rule 2204(2)(f) cannot create -- the rule that says that a discharge cannot create a facility was the appropriate standard to be applied for nitrogen.

Q Are you saying that you concluded that this rule that has specific numeric standards for nitrogen where some land treatment is expected -- you concluded that didn't apply?

A That's correct.

Q So what did you default to, then?
A We defaulted to the standard contained in Rules 2204(2)(f).
MR. REICHEL: Could we go to the next slide, please?
Q There's a reference here to Rule 2222(3). What is this rule and how, if at all, does it relate to this case?
A Rule 2222(3) lists six specific substances and have set numeric limits for those substances.
Q These are numbers prescribed in the rules themselves?
A Numbers prescribed in the rules themselves. These six parameters, aluminum, chloride, sodium, sulfate, iron, and manganese -- these limits are exactly the same as the aesthetic criteria developed under Part 201, generic residential criteria.
Q What do you mean by "aesthetic criteria"?
A Aesthetic criteria is criteria that's relative to things like taste, odor. These are not health standards. These are standards that are related to the ability -- in the case of iron and manganese to cause staining of fixtures or to discolor the water or to create odor situations.
Q So does this relate then to the potential impacts on the use of the water?
A That's correct.
Q Okay. I'm sorry. Did you want to add anything else about that subgroup?

A Again, these are -- these numbers are the same as the 201 generic residential criteria, but they are aesthetic standards, not health standards.

Q You next in this slide 15 refer to Rule 2222(5)(a). What does this rule provide and how, if at all, does it apply here?

A This rule provides the means for calculating a limit in groundwater for inorganic substances -- inorganic substance that was not -- that is not previously mentioned in the rule. So this would not include nitrogen. This would not include the six parameters that are listed in Rule 2222(3). These are generally for the other metals. And what this says is that there is a calculation factoring in background groundwater quality to determine what the limit in the permit should be for those individual substances.

Q Okay. Let's back up for a minute and briefly explain the concept of background groundwater quality and how that relates to the Part 22 Rules. In other words, how do we know what background groundwater quality is?

A Part of the -- part of the -- as we discussed earlier, the hydrogeology study requires the facility to establish the existing groundwater quality at the time a discharge is proposed. There are concentrations of metals and other substances that occur naturally in groundwater. And so this rule allows the department to factor those existing

groundwater quality conditions into the development of limits in the groundwater section of the permit.

Q And again this rule talks about having established a background level and you know what the 201 criteria is?

A Correct.

Q And this instructs you to do what, then?

A To calculate a limit based on the background. And what is says is that the concentration shall not exceed halfway between the background groundwater quality and the Part 201 generic residential criteria.

Q Let's go the next slide. At the outset you talked about there broad categories of the rules, those dealing with the process, those dealing with standards and the section dealing with compliance with standards. Could you briefly outline for Judge Patterson some of the key provisions of the rules that are structured to require -- some of the key provisions of the rules that are set up to assure compliance with the requirements?

A Well, starting with Rule 2223, Rule 2223 gives the department the authority to require monitoring. And it says, "In a manner and frequency and for a substance the department specifies is necessary to assess compliance with the rules." So this is the rule that gives us the authority to determine what substances are monitored and at what frequency they will be monitored. It goes --

Q And -- go ahead. I'm sorry.
A It goes on to say that -- it does allow for the use of indicated parameters.
Q What an indicated parameter, sir?
A "Indicated parameter" is a measurement of a substance that may or may not be directly related to the parameter that's being measured; which in effect is what's accounted for in 2222(3)(c). It's a sampling parameter that can be directly correlated to the concentration of another substance in the discharge. And we'll get into this I think later, but in the case of Kennecott specific conductants fits this criteria. It is a measure of a substance that if held within a given allowable range, and that's how we define it in the permit, will provide information relative to compliance of other parameters within the permit.
Q Okay. Based upon a demonstrated correlation between the indicator and these other --
A That's correct.
Q Okay. Can we go to slide 17, which also talks about Rule 2223? And could you highlight what you consider to be key points that may be relevant to this permit?
A Again, 2223 talks about groundwater monitoring, again, collecting water quality and water level data; important to understand that -- which way groundwater is moving after -- even after the permit is issued. We briefly touched on

mounding, but mounding is going to affect the movement of groundwater. And so we need to design a monitoring system to account for those hydraulic impacts. And so that's the purpose of collecting water level data. Water quality data is obvious. That is a direct -- water quality data is a direct comparison of the water quality to limits in the permit. Sampling and analysis plan; so we understand how the facility is collecting data so that the data we get is truly representative of groundwater quality. And then again, it goes -- talks about the design of the well. The well screens based on the hydrogeologic information need to be set at depths in the aquifer where we anticipate the discharge to -- path to migrate in the groundwater.

Q You also have a slide on Rule 2224; correct? What does this rule address as it relates to this site?

A 2224 addresses where in groundwater compliance is measured, and what this says is -- actually the third bullet is the key one in red, and that is, is that it shall not be more than 150 feet from the point of discharge; and that's in a hydraulically downgradient direction, the direction of groundwater movement.

Q So how does this relate to what you testified earlier about the overall approach to monitoring under the Part 22 rules; that is, how compliance is measured?

A This is the -- this is the location in groundwater where we

measure the ultimate compliance of the discharge with the groundwater quality rules. Our position is and has always been that in -- with the glacial geology of Michigan it is difficult to predict groundwater flow direction because of the changing soil conditions over very, very short distances. And so the rules were established to make sure that compliance takes place in an area close enough to the discharge -- in this case within 150 feet -- so that we have a very good handle from the hydrogeologic study as to what the movement of groundwater is within that known zone.

Q You also prepared a slide talking about Rule 2227.

MR. REICHEL: Could we go to slide 19, please?

Q What does this rule address?

A Rule 2227 addresses the discharger's compliance responsibility in the event they were ever to exceed a permit limit. What it -- what this rule says is that there is a prescribed time frame under which they have to notify the Department. There's a prescribed time frame by which the facility has to confirm that the original result actually was an exceedence of a permit limit. And then there's a prescribed time frame by which the facility has to report back to the Department as to what -- the status of that exceedence and what they've done to correct it.

Q Would it be fair to say that this rule establishes a minimum set of requirements on each of those topics?

A That's correct.
Q And have you put together a slide comparing these minimum requirements to the conditions actually imposed in the permit at issue here?
A Yes; that's correct.
MR. REICHEL: Can we go to slide 20, please?
Q Is that what's depicted here?
A That is correct.
Q Could you brief --
A So we've broke this down into the three categories of notification, confirmation and reporting. And if you -- what the slide indicates is, is that Rule 2227, the rule itself, requires notification of the Department within seven days of identifying exceedence; within another seven days or 14 days from the discovery of the permit exceedence -- the limit exceedence to do confirmation sampling; and then to submit a report within 60 days of that -- of the confirmation sampling. In the case of Kennecott we have reduced those numbers to 24 hours for notification, a second 24 hours to do confirmation, and then seven days to submit the report.
MR. REICHEL: Could we go to the next slide, please, number 21?
Q There's quite a bit of information here, but what -- could you summarize what rule is being discussed here and give an

overview of what it provides?

A This is the second portion of Rule 2227 having to do with the Department's response to a permit limit exceedence after the facility has done their confirmation sampling and submitted their report. There's a list of actions that the Department can take from changing the monitoring program by -- either by parameter or frequency. The Department can require changes to treatment. In fact the Department can close the facility and the Department can require remediation if the limit exceedences are such that they've gone above remediation criteria.

Q Mr. Janiczek, if you recall, are these requirements addressed in the permit that was issued to Kennecott?

A These requirements are also contained in -- I believe it's section -- Part 1, section 12 of the permit. They're always enforced; they are reiterated in the permit.

MR. REICHEL: Could we please go to slide 22, which refers to Rule 2237?

Q What does this address and how is it relevant here?

A Rule 2237 are the requirements for the design of a wastewater lagoon or a storage lagoon for wastewater and it -- what it says is, is that if the wastewater being stored in and of itself exceeds any water quality standard it has to have a specific design. And the design really comes from the solid waste program. It's the requirement

for a composite liner, which is a two-part liner. The base of that liner can either be natural clay, it can be compacted clay, or it can be a geocomposite. And directly overlaying above that is a flexible membrane liner. And the intent and the background of that rule is that -- and we did -- and I was part of the evaluation of this back in the days when there was actually a water resources commission, but this takes advantage of the low hydraulic properties of the flexible membrane liner, but it also uses the clay as a backup because during construction technique in placing large flexible membrane liners leads to tears and pinholes and the backup liner, the clay component of the composite acts as a seal to reduce the cross sectional layer that's available for leakage.

Q And just to follow up on that last point, you mentioned experience has shown that there's the possibility of some problem with the synthetic liner during installation. If you know, are there typically requirements where a permit applicant has to provide plans to assure the quality of the installation?

A There are requirements in the rule for the -- for a licensed engineer to certify that the -- and this goes also to the wastewater treatment plant, but the storage structure, which is part of the treatment train, a licensed professional engineer has to certify that they were constructed according

to the appropriate standards and as approved in the basis of design.

Q Okay. Let's shift gears now to the process of -- the administrative process or reviewing permit applications.

MR. REICHEL: Could we go to slide 23, please?

Q I think you've touched on most of these before, so -- but what is this intended to depict?

A This slide basically depicts the information that is to be included with a permit application in order to make sure that the application is administratively complete, which allows us then to begin our full detailed technical reviews.

Q Okay. Let's turn now to the -- more specifically to the proposed groundwater discharge at the Kennecott Eagle Mine. Mr. Janiczek, the record already reflects that the groundwater discharge permit application was submitted to the Department formally in February of 2006. Is that your understanding?

A That's correct.

Q Prior to that time did you and other water bureau staff have any meetings or discussions with Kennecott Eagle Minerals Company and its consultants?

A Yes, we did.

MR. REICHEL: And could we go to the next slide, please, slide 24?

Q What was the approximate time frame that you can recall

these types of discussions?

A The full -- early on there were some -- there were some evaluation by our geotechnical staff that was assigned to the project of some early reports, but basically as it evolved, the full permit process, from about August 2005 to February of 2006 we conducted a series of meetings both internally and with the company.

Q And the meetings with the company; who initiated those, if you recall?

A It was both between ourself -- the staff of the Department and the company.

Q Well, first of all, in your experience -- and you testified you've worked on a number of permit application processes. Is there anything unusual about preapplication communications between a prospective permit application and the Department?

A No. We offer preapplication meetings to every applicant from the smallest discharge to the largest discharge. The rules themselves and the process can be very complicated, and so we've always found it both in our best interest because of the quality of the application, and in the best interest of the applicant to understand some of the nuances of the permit process and their responsibilities that we meet prior to a permit application so that everybody has an idea of what the process is, what we expect of the

applicant.

Q So in this instance during this time frame, if you recall, did Kennecott request you or other Department staff to provide some interpretation or further clarification of what it was that you expected would be required as a part of the permit process?

A Yes; that's correct. The issues as I had mentioned here: issues of antidegradation under Rule 1098; issues of groundwater modeling relative to the movement -- fate and transport of the discharge once it was introduced into what later became known as the treated water infiltration system. And just the process itself. Those are the types of issues that we would generally discuss -- well, we would generally, but in particular those are issues that were particular to Kennecott.

Q I don't want to go off on a tangent, but just to clarify a little bit. Your second bullet -- and a moment ago you referred to this term "antidegradation." Could you explain briefly what you're referring to and -- by that?

A Okay. "Antidegradation" -- Part 22 requires discharges be protective of surface water. If you recall Rule 2204(2)(e) said that discharge had to be protective of surface water. Included in that is -- in that sequence of rules that's described in 2204 is the requirement for antidegradation, which is Rule 1098. That is primarily a surface water

requirement. This facility -- under normal circumstances the Part 22 rules state that the Department will -- in cases where groundwater vents to the surface water within a thousand feet of the discharge we will refer to the surface water staff for input as to groundwater protection -- I should say groundwater limitations that are protective of surface water. This case, the Kennecott situation, was unusual. It's the only one I'm aware of where the actual venting to surface water occurs in an area approximately 4- to 5,000 feet from the discharge, but because enough hydrogeologic information was gathered prior to the application, the Department made a determination that anti -- that the surface water protection rules, and antidegradation in particular, would apply in this case.

Q And I don't necessarily want to at this stage go into the details of that, but that's the context for this discussion of antidegradation?

A Correct.

Q You indicated a moment ago that there were a series of meeting -- preapplication meetings up to the submission of the application in February 2006.

MR. REICHEL: Could we go to the next slide, please, number 25?

Q Now, this refers to a February 8th, 2006 preapplication meeting. Could you briefly describe, first of all, what the

focus of that meeting was and what, if anything, from your standpoint noteworthy was discussed or reviewed at that meeting?

A The February 8th, 2006 meeting occurred approximately two weeks prior to receiving the actual permit application, so it was the final preapplication meeting with the company. And with -- at the meeting this was the first indication that we had gotten from Kennecott Minerals that their -- the treatment system as --

MR. EGGAN: Your Honor, I think we're about to hear hearsay about what Kennecott said, and so I'm going to object to that.

MR. REICHEL: Your Honor, this is not being offered for the truth of the matter asserted; this is simply to explain what information Mr. Janiczek or other DEQ staff gleaned from Kennecott and how that -- what significance they attached to it.

MR. EGGAN: I believe it is being offered for the truth of the matter asserted, and I also think that it's an extremely self-serving comment both in terms of how MDEQ treated it and on behalf of Kennecott. So I would object.

MR. BRACKEN: I join with Mr. Reichel. I don't think it's hearsay, because I do not think it being offered for the truth of the matter asserted; just for the purpose -- and we'll find out if Mr. Janiczek's allowed to proceed --

purpose of why the Department did certain things in response thereto.

JUDGE PATTERSON: I'll overrule the objection.

A Can I continue?

Q Do you remember the question?

A Oh, okay.

JUDGE PATTERSON: You can answer if you remember the question.

THE WITNESS: Okay. I think I do.

A This was the first indication from Kennecott that when the application was going to be submitted that the proposed effluent quality coming from the wastewater treatment plant was going to meet all standards -- virtually all standards prior to discharge. To this point in the Department's review we were looking at groundwater modeling as being an integral part of the review, because we anticipated from our earlier discussions that Kennecott was going to rely on groundwater and the movement of groundwater from the infiltration system to the venting location as part of the treatment process. The application bore out the fact that Kennecott had committed to meeting treatment up front, which meant that for our purposes we would focus our hydrogeologic evaluation to monitoring in the area of the discharge, the treated water infiltration system, and mounding so that we wouldn't have the groundwater or the discharge intersecting

the surface.

In effect we were no longer discussing fate and transport, sentinel wells, which are wells someplace which are located between the discharge and the ultimate venting point, or what's termed GSI, groundwater/surface water interface, monitoring wells directly at the groundwater/surface water interface. We would focus our monitoring back to what's required in Rule 2224, and that is at 150 feet from the point of discharge.

MR. REICHEL: Okay. Could we go to the next slide, 26?

Q I mean I think this -- is that essentially what you said, sir?

A I think -- yeah, I think I just did slide 26.

Q Okay. All right. Let's move forward then to slide 27. The permit application was submitted in February 22nd of 2006; is that correct?

A That's correct.

Q And if you recall, sir, the application was accompanied by a series of supporting documents and appendices; is that correct?

A Correct.

Q And in the permit application, what -- at what rate or what volume of processed wastewater did Kennecott propose to discharge to groundwater?

A Kennecott proposed to discharge at 504,000 gallons per day of treated processed wastewater, which is the equivalent of 350 gallons per minute.
Q Is that the maximum they sought?
A That is the -- that is the maximum that is -- yes.
Q That they proposed?
A Yes; that's correct.
Q And jumping ahead here, was that -- in the permit ultimately issued was there or is there a limit to that effect in terms of the volume of water?
A Yes, there is. The limit in the permit is 504,000 gallons per day. That is the daily maximum allowable discharge volume.
Q Okay. And, Mr. Janiczek, you were aware, were you not, that at the same time that Kennecott was applying for this Part 31 permit application it submitted other permit applications to DEQ?
A Yes.
Q Including --
A A mining permit, air quality permit, and lease applications with DNR leasing arrangements.
Q And in reviewing the application the focus of the proposed discharge was to -- strike that. What's the location where Kennecott proposed to discharge; in other words, --
A The location is described as the treated water infiltration

system, or "TWIS" as it came to be known.

Q It's been suggested both in the petition -- certainly in the petition that there are certain other discharges, so called, that should be but are not regulated by this permit. Do you recall reading that in the petition, sir?

A Yes.

Q And are there -- in your consideration of this were there any provisions of either the Part 22 rules or other laws that you took into consideration in evaluating that?

A Yes.

MR. REICHEL: If we could go to slide 28, please.

Q Could you -- there's a reference there to Rule 2210(w). Could you first describe what that rule is about and your understanding of it as it relates to this situation?

A What that rule -- the Part 22 rules include a rule entitled, "Exemptions." It's Rule 2210. Rule 2210(a) through (x) are a series of activities or discharges that are in effect authorized without requiring the discharger to notify the Department or to submit an application. They are simply authorized by rule. Under Rule -- there's a separate authorization under Rule 2210(y) which does require a Department evaluation process to evaluate the significance of the discharge and whether there's minimum potential for injury. But all the discharges that are listed up until (x) are exempted by rule. Rule 2210(w) says that a discharge

that is authorized through another permit issued by this Department or another department is exempt from obtaining a permit from -- under Part 22.

And so it was our conclusion that through Rule 409 of Part 632, which is the rule that authorizes the operator to manage the mine in such a manner to -- as it states to minimize actual and potential adverse impacts on groundwater and surface water by preventing leaching or runoff of acid-forming waste products. We interpreted that to mean that there was authorization for work within the mine, including some incidental utility water, that was authorized under Part 632 and, therefore, did not require a Part 22 permit.

Q And again, your focus is on activities within the mine itself regulated under Part 632?

A That's correct.

Q And you're not suggesting, of course, that this -- strike that. Okay. Once the application was submitted to the Department, were you responsible for assigning or delegate -- assigning various DEQ staff to review different aspects of it?

A That's correct.

Q And have you put together a slide or a series of slides summarizing who you brought to work on this project?

A Yes.

MR. REICHEL: Could we go to slide 29, please?

Q Does this -- could you briefly walk through this, please?

A The process -- when an application comes in I will prepare a transmittal sheet for the secretary for entering some data into our database, and at the same time make technical assignments. And in this case the permit writer that was assigned was Jeanette Bailey and her areas of responsibility included Rules 2218, 19 and 25. The geologist who was assigned to review this project was Eric Chatterson. His responsibilities included Rules 2221, 23 and 24. The soil scientist assigned to the project was Mr. Robert Deatrick, who evaluated Rules 2233 and 36.

MR. REICHEL: Okay. And go to the next slide, please.

A The basis of design was assigned to our district engineer in the U.P. district, Kristen Mariuzza, who -- that was responsible for evaluating compliance with Rule 2218. Kristen also had some involvement in the antidegradation. Antidegradation has a requirement -- in this case for mercury -- for what's called best technology in processed treatment, BTPT. And she was involved in that evaluation. Surface water -- actually, the surface water assignment came later. The application came in in February. Until we had adequate information -- our process is such that the surface assessment section is a separate group from the permit section. They act in fact as technical consultants. And so

we actually didn't refer that or make a request for a review from surface water section until May 11th of '06, approximately two and a half, three months later, and that was assigned to Sara -- it's now Sara LeSage; it was Wolf at the time. And antidegradation, the Rule 1098 evaluation, was handled by Dan Dell, Jerry Saalfeld, Steve Casey, Asad Quraishi, and Kristen Maruizza. Now, Dan Dell and Asad Quraishi work in the permit section. Those are people who are involved in the MPDES program and routinely do antidegradation evaluations. It's not an area that the groundwater permits unit gets involved in very often, so we relied on their expertise in that case. Jerry Saalfeld, Steve Casey and Kristen Maruizza would be looking at some of the engineering aspects.

Q And while we're on the subject of organization, although it's not addressed in your slide, in terms of the overall structure of the water bureau and permitting for both groundwater and surface water discharges, who oversees that process?

A The --

Q I'm sorry. I'll withdraw that question. Who is Bill Creal and what does he do?

A Bill Creal is the section chief of the permit section. That permit section includes two permitting functions: the groundwater permitting function and the surface water or

MPDES permitting function. So Bill is the section chief over both programs. He is ultimately in charge of both the groundwater and the surface water discharge programs.

Q And so would he have supervisory -- strike that. And was Mr. Creal involved directly in some aspects of this process, both before and after the application was submitted?

A Yes, he was.

MR. REICHEL: Okay. Let's go to the next slide, please.

Q This is a lot of information here. I don't know if we want to spend much time on this. It's a flow chart. Could you describe what you're trying to depict here without going through each box? I mean, what's the point of this?

A The point of this slide is to -- just to give an overview of assignment responsibilities amongst the technical staff as part of the administrative completeness review process. When an application comes in I usually -- I'm usually the second person to touch the application. I will do a cursory review to see whether the gross elements are present; whether the hydro study is in the application, basis of design. But then that is deferred -- is assigned to technical staff to do the detailed evaluations to determine whether or not there's truly enough information from a technical perspective to make a permit decision.

Q And that was the process that was followed here?

A And that's what this slide depicts, that review process.
Q Okay. Let's go on to the next slide, number 32. And this -- well, what does this indicate by way of summary?
A Excuse me. This summarizes the review -- the technical -- the review by technical staff and determination of whether or not the application was administratively complete. That is a 30-day process that is required in Part 31 and it's -- the 30-day process is required relative to refunding of fees if we don't complete that within the prescribed time frame.
MR. REICHEL: Could we please go -- if we could minimize this for a minute and go to Respondent's Proposed Exhibit 159?
Q As indicated I think in your slide a moment ago and in your previous testimony, did you or other -- did Department staff identify certain items that you believed in certain respects in which the application was not complete?
A That's correct.
Q And did you communicate that initial determination to Kennecott?
A Yes, we did.
Q Okay. We have up on the screen what we've marked as Respondent's Proposed Exhibit 159. Do you recognize this letter?
A Yes. This is the March 22nd letter to the company indicating that it was our determination that the permit

application was administratively incomplete.

Q I'm not going to ask you to go through this, but if we just pause there, does this letter, if you recall, sir, identify a series of issues that the Department identified where additional information was determined to be necessary?

A Yes, it does.

Q And was, to your know, this actually communicated to Kennecott?

A Yes.

Q And do you recall whether or not the permit applicant responded to that March 22nd --

A There were a series of responses to the -- to this letter.

MR. REICHEL: Could we go to Respondent's Proposed Exhibit 160?

Q And just for the record, what's the heading on this letter in terms of the date?

A The date is April 7th, 2006. And it's -- the title is, Kennecott Eagle Project: Response to MDEQ comment letter dated March 22nd, 2006."

Q Okay. If you recall, sir -- I don't necessarily want to go through the details of this. Does this, if you recall, sir, refer to some attached responses or detailed responses?

A Yes.

MR. REICHEL: And if we could go Respondent's Proposed Exhibit 161. I'm sorry. 164.

Q What is -- do you recognize this document, sir?
A This is another response from Kennecott addressed to Ms. Jeanette Bailey who was the permit writer and permit coordinator on the project. And the title was, "Additional responses to MDEQ comments."
Q Okay. And again, is this a further response, as you understand it, to the March 22nd, 2006 letter?
A That's correct.
Q And were there other documents attached to this as you recall?
A Yes.
MR. REICHEL: Okay. Could we get back to the slides, please, number 33?
Q What's the purpose of this slide?
A The purpose of the slide is to simply summarize the areas where staff felt we had insufficient information to make a permit decision.
Q Okay. And so these were issues that were raised in that March 22nd, 2006 letter?
A That's correct.
Q Sort of a quick summary of some of those concerns?
A That's correct.
MR. REICHEL: Could we go to the next slide, please?
Q And is this a continuation of that?

A Yes, it is. These are a continuation of the issues that were still deficient at the time of the application.
Q And those -- could you just briefly mention them?
A Discharge management plan was inadequate to provide direction for the operation of the treatment -- treated water infiltration system. We were still looking for -- as part of the surface water assessment section review and establishing of the surface water limits. We were looking for total organic carbon information and hardness. And we were -- relative to antidegradation we were looking for additional social and economic benefits: state of the economy, all the social issues that were -- are related to the antidegradation demonstration.
Q Is this related to Rule 1098?
A Under Act 1098, yes.
MR. REICHEL: Okay. Could we go to the next slide, please, number 35?
Q I think we've already touched on some of this, but what is summarized in this slide in terms of the process?
A This is the summary of the Kennecott responses to the March 22nd deficiency and leading to the August 8th, 2008 (sic) determination by the Department that the application was now administratively complete and technical reviews would begin.
Q And that administrative completeness -- and this slide references certain proposed exhibits in this case; is that

correct?

A Correct.

Q Okay. And the August 6th -- excuse me -- August 8th, 2006 letter was the one in which -- was that where DEQ notified Kennecott that it had determined that the application was now complete?

A Yes.

MR. REICHEL: Okay. Could we go to the next slide, please, number 26?

Q And again, this is a rather -- a lot of information here; it's another flow chart that has at the top, "Administratively complete," and then a series of arrows. I'm not going to ask you to go through all of this, but could you just briefly indicate or explain what the point of this is or what you were trying to depict?

A Yes. This is -- again, this is the -- this now addresses the issue of actual technical reviews, who was assigned to that particular task; whether there was additional exchanges of information after the determination of administrative completeness leading to each individual technical person's summary and approval of their respective portion of the permit application leading to a draft permit.

Q Okay. And then let's -- do you in some succeeding slides present perhaps in more legible form the summary of the input that you got from other department staff on the

various issues they were assigned to review?

A Yes.

MR. REICHEL: Could we go to slide 37, please?

Q And again, this lists a series of dates and exhibits. Is this basically a listing of the briefings or technical input that you and the permit writer got from staff assigned to review different aspects of the application?

A That's correct. Our process is set up that once a technical staff person has completed their review they prepare a technical memo describing the background for their approval of their particular area of responsibility.

Q And again, could we just -- I don't want to go into a lot of detail, but could you just highlight from this -- either from memory or from this slide the staff involved in this process?

A Mr. Deatrick was assigned to the review of Rules 2233 and 36, discharge management plan. His was the first memo to come through. In November Sara Wolf-LeSage provided the -- provided Jeanette Bailey with recommendations for ethyl limits relative to surface water protection. December '06 Kristen Mariuzza, who was the district engineer in the U.P., provided her approval of the treatment system through her basis of design memo. January of '07 Eric Chatterson, who was the geologist -- hydrogeologist responsible for evaluating the geology and monitoring portion of the

application provided his approval. And February of '07 Dan Dell, who is in -- works in the permit section, provided the antidegradation checklist approval.

Q So once the staff had provided their inputs to you and the permit writer, Ms. Bailey, was a draft -- well, the permit's then actually drafted?

A An initial draft was prepared; that's correct.

MR. REICHEL: Could we go to the next slide, please?

Q This says, "Draft permits from December of '06 through February of '07." Was there just one draft or were there various iterations?

A Actually there were ten iterations of the draft permit based on meetings between staff, based on additional information and discussions. We ultimately went through ten separate internal drafts of the permit before we had felt we had draft that was ready for public notice.

Q Okay. And you alluded to this earlier. Under the rules that govern the issuance of water discharge permits there are requirements for public notice and opportunity to comment; is that correct?

A That's correct.

Q And did you and other Department staff follow the -- what you understood to be those procedures?

A Yes.

Q And do you have a slide or a series of slides summarizing the public participation process that the water bureau followed with respect to the Part 31 permit?

A Yes; yes.

MR. REICHEL: Could we go to slide 39, please?

Q Okay. This is about that public participation process?

A That's correct.

Q So what mechanisms, if you recall, did the DEQ use to make available to the public about the proposed groundwater discharge permit?

A Well, these were concurrent permit reviews that were going on between three programs. The office of geologic survey, air quality division, and the Water Bureau. And so on August 6th of '07 the information for public review was posted on the office of geologic survey website. The geologic survey -- office of geologic survey had a website that had been up for quite some time allowing the public input into their process. Once we had draft permit we joined in in that website to include our draft permits. And so that contained the overarching document describing the process, all of our -- when it says "fact sheets," this would have been our technical memos from staff as they approved each portion of the application. And then the proposed terms and conditions.

MR. REICHEL: Okay. Could we go to the next

slide, please?

Q And what does this summarize, what further steps?

A This summarizes the newspaper public noticing process. The notice of public comment period and hearing was announced on July 31st, August 9th and August 23rd of 2007 in the Marquette Mining Journal and the notice contained some information about the process, but also references to where the public could get additional information if so desired.

MR. REICHEL: And could we go to the next slide, number 41?

Q And what does this -- could you summarize what steps in the process are listed here?

A The Department allowed for a 28-day public comment period and also held a series of public hearings. The public hearings were conducted from September 10th through 14th in both Marquette and Gwinn. The Marquette public meeting was held on the 10th. Because of logistics the public meetings on the 11th -- on the 11th through the 14th were at the -- it was in Gwinn; the recreation hall in Gwinn next to the district office. And September 19th of '07 a public hearing was held in Lansing.

Q And you put together another slide summarizing the level of public participation?

A Some information on public -- we --

MR. REICHEL: Could we go to slide 42, please?

A In Marquette the meeting that was held on that Monday, there were approximately 700 people in attendance. Approximately 200 people attended the hearing -- the series of four days of hearings in Gwinn; 150 in attendance at the Lansing public hearing. We received approximately 3500 written comments. Now, that's for all the programs, that's not just water bureau. That's combined between DNR, air, office of geological survey and the water bureau.

Q Mr. Janiczek, did you and other staff -- water bureau staff review and consider both oral and written comments submitted by members of the public as they related to the Part 31 permit?

A We reviewed every comment relative to the groundwater permit, yes. The Part 31 permit.

Q And having completed that review, did you or your staff ultimately put together a compiled response to public comments by different branches of the DEQ?

A The Department put together a responsiveness document that was 138 pages long of which approximately 40 pages of that were directly related to water bureau issues.

Q Okay. And is that what's --

MR. REICHEL: Could we grab slide 43, please?

Q Is that what you're talking about there?

A Yes. I'm sorry.

Q And have you put together some slides identifying specific

actions that the Department took, and more specifically the water bureau took with regard to changes in the draft permit based upon public comment?

A Yes.

MR. EGGAN: Your Honor, and with respect to Mr. Reichel, might this be a good time for a break? We've been at it about an hour and a half.

MR. REICHEL: Certainly.

MR. EGGAN: Even if it's two minutes?

MR. REICHEL: No, that's fine.

JUDGE PATTERSON: Time flies.

(Off the record)

Q Mr. Janiczek, when we took our break I was just asking you about whether or not you had prepared some slides summarizing changes that you indicated were made by the Department to the draft permit as a result of the public participation process?

A That's correct.

Q And I believe you testified you prepared some slides summarizing those?

A Yes.

MR. REICHEL: Can we go to slide 44, please?

Q Could you briefly review or highlight the changes that the Department made to the permit based on public comment?

A The first is contained in Part I, Section 4. And that was

the inclusion of numerical limits in groundwater for a series of substances, particularly metals, that were previously regulated by rule. The standards were -- by reference were already there. But in this case we added numerical limits to actually describe those in the permit.

Q Can I just interrupt you there to ask you to clarify something? When you talk about "enforced through rule," are you saying that this permit requires compliance with rules under --

A Yes.

Q The Part 22 Rules?

A Yes. In particular, either Rule 2204(2), which says that -- which states that a discharge cannot create a facility, or Rule 2222, which has specific standards. Even if the permit as written simply contained the word "report," the rule that applied to that parameter and the standard associated with that would still be in force.

MR. REICHEL: Can we go to the next slide, please?

Q What additional changes have you identified based on public comment?

A Part I.12 of the permit was a clarification. As we noted before, the compliance responsibilities of the applicant in the event a permit limit was exceeded -- we clarified that the report that was due, explaining what was done about correcting the exceedents, would come -- would be due seven

days after confirmation sampling, rather than the initial result. In Part I.12, we also added specific language from Rule 2227. Again, these are -- these are requirements that were in force by rule previously, but we simply added the three items that are listed there; that is, reduce or specifically eliminate the use of a substance, closure of the facility -- those two were added. Again, they don't normally appear in the boilerplate in our permits. They were added specifically to this case based on public comment.

Q And again, are these -- in the rules under the permit, are these things that a permit can require?

A Yes.

MR. REICHEL: Can we go to slide 46, please?

Q Could you explain what changes are identified here?

A We added a definition for "by-pass," clarifying that this is only to include the discharge of effluent that does not meet permit limits. The company had made a -- Kennecott had made a request as to clarification of the term "by-pass." If for some reason a particular waste stream, prior to going through the treatment system, had already met all the standards and all the limitations that were in the permit, would that necessarily be considered a by-pass? And in this case we said no. As long as all limitations were met up front, that wouldn't necessarily by definition be a by-pass

of the treatment system.

Q And what's the next change?

A Part III, Section 1, it clarified -- our usual language says that "this permit does not authorize discharge surface waters." In this case the hydrogeologic study demonstrated that there is venting to the surface water at some distance from the discharge. We simply added the term "direct discharge to surface water" in the -- in that statement in Part III.

MR. REICHEL: Can we go to slide --

Q Did you want to add something?

A No.

MR. REICHEL: Slide 47, please.

Q Could you continue with the list of identified changes?

A This was a change made to Attachment I, which is a table contained in the permit of expected effluent quality coming from the treatment plant. And we simply added a footnote explaining the purpose of the list. People were very confused about what table -- what the Attachment I really meant. And we put a clarifier on there that simply indicated that this was the effluent quality that was expected to be coming out of the wastewater treatment plant.

Q And can you address the last bullet on page 47?

A Yes. The last bullet says, "The language in Part I, Section 10.d specifies how compliance with the limits in Attachment

I will be addressed." Attachment I, again, describes the expected effluent quality coming out of the treatment plant. All of those numbers, all those values are less than -- in fact, in most cases quite a bit less than the standards that would be applied to groundwater. What Part I, Section 10.d is, is a notification requirement that states that if the facility, in their effluent monitoring, ever exceeds five times the level of the parameters in Attachment I, then the Department can require them to do -- to take certain actions, including increasing the monitoring and modification of the wastewater treatment plant.

Q And ultimately the groundwater discharge permit was issued when, sir?

A December 14th, 2007.

Q And again, you've already testified you were the one -- by virtue of a delegation from the director, you actually signed this permit?

A That's correct.

Q And in doing so, Mr. Janiczek, did you make any determination that in your judgment -- as to whether or not the permit as issued did or did not meet the requirements of Part 31 and the Part 22 Rules?

A That was -- the basis for my signature was the fact that it was my opinion, as it is my responsibility, that all the limitations in that permit, both direct numerical and by

rule reference, were such that the discharge in compliance with that permit would not be injurious to groundwater or surface water.

Q And did you otherwise -- did you make any determination as to whether, in addition to the effluent or the discharge requirements, whether the permit otherwise satisfied the applicable requirements of the Part 22 Rules?

A Yes.

Q And what was that determination?

A That the -- with regards to volume?

Q Not specifically. I guess what I'm asking you -- I think this was implicit in your decision, but I just want it to be clear. Is it or is it not your belief that the permit as issued satisfies the requirements of the Part 22 Rules?

A Yes. The Part 22 Rules and Part 31 of Act 451.

Q Let's talk now about limitations in the permit. First of all, I think you touched on this, but what -- does the permit limit the amount of water that can be discharged?

A Yes. The limit is 504,000 gallons per day as a daily maximum.

MR. REICHEL: And could we go to slide 49?

Q And what was the basis of that?

A The application from the facility.

Q To put this as simply as possible, under the terms of the permit is there any condition or provision in the permit

that would allow Kennecott to discharge in excess of that limitation?

A No.

MR. REICHEL: Can we go to slide 50, please?

Q Does this slide summarize conditions in the permit regarding treatment?

A Yes, it does.

Q And could you briefly review those?

A This basically -- this section of the permit basically says that the wastewater must be treated according to the basis of the design that was submitted as part of the application and ultimately approved by the staff person, in this case Kristen Mariuzza, responsible for approving the basis of design. The wastewater treatment plant, at least in flow chart, z described in Attachment 6A and -B of the permit; that under the mining permit, the engineering plans for the design of the system must be approved by the Department and that once the facility is constructed, construction must be certified by a licensed professional engineer.

Q Does the permit as issued contain some requirements related to treatment system operation?

A Yes, it does.

MR. REICHEL: Can we go to slide 51, please?

Q And could you briefly outline those requirements?

A Part I.5.c is the requirement for the operation of the

maintenance manual, which is described in Rule 2218. That is required as a schedule in the permit. Those usually don't come prior to permit issuance, in that they're developed in accordance with a specific design and operation of the treatment system. Part I.6 of the permit deals with operator certification pursuant to Rule 3110 -- or I'm sorry. It's not "Rule" -- pursuant to Section 3110 of Part 31, the law requires that a certified operator be in charge of operating the system. And then Part I.7 deals with facility operation and maintenance, a series of inspection requirements to make sure that the facility -- the treated water infiltration system is maintained and inspected, so that it meets the criteria such as two feet of freeboard; that it continues to take water; that we don't have ponding and pooling; those types of issues.

Q I'd like to turn now, Mr. Janiczek, to considerations that you and your staff made in developing specific permit limits.

MR. REICHEL: Could we go to slide 52, please?

Q It says the heading, "Hydrogeologic Considerations." Could you explain what hydrogeologic considerations of a general nature went into the development of the limits in this permit?

A Well, our initial determination of course was that the groundwater actually did vent to surface water,

hydraulically downgradient from the treatment water infiltration system at a distance of approximately 4- to 5,000 feet from the actual discharge location. The receiving water, the headwaters of the tributary of the Salmon Trout River, were evaluated under zero flow conditions, meaning that there was no credit given for mixing the surface waters, so the numbers are the most conservative surface water limits that could be developed in the situation.

Q Can I interrupt you there just to explain further? When you talk about -- what is your understanding of how, in the course of developing standards for protection of surface water, to what extent the amount of flow in the water to which the discharge is to occur, the surface water is taken into account?

A Well, that's more -- I mean, that's more of a question that would be directed to our Surface Water Assessment Section staff. The evaluations by that staff are based on the amount of flow in the receiving water. The greater the flow, the higher the standard because of mixing. Mixing is a concept that is generally allowed in surface water, so that the limitation would be higher, based -- as it relates to flow, based on the volume of flow in the receiving water.

Q In this case, as you and other staff were proceeding with the development of permits, essentially what assumption was

made with regard to whether there would be any surface water to mix with, in terms of a possible upward movement of allowable contaminant levels?

A My understanding is that the surface water calculations were based on a situation where venting groundwater would be 100 percent of the flow in that stream.

Q And to your understanding -- recognizing that you didn't develop this, to your understanding is that a -- is that or is that not a conservative assumption?

A That is a very conservative assumption.

Q Could you go to the third bullet, please?

A The third bullet. The effluent quality as proposed in Attachment 1 is -- and the parameters that are limited in Part I.2 of the permit, "Final Effluent Limitations" are protective of both groundwater and surface water.

MR. REICHEL: Could we go to the next slide, please? Number 53, which talks about water quality standards.

Q Could you explain to Judge Patterson what you wanted to depict in this slide or what you wanted to present?

A Yeah. This slide is simply intended to point out that for purposes of the groundwater discharge permit, that for every parameter that is monitored, that has either -- has a water quality standard either in surface water or groundwater, there is either a numerical of it or a limit that is

referenced by rule that would apply to that parameter, so that there is some control, either direct numerical limitation or by rule reference, of every parameter that has a standard that's been developed by the Department.

Q So to the extent that it's been suggested in prior testimony in this case that the permit as issued does not regulate the discharge of certain parameters, would you agree or disagree with that?

A I disagree. The parameters are regulated through that permit.

MR. REICHEL: Could we go to slide 54, please?

Q Could you explain what aspects of the permit you're trying to summarize here, as it relates to the implementation of the permit once the system is set up and ready to operate?

A This slide 54 covers the effluent limitations as it relates to the initial and final limitations.

Q And when you talk -- I'm sorry, sir. When you talk about initial limitations, what's the context for that?

A The limitations for effluent are broken up into two sections. Under the initial effluent limitations which apply for at least 90 days, the facility is required to do a pilot study. And under that pilot study they are to operate the treatment system to demonstrate that they can meet the effluent limitations that are contained in Part I.1 of the permit and the expected effluent quality that's tabulated in

Attachment I.

Q And given the way the permit is written, as this initial run of the system is conducted, does the permit authorize the discharge of that water from this initial -- as you called it, pilot period? Does the permit authorize that water to go into the ground?

A No. The permit specifically prohibits any discharge to the treated water infiltration system until the facility has demonstrated that the treatment plant can achieve the limitations contained in Part I.1 and Attachment I.

Q So if the treatment system is running, what happens to the water that's coming out the back end?

A They would have to store that water until such time as the treatment system had demonstrated that it could meet the limitations.

Q And during this -- under the initial effluent limitations, what frequency of sampling analysis is required?

A That's a two-part -- actually a two-part question.

Q Okay.

A For each individual parameter -- specific parameter, within the -- within Part I.1, the facility is required to do daily sampling. The permit also requires the real-time, continuous testing of specific conductants. And as we discussed earlier, "specific conductants" is the indicator parameter for the treatment system. The company is required

during this pilot study to develop what's referred to in the permit as the allowable operational range. It is the range of specific conductants' values under which the facility has demonstrated that the treatment system can achieve the limitations in Part I.1 and Attachment I, the expected effluent quality.

Q And to make this demonstration, does the company -- or contractors have to establish some correlation between specific conductants' measurements and the chemical characteristics of the effluent?

A That's exactly what the intent of the pilot study is to do, so that --

Q And it --

A -- so that, as the -- if the pilot study demonstrates the capability of the treatment system to meet those limitations, but our monitoring frequencies change. And we'll actually talk about that here in a second.

Q But again, does the demonstration you've just talked about -- until that demonstration is made, is the permitee, Kennecott, allowed to actually discharge treated water into the ground?

A No.

Q Could you go now and talk about the remainder of the slide, the final effluent limitations, and explain what you mean by that and how that's implemented in the permit?

A The final effluent limitations are the set of limitations that apply once the permitee has demonstrated that they can achieve the limitations described in Part I.1 and Attachment I. At this point they are allowed to discharge to the treated water infiltration system up to 504,000 gallons per day. Sampling frequencies for individual parameters now change to weekly or monthly. And the facility must continue, however, to sample specific conductants on a continuous, real-time basis. There are conditions in the permit that state that if the facility ever falls outside that operational range for conductants that was determined in the pilot study, that what the facility must then do is revert to daily sampling for individual parameters and make a demonstration to the Department that the excursion from the allowable operational range has not caused an individual parameter to exceed a permit limit; and if it has, to take the steps necessary to upgrade the treatment system.

MR. REICHEL: Can we go to slide 55, please?

Q What are the permit conditions and limitations relating to monitoring?

A Well, in this case, this slide is specifically in reference to groundwater monitoring. There are two groups of wells that are -- that are listed in the permit: Part I.3 of the permit, which is the groundwater monitoring limitations for the hydraulically upgradient monitoring wells. And really

there are -- initially there are no numeric limitations in this section of the permit. This is theoretically the quality of water that's coming onto the site from offsite and passing through underneath the treated water infiltration system.

Q In other words, it's essentially the background into which the discharge is occurring?

A That's correct. That's pre- -- and that's exactly correct, prior to discharge.

Q And what does condition -- or Part I.4 address?

A Part I.4 is for the hydraulically downgradient monitoring wells and numerical limitations. There are numerical limitations in that section of the permit. In both cases groundwater is monitored on a quarterly basis. So we have -- so the monitoring system in effect is continuous monitoring of conductants within an allowable operational range, weekly and monthly monitoring of effluent parameters, quarterly monitoring of groundwater parameters. If, after discharge commences, we find that the mound that's created as a result of the discharge has larger influents than was initially predicted, then the monitoring wells in Part I.3 which are currently listed as upgradient wells could be changed to wells that have limitations, and additional upgradient wells installed after the fact.

Q And again, I believe you testified of this earlier; that the

permit requires groundwater monitoring downgradient -- or what's understood to be downgradient of the TWIS; is that correct?

A That's correct.

Q And just going back to I.3, what are the -- when you talk about sidegradient, what does that mean?

A Basically that is -- those are wells that are located lateral to the treated water infiltration system. You have a situation where you have the infiltration system. You have groundwater migrating from the southwest to the northeast across the treated water infiltration system. That groundwater, which is -- which flows immediately under the treated water infiltration system -- the sampling of would be -- those wells as referred to as the upgradient wells. The lateral wells are the wells that actually would exist upgradient but outside the treated water infiltration system.

JUDGE PATTERSON: We need to take a break. Becky has a technical problem.

MR. REICHEL: All right.

(Off the record)

Q Mr. Janiczek, I'd like to shift focus to the issue of effluent limitations.

MR. REICHEL: Can we go to slide 56, please?

Q What's the point of this slide?

A The point of this slide is simply to point out the key parameters that were involved in our evaluation or establishment of limits in the permit.
Q And the first one is specific conductants. You've already been talking about that; correct?
A Being used as an indicator or parameter to demonstrate the effectiveness of the treatment system, yes.
Q And so we've gone through that. The next category you have listed here is metals; is that correct?
A That's correct.
Q Is it fair to say that metals were the principal focus of the permit in terms of regulations?
A That's correct.
Q And with respect to the development of effluent limitations for metals, were -- did you or the Department consider a variety of factors in developing limits for metals considering both surface water and groundwater considerations?
A That's correct.
MR. REICHEL: Can we go to slide 59, please?
Q Could you explain -- strike that. Was part of the process that you used to develop limitations -- did it involve consideration of surface water as well as protection of groundwater?
A That's correct.

Q And with regard to surface water protection, what sort of factors went into your consideration of that?
A The factors that went into that consideration included surface water protection for those parameters that were described by the surface water assessment section as being important for surface water protection.
Q And so I think you've testified, and some of the previous slides reflect that you -- that the groundwater permitting staff interacted with surface water assessment and sought input from them?
A Correct.
Q On these surface water protection issues; is that correct?
A That's correct.
Q And based upon your communications with surface water assessment staff, what is your understanding of how -- what sort of analysis they go through in terms of -- well, for example, you're looking at the slide here. The third bullet talks about loading. Could you explain what you're attempting to convey there?
A Loading -- for surface water purposes, loading is an important issue. Surface water standards from our experience in dealing with the surface water assessment group for a long time -- surface water standards are divided into two separate types of limits. Limits for acute toxicity and limits for chronic toxicity. And so "loading"

is a term that relates to the overall -- let me take a step back. Rather than a specific concentration limit at a point in the aquifer, which is how groundwater compliance is generally determined, surface water will look at the loading of a particular substance to the surface water over the broad area of influence; in this case, over the discharge. So for chronic values, values that have potential long-term effects, the surface water assessment group will establish a loading rate over an area that is influenced by the discharge. And that's part of the information that we provide surface water in our request for an evaluation. What we provide to them in effect is, how much groundwater affected by the discharge we've calculated or given our best estimate as to how much water is venting to those surface water bodies on a daily basis. And they then take that information and determine whether or not, based on the parameters in the application, whether there are acute values, meaning that these are maximums not to be exceeded, or whether they're chronic values, which are values that can be averaged over an area to see what the overall loading is to the system, to the surface water. And that gets to the next bullet, is that in general, for parameters that are related to groundwater concerns, the groundwater program deals, as you see in groundwater, with values that are classified as daily maximums. A groundwater system, a

groundwater discharge, is regulated by daily maximums because of the difference in flow, in the flow dynamics. Surface water flow is turbulent flow. There is some mixing that could take place. Groundwater is laminar flow, and therefore, if you exceed a standard, that standard generally is going to -- that concentration in groundwater is generally going to travel large distances with very minimal change in the initial concentration. In surface water, a venting under normal situations -- now, understand this one was a zero flow, so this was a very conservative number. But under the normal situation, groundwater vents to surface water, will mix with the available surface water. And so with that you'll see in our permit -- in this permit in the effluent, daily maximum and monthly average limits for certain parameters.

Q And with regard to -- and again, you testified that you and your staff got some input from the Surface Water Assessment System as to standards that they would establish or recommend to protect surface water, including these chronic effects; is that correct?

A Yes.

Q And with respect to -- is there a group of metals for which they provided input where -- that are addressed in the last bullet on this slide 59?

A Yes.

Q Could you explain what those were and how they were addressed?

A Do you want to jump ahead to the next slide where we list them individually?

Q That's fine, yeah, if you want to explain that, but -- go ahead.

A We could do that probably more easily if we had those in front of us.

Q Sure.

MR. REICHEL: Let's go to slide 60, please.

A These are the substances for which the Surface Water Assessment Section provided recommendations for specific limitations in the program. And they include cadmium, copper, mercury, silver and selenium. The limits in groundwater for those parameters are listed in the second column and are based on the background -- based on groundwater limitations -- evaluating groundwater limitations, surface water protection, and background groundwater quality. The third column is the actual surface water standard or surface water criteria recommended by the Surface Water Assessment Section. And you will see that there is a difference between the values in column 2, the groundwater limitations; and column 3, the surface water limit. It was our professional opinion, based on input from staff hydrogeologists and approved by me, since that's my

delegated authority, that the limitation of cadmium at 3.0 micrograms per liter, would, through the mechanisms of advection and dispersion, achieve a surface water limit of 2.8 at some distance 4- to 5,000 feet from the discharge point. Similarly, for copper the groundwater limit is ten. Again, these limitations are enforced at 150 feet from the point of discharge. It's our professional opinion that at a venting location approximately 4- to 5,000 feet away, that the mechanisms of advection and dispersion will reduce that to at least 7.4 micrograms per liter for copper. And the same evaluation would have taken place for mercury and for silver.

Q Could you back up now, sir, and explain what you mean by "advection and dispersion"?

A "Advection" and "dispersion" are terms relative to hydrogeology. Advection is simply the movement of groundwater, and dispersion is the mechanical reduction of concentration of a substance at the leading edge of -- in this case we'll call it a plume -- but the leading edge of the effluents of the discharge -- the groundwater affected by the discharge. And so because of the flow path, the torturous flow path that a molecule must take through sand grains, that process will lead to some dispersion of that material to the point where the concentration at the leading edge is reduced.

Q So in this case, if I understand you, looking again at slide 60, under the second column, "GW" or groundwater "Limits," those again -- those are being measured where?

A Those are being measured in groundwater 150 feet downgradient from the treated water infiltration system.

Q And based upon the available hydrogeologic information, how far from that point of measurement, about 15 feet downgradient approximately, would the water have to travel before it actually vented to the surface waters; that is, the seeps in these tributaries to the east branch of the Salmon Trout?

A Approximately 4- to 5,000 feet.

Q And as a geologist -- a hydrogeologist, in your professional judgment is there any question in your mind that is the result of advection and dispersion that, as a result of that transit over that time --

MR. EGGAN: I think that this is about to be a leading question, Mr. Reichel.

MR. REICHEL: All right. That's fine.

Q Mr. Janiczek, based upon your professional training and experience and your understanding of the site conditions here, have you formed any opinion as to whether or not, during the course of transiting from the TWIS system or monitoring points 150 feet downgradient of it, to -- through the groundwater to the locations of the seeps, where there

could be a connection to surface water, have you formed an opinion as to whether or not the processes that you described would result in a water quality at the seep locations that would meet or exceed the surface water criteria listed here?

A It was the professional opinion of staff assigned to do the detailed technical review -- and based on -- my hydrogeologic experience supported that opinion -- that the values, the concentrations that are protective of surface water would be achieved at the venting location.

MR. REICHEL: Can we go to the next slide, please, number 61?

Q Could you explain what you were attempting to summarize here, sir?

A This is a pretty complex slide here that we'll -- I'll try to explain it. Attachment I in the permit describes the expected effluent quality that will be coming out of the treatment system. And it is the level of treatment that the Department expects the company, Kennecott, to achieve as part of their treatment process. Each of the values, each of the results in concentration that are listed in Attachment I, those values are protective for both surface water and groundwater. There is a provision in the permit, Section 10.d, that's a notification provision. And that notification provision says that if the facility exceeds

five times the concentration of a parameter that's listed in Attachment I, that the Department can require the facility to change their monitoring system or upgrade or modify the treatment system. Even at five times the concentrations that are listed in Attachment I, virtually all of those parameters would continue to be protective of surface water and groundwater. And the parameters, in correspondence between ourselves and the surface Water Assessment Section, there were three parameters; barium, nickel and zinc; for which the actual limitation in the permit in groundwater is based on groundwater protection. The Surface Water Assessment Section recommended that for those parameters, the more conservative surface water number be employed in the permit. It was my conclusion that through the condition, the notification condition in Part I.10.d, that even if the parameter exceeded five times the expected effluent quality, they would still be below the surface water protection number. And that would be the section of the permit that would control the value of those substances and still ensure that the discharge was protected.

Q And again, in this slide you reference this allowable operational range producing -- how does that relate to what you've just said if at all?

A The allowable operational range -- the permit states that the facility, in their pilot, must develop an operational

range that demonstrates that they can achieve the limitations contained either in Part I.2 or Attachment I. And so it is anticipated that if the company stays within the operational range, that the concentrations in the effluent will be far below the standards that are protected for both groundwater and surface water.

Q And could we go to the next slide, please, number 62? And does this talk about this expected -- or this EEQ, Expected Effluent Quality? What is that again, sir?

A The expected effluent quality is the concentration of these substances that Kennecott in their application indicated they could achieve through the wastewater treatment plant. The third column is the limit in the permit. And this is simply a graphical representation and comparison of the expected effluent quality which is Attachment I in the permit limits, indicating in every case that the expected effluent quality is less than the permit limit.

MR. REICHEL: Could we go to the next slide, number 63?

Q This has the heading, "Numerical Limits, Groundwater Rule 2222(5). and 50 Percent of Part II.1 Criteria." Could you first explain what you mean by that and how these particular limits were developed?

A Rule 2222(5) describes the process for establishing limits for inorganic substances that are not otherwise mentioned in

the rule. And so what it says is that the limit should be one-half the concentration -- the difference in the concentration between background and the Part II.1 criteria. In this case, this is a listing of five parameters, barium, strontium, thallium, vanadium and zinc, for which no credit for background groundwater quality was given. And so these limits in the permit are simply 50 percent of the 201 residential criteria.

Q And again, if I understand you correctly, these limits are based upon -- are you saying these limits were based upon Rule 2222(5)?

A That's correct.

Q And the parameters here are -- if you'd just read them, please?

A Barium, strontium, thallium, vanadium and zinc.

MR. REICHEL: Could we go to the next slide, number 64?

Q Could you explain what's depicted or summarized on this slide?

A This is a group of substances, group of metals that is -- for which limitations were also established pursuant to Rule 2222(5). However, based on information that was provided by the facility, these limits are now -- now have a factor in them relative to the existing groundwater quality at the site.

Q And again, how is the existing groundwater quality determined?
A Through the collection of water quality data from the existing wells at the facility that were submitted as part of the -- initially as part of the hydrogeologic investigation, and then subsequent data received from the company after the application.
Q So using those data and -- what? -- the Part 201 criteria?
A Correct.
Q Then how were these limits set?
A That's correct.
Q So set between those two -- halfway between those two points?
A Basically subtracting the 201 criteria from the existing groundwater quality; dividing that in half and adding that to the existing background groundwater quality.
Q Thank you. And again, to your understanding, sir, is that approach consistent with the requirements of Rule 2222(5)?
A Yes, it is.
Q Now I'd like to direct your attention to three of the parameters on this list: beryllium, boron and lead. I believe you're aware, Mr. Janiczek, that Petitioners have argued in this case -- or at least in their petition, that the effluent limits established for those parameters and the permit that are reflected here are in error or too high.

Are you aware of that contention?

A Yes.

Q And could you explain, if you -- first of all, do you agree with that contention?

A No.

Q And could you explain why?

A Well, the reason is that Part 31, Section 3109 and Rule 2204, both indicate that a discharge shall not be injurious to any of the protected uses of the waters of the State. In establishing values or permit limitations, which is my delegated responsibility, there are -- first of all, there are no rules in the Department relative to the rounding of calculations. In fact, the Water Bureau has subsequently recognized that that was an issue within the bureau. Routing was done in every way imaginable by the individual technical staff. There were no rules, no guidance documents out there relative to rounding.

Q Excuse me. Let me just interrupt you here. Why is rounding even an issue here?

A Because of the fact that the values, as strictly calculated for beryllium, boron and lead, are slightly less than the numbers as they appear in the permit. In the case of boron, there is a less-than-2-part-per-billion difference in the exact calculation. And for beryllium and for lead, there are in the area of parts-per-trillion differences between

the specific calculated number and the number as it appears in the permit. Based on my delegated authority in this case, I approved these limitations because the difference in the numbers was very slight and that even at the numbers -- with the numbers that are described, the limitations described in the permit, that the discharge at those levels and the concentration at those levels in groundwater will not be injurious.

Q Just so we're clear on this, when these numbers were calculated following the process provided under Rule 2222(5) which you've talked about, again is this -- where you look at the difference between background and the Part 201 criteria; is that correct?

A Correct.

Q And then halfway between those; is that correct?

A Right.

Q So you have to do some arithmetic to get to those?

A That's correct. There's some math involved.

Q And in those calculations, is that where the rounding issue comes in?

A That's correct. As a result of those calculations I think the boron number ended up being 283-point-something, and the beryllium and lead were on the order of 2.4 instead of 3. And so those numbers were simply rounded up to the whole number but still below the 201 criteria and are not

injurious.

MR. REICHEL: Can we go to slide 65, please?

Q And this lists some additional metals; is that correct?

A That's correct.

Q And could you explain how the Department established groundwater limits or limits for these parameters?

A These are the parameters, as we discussed earlier, that are related to Rule 2222(3), which are the numbers that are specifically listed in the Part 22 Rules and are the aesthetic criteria under the Part 201 generic residential criteria.

Q So in other words these numbers -- when you go to the Part 22 Rule referenced there, you would actually see those numbers themselves in the rules?

A Directly in the rules, that's correct.

MR. REICHEL: Could we go to slide 66, please?

Q This talks about nitrogen. I think you've touched on this before, but could you briefly recap again how the Department chose to regulate nitrogen in this discharge and why?

A Again, the system as proposed -- the discharge system as proposed is a rapid infiltration basin. No treatment credit is given after that discharge. Rule 2222(2) speaks to substances that are treated by the action of soil, soil microorganisms or plants, which are not the case in this instance. And so we deferred to Rule 2222(f) for

establishment of the limitations in the permit for this discharge for nitrogen.

We have approximately 45 permits in house right now for which -- which are primarily drain fields, for which Rule 2204(2)(f) has been used to establish nitrogen criteria in groundwater. In fact, just within the last two weeks I signed the permit for the Huron Mountain Club, which is one of the Petitioners, in which we used this rule to establish the numerical criteria for nitrogen.

Q So the approach you took for the regulation of nitrogen here, is that consistent or inconsistent with your Administration Part 22 Rules at other sites?

A It's consistent with our use -- development of the limitation for nitrogen at other sites.

Q Just looking at the slide, sir, the second bullet, the reference there is to Rule 22- -- as typed says 2204. Now, is there -- is that citation --

A That's a typo. That should be 2204(2)(f).

Q Okay.

A Paren 2, paren f.

Q Okay. Thank you.

MR. REICHEL: Could we go to the next slide, number 67?

Q What is the purpose of this slide?

A Just a summary of our position relative to the groundwater

discharge permit. And that -- the groundwater permit has limitations for metals, nitrogen, pH and other inorganic substances. The limitations in the permit are in compliance with Section 3109 of Part 31, which is the requirement that a discharge shall not be injurious to any of the protected uses or waters of the state. And the last bullet is that it will not be injurious to any of the protected uses of the waters of the state.

MR. REICHEL: Your Honor, I have a few exhibit issues. Well, first of all, as a threshold matter, let me back up.

Q Mr. Janiczek, during the course of your work on this project did you have occasion to -- I think you testified on this, but you did have occasion to see and look at the permit application and supporting materials submitted by Kennecott to the Department in February of 2006?

A Yes, at least in a cursory fashion; that's correct.

Q And do you have some understanding of what the various appendices were -- I'm not asking you from memory. But you understand that there was the application itself and then a series of supporting appendices?

A Correct.

Q And, Mr. Janiczek, do you understand that we have marked for identification in this case as proposed exhibits a series of exhibits designated Respondent's Exhibits 141 through 158,

to be collectively designated the Groundwater Permit Application Related Appendices?

A That's my understanding.

Q And is it your understanding that those proposed exhibits contain the documents submitted by Kennecott --

A Yes.

Q -- in connection with the permit application?

A Yes.

MR. REICHEL: Your Honor, I'm not clear on this issue. I believe that -- again, to recap, at the beginning of these proceedings I thought there was initially a stipulation that the permit applications would be admitted into evidence. I understand that counsel for Petitioners subsequently withdrew that in part. I'm not sure where we're at on that. But in any event, if it is not -- if they are not already into evidence, I would offer into evidence in this proceeding the groundwater discharge permit application that is Respondent's -- those Exhibits 141 through 158.

MR. EGGAN: Your Honor, I have conferred with Mr. Haynes on this, and our position on this is -- and he kindly reminded me what our position has been with respect to these exhibits. Our position is that the permit itself may be and should be admitted. The permit application and the attachments may be accepted by the court but should not be

considered as truth of the matter asserted; in other words, should not take the factual averments that are in those permit applications as true, because we have not had all the witnesses who were participating in all of that factual gathering or even the drafting of that present in court to testify about it. So we're going to maintain our position on that; that the application itself may be admitted or should be admitted and that the -- I'm sorry -- that the permit itself should be admitted but that the application is a hearsay document and should not be considered as truth of the matter asserted.

MR. HAYNES: Your Honor, I join in the objection for a couple of additional reasons. Counsel has just offered as a group exhibit, if my notes are correct, DEQ Exhibit 141 through 158, which is the groundwater discharge permit application and appendices A through M. I haven't looked at those in awhile, but I suspect they're pretty large. And I don't think the witness testified that he authored the documents. He testified that he may have reviewed them cursorily as part of his job. But I think it's improper to offer those exhibits to this witness when he didn't author them. And he certainly can't aver to the truth of the averments in those documents. So I think there's a significant lack of foundation here to admit these exhibits through this witness.

MR. REICHEL: Well, your Honor, the witness has testified that the Department made its decision -- I mean, the whole reason we're here is because these documents were submitted to the Department and reviewed by it. They form the primary initial basis for the Department's decision in this matter. And I think that it's appropriate that -- obviously we've not suggested that Mr. Janiczek was the author of these documents. But we're offering these documents because they were and are essential to the Department's decision reached in this matter.

JUDGE PATTERSON: And it's part of the Department files?

MR. REICHEL: Yes.

JUDGE PATTERSON: So it's admissible under the APA.

MR. REICHEL: Yes.

JUDGE PATTERSON: Whether or not the facts elicited in the application are true I think is certainly an open question as it always is. It's merely an application. And obviously there is dispute over whether or not that's true on the record. So I will admit it on that basis, with the understanding that obviously much of what is recited on the application is now in dispute in this hearing. And as far as the truth of the matter asserted, I understand that.

(Respondent's Exhibits 141 through 158 received)

MR. REICHEL: Thank you, your Honor. With respect to -- may I have just a moment, your Honor?

JUDGE PATTERSON: Sure.

MR. REICHEL: Your Honor, I would also move for the admission of Respondent's Proposed Exhibit 159, which is the March 22nd, 2006 correspondence that the witness testified earlier from the Department to Kennecott, identifying some additional information needed to complete the application.

MR. HAYNES: Your Honor, my notes, although I wasn't here that day, indicate that DEQ Exhibit 159 was already admitted.

MR. REICHEL: That's entirely possible, Counsel.

MR. HAYNES: Again, I wasn't here. This is just what my notes say, that it was admitted through Ms. Mariuzza.

MR. EGGAN: That is my recollection also.

MR. REICHEL: You're correct. Thank you, Counsel. I apologize. I'm sorry. I do not have encyclopedic knowledge of --

MR. HAYNES: I'm surprised.

MR. EGGAN: You're not meeting our expectations.

MR. REICHEL: Okay. Sorry to let you down again. And I would also -- I believe if not already admitted into

evidence, I would offer Respondent's Proposed Exhibits 160 and 164, which were responses submitted by Kennecott to the Department in response to Exhibit 159.

MR. HAYNES: Your Honor, to the extent that those exhibits, 160 and 164, are offered under the same basis as the application and its appendices; that is, as part of the application process; to the extent that the DEQ looked at those documents in formulating its permit, I think the court ought to rule in the same manner for those exhibits as it has for the application appendices.

MR. EGGAN: We have no objection.

JUDGE PATTERSON: That was -- I'm sorry?

MR. REICHEL: 160, your Honor, and 164.

MR. EGGAN: So it's 160 and 164, not through 164?

MR. REICHEL: Correct. 160, 164.

(Respondent's Exhibits 160 and 164 received)

MR. REICHEL: And I would also move for admission of Respondent's Exhibit 179, which was the correspondence from August of 2006 where the Department notified Kennecott that they determined the application was complete. And Mr. Janiczek did testify about that this morning.

MR. BRACKEN: No objection.

MR. HAYNES: No objection.

MR. EGGAN: And we have no objection.

JUDGE PATTERSON: No objection; 179 will be

entered.

(Respondent's Exhibit 179 received)

MR. REICHEL: And finally, your Honor, solely for demonstrative purpose, Respondent's Exhibit 216 about which the witness testified this morning.

JUDGE PATTERSON: Let me ask a question. I didn't note that Mr. Janiczek made any reference to slides number 57 or 58 in his testimony. And given Mr. Eggan's concern about that --

MR. REICHEL: Well, I can address that, your Honor, but I actually skipped over them in the sequence because in response to prior questions Mr. Janiczek had already, in my estimation, discussed the same substantive points.

JUDGE PATTERSON: I believe that's true.

MR. HAYNES: My recollection is the same as Mr. Reichel's.

JUDGE PATTERSON: Okay. I see that. I haven't frankly looked at it that closely.

MR. REICHEL: It was simply an effort to not further prolong this process.

MR. HAYNES: I have no objection, your Honor.

MR. EGGAN: We thank you for your efforts not to prolong the process. Your Honor, our position on this one is the same as it has been throughout.

JUDGE PATTERSON: I understand. I am going to make the same ruling.

MR. HAYNES: And I concur with Mr. Eggan.

(Respondent's Exhibit 216 received)

MR. REICHEL: That concludes my offer of exhibits, your Honor, and at this time I pass the witness.

JUDGE PATTERSON: It's 11:58. Do you want to break for lunch?

MR. EGGAN: I think so, Judge. Thank you.

MR. REICHEL: Sure.

JUDGE PATTERSON: Come back at 1:00.

(Off the record)

MR. HAYNES: I'll defer my questions.

MR. EGGAN: Ready, your Honor, cross-examination.

Mr. Janiczek, I'm Eric Eggan. I represent some of the Petitioners in this matter especially in groundwater-related issues. I'll have some questions for you, and then I suspect that my colleague Mr. Haynes down at the end of the table will have some questions for you, too. Okay.

CROSS-EXAMINATION

BY MR. EGGAN:

Q Let's begin by talking a little bit about the work you've done in your career. As I understand it, you have a bachelor of science in geology from -- is it Wayne State?

A Wayne State, correct.
Q No master's degree?
A No.
Q No Ph.D.?
A No.
Q You're not a licensed engineer here in Michigan?
A That's correct.
Q Are you a licensed engineer anywhere?
A No.
Q I take it that -- in looking over your resume, I take it that you've never worked in a mine?
A That's correct.
Q Or in an underground mine?
A Correct.
Q Certainly not in a sulfide mine?
A That's correct.
Q And you've never approved a permit for a wastewater treatment plant for an underground mine?
A Correct.
Q Or a sulfide mine?
A That's correct.
Q Okay. Or a mine where there were concerns about acid rock drainage or metals leaching?
A That's correct.
Q Okay. So that you testified earlier that in your career

you've probably looked at 3- to 500 groundwater permits conservatively, I'll bet.

A Uh-huh (affirmative).

Q But none of those permits were for sulfide mines?

A That's correct.

Q Or for underground mines?

A The only -- we did -- your first question was have we ever issued a permit. We did an evaluation of the Copper Range Mine that was proposed to reopen as a solution mine operation. That permit was never issued.

Q Okay. Before I get too far down the road, I want to mention something or least discuss with you something. You said that the groundwater rules in Michigan are based in part or are similar to the groundwater rules in Wisconsin?

A That's correct.

Q Now, you're aware, aren't you, that Wisconsin presently has a -- that the state of Wisconsin has a moratorium on sulfide mining? You're aware of that?

A That's my understanding, yes.

Q Okay. Now, I want to ask you -- and this is a little bit of a -- I guess a frolic and detour. But I've got a question for you. I want you to assume that one of the employees in your section concluded an analysis of a groundwater permit analysis. All right. They concluded their analysis of the permit and made a recommendation to you for approval of the

permit. Okay. So that's the scenario we're dealing with.
A Uh-huh (affirmative).
Q And you later -- you learned after they had done their work that that employee actually had a contractual relationship with the entity they were reviewing and considering approving. Okay?
A Okay.
Q Would there be an ethical issue that you would raise in that circumstance?
A Yes.
Q Why?
A Well, I think if I had discovered that -- there's a potential conflict of interest.
Q What is that conflict?
A If an employee has a interest in a regulated party, certainly, if I knew that up front, that person would not be assigned to that project. If I discovered that after the fact, then -- then I have the choice of conducting my own review or reassigning that project to evaluate whether or not the review was in compliance with -- in this case, it would be the Part 22 standards and rules.
Q Okay. So there would be an issue about a potential conflict of interest, and you would do a -- some sort of an analysis, some sort of an investigation to see whether or not there was an impact on the decision that was made?

A Correct.
Q And in all likelihood you would -- what? -- reassign it to somebody else for another --
A It would probably be a case-by-case determination. I would do my own evaluation first.
Q Okay. Have you ever -- I'm going to go back now to your credentials. Have you ever done a peer-reviewed paper on groundwater-related issues at hard rock mines?
A No.
Q Have you ever done a peer-reviewed paper since you've been working for the MDEQ?
A No.
Q And you worked with Kristen Mariuzza on this project, I take it?
A Correct. She was part of the review team.
Q Okay. Was she part of the Part 31 review team also?
A Yes.
Q Was there -- and forgive me for asking, but was there a difference between the Part 31 review team and the Part 632 team or were they all considered one big group called the so-called mine team?
A Actually Kristen was an overlap position in that she had some involvement in the -- on the mining team relative to the 632 permit. And, of course, we would have conversations with staff that were assigned as part of the 632 review

team. However, the other staff assigned to the project would have come out of the permit unit, the groundwater permit unit, and generally were under my direct supervision.

Q I see.

A The process is set up such that the engineering expertise for evaluating things like treatment systems generally comes out of our district office. And so that's where Kristen fit into the Part 31 system.

Q Just to -- is Kristen Mariuzza part of the groundwater permit unit?

A No, she's not.

Q Okay. So she would have been part of the mining team, but she had overlap on issues that related to Part 22 or Part 31?

A Because she was the district engineer for Water Bureau in the Upper Peninsula.

Q Okay. In any event, Kristen Mariuzza was the person assigned to review the basis of design for the wastewater treatment plant for this particular mine project?

A Correct.

Q Now, you were aware, I assume, that Kristen had no experience with a wastewater treatment plant for an underground mine?

A Yes.

Q Okay. And you were aware that she had never seen or

reviewed a wastewater treatment plant like the one proposed in this situation?

A That would be my understanding.

Q And you're also aware that she had not done any special studies to help her prepare to handle this particular wastewater treatment plant?

A Not that I was aware of.

Q Okay. She had not -- you were not aware -- I'll tell you she testified that she did not do any field studies on wastewater treatment plants in hard rock mines anywhere. Were you aware of that?

A Yes.

Q Okay. Did you yourself go and do any field studies on hard rock mining?

A No.

Q So you didn't go out and do a site visit on a sulfide mine anywhere in the United States to get a sense of what the groundwater issues were?

A That's correct.

Q Okay. You're also aware that Ms. Mariuzza had never in her professional career done a design for a wastewater treatment plant; am I right?

A I was not aware of.

Q Does that surprise you?

A Does what?

Q It doesn't surprise you, I take it, that she had never done a design for a wastewater treatment plant in any context?
A The --
Q Does it surprise you?
A No.
Q You also worked with Margie Ring on this project?
A Correct.
Q What is Ms. Ring's relationship to either your determination or the mining determination in this matter?
A Margie Ring, my understanding, works for the waste and hazardous materials division and is an engineer assigned to the U.P. district office.
Q Okay. And do you have an understanding that she reviewed the TDRSA for this project?
A Yes.
Q Okay. You're aware that she had never worked on a mining-related mitigation project?
A I was not aware of that.
Q Does it surprise you to learn that she was not?
A No.
Q And had not?
A No.
Q Now, I've got a question for you related to an assignment of a team member to this project.
MR. EGGAN: May I have MDEQ 031365? And can you

blow up the second part of -- perfect.

MR. REICHEL: Counsel, can you identify for the record what this document is?

MR. EGGAN: Yes. This is Petitioner's Part 31 Exhibit 10-F. And this is an e-mail to -- it's e-mail traffic between Mr. Janiczek and Jeanette Bailey in August of 2005.

Q I'm right on that, aren't I, sir, August of 2005?

A That is correct.

Q Okay. Now, you can see that the first e-mail in this string is -- it appears to be from you. And it's to Ms. Bailey. And it says, "Mark Cherry from Kennecott will be in Lansing. He'd like to meet with staff assigned to the mining proposal." So you were setting up a meeting basically with this e-mail?

A Correct.

Q Okay. And moving up, what we see is the response that was sent to by Ms. Bailey?

A Yes.

Q Okay. And what she says is:

"I will give him a call. This is going to be a groundwater discharge. With that in mind, would you consider contacting Steve Casey and ask that Randy Conroy be assigned to this site when the application comes in as it's going to be a groundwater discharge?"

And it looks like she has underlined the word "groundwater"; right?

A Yes.

Q "If they still want Kristen on board, that's fine. But Randy needs to be in all the pre-app meetings and review of the application as usual as he is the one with the groundwater experience. I don't mind Kristen still being on board, but Randy is our guy up there and he needs to take over or at least have equal footing. Thank you."

And that was a recommendation being made to you by one of your staff members, Ms. Bailey; is that right?

A That's correct; that's correct. Yes.

Q All right.

MR. EGGAN: Can we now go up to the -- to Mr. Janiczek's response to that e-mail? Do the whole -- with the to and from and the address and -- okay.

Q Now, your response to the e-mail from Ms. Bailey is:

"Do you really hear what you're asking for? Let's talk about Hoerner Flooring where a 50-gallon or so discharge has taken ten years to evaluate and they still don't have a permit. I'm going to have to think about that one for awhile before I decide."

Now, my question is -- for you is, the e-mail traffic indicates that Randy Conroy, another employee at the

Marquette office -- or the Gwinn office --
A Correct.
Q -- should be assigned to this team because he's the one with groundwater experience. That's what the recommendation is?
A Correct.
Q Okay. And what she's suggesting is, if Kristen Mariuzza can be an asset but that "Randy is our guy up there and needs to take over" -- that's what Ms. Bailey's suggestion to you is?
A That's correct.
Q And sometime after this e-mail traffic occurs, Ms. Mariuzza was assigned to this particular mine team; am I right?
A That's correct.
Q And Randy Conroy was not assigned to this project?
A That's also correct.
Q Okay. By the way, Mr. Conroy is still employed by the MDEQ?
A That's correct.
Q It isn't like he retired or anything; he's still available?
A That's correct.
Q Okay. Now, I want -- I also want to discuss a budget issue with you. You don't have to be more than a casual observer to know that, during the time period that this particular mine project was under consideration by the MDEQ, there was a real issue in Michigan government about budgetary issues?
A That's correct.
Q And the Water Bureau really was under a resource strain at

that time just like everyone else was; am I right?
A That's correct.
Q And weren't there instances where the Water Bureau's ability to address permit requests was -- it was difficult. It was difficult to assign all the resources needed just to handle the permit applications that were coming in?
A That's correct.
Q This is a pretty important project, this Kennecott project?
A It received our highest priority.
Q Well, that's a -- I think a good answer. But let's just go with my question. Extremely important project to the Water Bureau; am I right?
A It was an important project in the sense that there were critical issues and it required our very best people to conduct the reviews. So this was an important issue for the Water Bureau.
Q And extremely important to the DEQ as a whole?
A I'm not sure what your perspective is on important to the DEQ. Yes, it was a very, very complex, complicated process. And it was our highest priority and, yes, a very important project.
Q Okay.
MR. EGGAN: Can I have MDEQ 026609?
Q Well, I think you've answered the question. Would you call this the most important project that MDEQ has had in the

last several years in terms of permitting?
A Based on the parameters being regulated, I would say yes.
Q Okay. You didn't do any special training for employees in the Water Bureau, though, did you, to -- on issues of acid mine drainage?
A No.
Q Okay. And as far as you know, the MDEQ didn't do any special training for the people on the mine team who were reviewing the various components?
A That, I'm not aware of.
Q Are you aware, sir, that one of the MDEQ employees who was assigned to this project did her own review of acid mine drainage issues by Googling that topic on the internet?
A I'm not aware of that.
Q Well, if I represented to you that that was the testimony of Margie Ring, would you have any reason to doubt what I said?
A No, none whatsoever.
Q Well, if that's the case, the person responsible for the TDRSA analysis is getting her training for a project that you described as being one of the most important projects that the MDEQ has, the training she receives is training that she gets by Googling something on the internet?
MR. REICHEL: Object to the form of the question. The record does not establish -- and lack of foundation. The record does not establish that Ms. Ring said she got her

training in reviewing the TDRSA from Googling the internet. She testified at length concerning her extensive educational and professional training as an environmental engineer that formed the basis of her review of this permit application.

MR. BRACKEN: I join. I join in the response by Mr. Reichel.

MR. REICHEL: I would note I'm not disputing that --

MR. EGGAN: I understand what your objection is. I'm going to go to the transcript really quick so that I'm making sure that we're all talking about the same thing.

Q I'm going to read you a question and an answer from Ms. Ring. Okay. And this was testimony that she offered in this case last Friday.

MR. BRACKEN: Your Honor, I'm going to object right now before we start this, because there's been a lack of foundation. Because Ms. Ring's testimony is obviously more than one question and one answer. And asking this person what he thinks about one question and one answer is not going to be an appropriate way to cross-examine him about this issue. It's not going to be fair to Ms. Ring. And unless he completely asks the questions about her entire experience related to the way he -- he asked the question, I don't think it's fair. In addition, I think there's a lack of foundation about this gentleman commenting upon what she

said about her training or expertise.

JUDGE PATTERSON: I think, if there's a limitation in Mr. Eggan's questioning, and it can be pursued on redirect testimony.

MR. EGGAN: I will be quick, your Honor. Thank you.

JUDGE PATTERSON: Okay.

Q Here was just a couple of questions I asked of Ms. Ring. And I just -- I'm going to ask you for your comment on it.

> "Prior to this project, had you worked on any similar project where you were attempting to assist in the design of a plan that was to mitigate a potential problem before it occurred at a mine?"

The answer was, "At a mine, no." "Okay." The next question is, "And my guess is that you have not worked on any matter involving the potential for acid rock drainage?" "No, I have not." "Okay." And this is the next question. "And prior to undertaking the responsibility here for the review of the TDRSA project, did you do any research into acid rock drainage?" "Not prior to it. But while I was reviewing it, I did look up a few things on the internet." Question: "You did a Google search on acid rock drainage?" Answer: "Yes." That was her testimony. Now, given your testimony that this is one of the most important projects that MDEQ has had for the last several years, is this consistent --

her research, her knowledge of acid rock drainage issues -- and remember she's working on the TDRSA -- is that consistent with this being the highest priority of your agency?

A I know Margie Ring. I used to work with Margie when we were both in the waste management division. And my understanding was that Margie Ring's involvement was relative to her expertise to the design of the mining system for the holding lagoons, the holding facilities.

Q Her analysis, sir, was to review the TDRSA. My question is --

MR. BRACKEN: I'm going to object to his interruption of the answer to the question. The gentleman was trying to -- you cut him off in the middle of his answer. I don't think that's very fair, first of all. And I think it's inappropriate for not allowing the person to answer the question, which is what he was trying to do.

MR. REICHEL: I join in that. I believe the witness should be allowed to answer the question.

MR. EGGAN: Well, I asked him whether or not if that's consistent with the highest priority of the agency. And he wants to tell me all about Ms. Ring's experience looking at landfills. And I don't think that's responsive to my question. So I am simply asking him to respond to my question.

MR. BRACKEN: Well, I think the fair thing to do is allow the gentleman to answer the question and then, if you don't think it was an appropriate answer, move to strike the answer.

JUDGE PATTERSON: I think it was responsive to the question, though. I'll sustain it.

A My understanding of Margie Ring's involvement was relative to the design of the TDRSA and it involved her history in the waste management division and the waste and hazardous materials division has to do with the engineering of lining systems and containment systems. And that was where her expertise came into play relative to her role in evaluating that system. That was my understanding.

Q Don't you wish that an employee who worked on this particular project where acid rock drainage is an issue had a little bit more information available to them than Googling acid rock drainage on the internet?

A I think that, for my purposes knowing Margie's expertise and history, I felt that her background and experience was appropriate for what she was asked to do for the project.

Q Have you ever been to this particular site? Did you ever travel up there?

A Yes, as part of the -- during the public hearings.

Q Good. And we can agree that this is an environmentally sensitive site, can't we?

A Yes.
Q It's a very unique site, isn't it, given the resources that are accessible at that site?
A Yes.
Q And it's made -- the environmental situation here is made even more unique by virtue of the fact that the underground mine is proposed to be under a river?
A That is an issue, yes.
Q Okay. That makes this particular permitting issue more complex, doesn't it?
A The position of the mine is not part of the Part 31 review of this application.
Q I understand. Okay. We do know that the MDEQ did not hire an expert consultant to consult on the wastewater treatment plant basis of design, did it?
A That's correct.
Q In fact, the MDEQ didn't hire an expert consultant to do any analysis of the wastewater treatment plant or the proposed issues?
A That's correct. Our processing rules are structured that -- in particular, Rule 2206, that the applicant --
MR. EGGAN: Your Honor, this is unresponsive. This is unresponsive to my question. And I would ask that that be stricken.
MR. BRACKEN: I don't know that -- you have to let

him answer so you can find out what's responsive, and then you can make a motion that it was unresponsive. But you can't cut him off in the middle of his answer until you find out what he's going to say.

MR. EGGAN: My very simple question was, they didn't hire an expert consultant. And now he wants to tell me about all the rules. And I think I'm entitled to have a cross-examination where I ask questions and he gives me answers to those questions. Mr. Reichel is more than capable of going back and allowing him to embellish any answer he wishes to.

JUDGE PATTERSON: I think that was a "Yes" or "no" question. We don't need to go beyond that.

A The answer is, yes, we did not hire any --

Q You did not hire a consultant?

A Outside consultant, that's correct.

Q Essentially you relied on Ms. Mariuzza to analyze those issues and make a decision and make a recommendation?

A Ms. Mariuzza who had access to other engineers within the department.

MR. EGGAN: Your Honor, again, a simple "yes" or "no" question.

Q You relied on Ms. Mariuzza, didn't you?

A Yes.

Q With respect to modeling at this site, MDEQ didn't do its

own modeling at this site, did it?
A Correct.
Q It relied on Kennecott's modeling, didn't it?
A Correct.
Q In fact, it didn't do -- MDEQ didn't do its own modeling even at the TWIS where the discharge occurred, did it?
A That's correct.
Q It relied on modeling that was done by Kennecott?
A That's correct.
Q Now, there is a section within the MDEQ that does do groundwater modeling, isn't there?
A I believe there is, yes.
Q Isn't there a section called the groundwater modeling program?
A Yes.
Q Okay. But nobody as far as you know -- as far as you know, nobody from either the mine team or the Part 31 team consulted with that group and requested that they do modeling for this site?
A Correct.
Q And there's nothing in Part 31 that would have prevented that from happening? There's certainly no prohibition in Part 31 or in your rules that would have prohibited you from requesting another part of your own agency to assist with the groundwater modeling effort if you had wanted to do it?

A That's correct.
Q Nothing at all to prevent -- to prevent anybody on your team from requesting the expert groundwater modeling within your agency to assist on this project?
A Correct.
Q I want to move to a different area and ask you a question about mining activities -- when the mining activity is going on and this slow process of refilling the mine as mining activities are going on. Okay. You know the basic plan is to have mining operations going on and, as they move up each level, they're going to fill the area that they just mined?
A Correct.
Q Okay. And you also know that in the post-mining when mining is completed, then the plan is to flood the mine with water?
A Correct.
Q And to essentially leave it in place?
A Yes.
Q Okay. Now, just a few questions about that. And we also know that they intend to utilize the rock from the TDRSA area mixed with limestone and put that back into the mine. That's essentially the plan; right?
A Yes. Okay. Yes.
Q Okay. Now, you indicated that there was a process that is authorized by the Part 31 Rules that would have allowed that particular activity to have been considered by the mining

team and considered that as part of the Part 632 process?
A Yes.
Q Okay. Who at -- who in the Part 31 team that you've identified -- who made the decision that this was not going to be a discharge -- that this was not going to be considered a discharge?
MR. REICHEL: Counsel, could you clarify the question? What do you mean "this"? Re-flooding the mine?
Q That re-flooding the mine or that this activity of putting materials down into the mine either during or after operations was not a discharge, who made that ultimate decision?
A Based on discussions with staff, that's my responsibility.
Q And that was a decision that you made?
A Correct.
Q Okay. What kind of analysis did you do of what was going to be placed down into the mine if you personally made that decision? Did you do any sort of analysis to determine what it was that was going to be down in the mine?
A No.
Q Did you do any sort of analysis as to -- or did you know when you made that decision what the level of contamination of the water was going to end up being?
A Not in detail.
Q Okay. Did you make any sort of analysis as to whether or

not that water is going to remain in that area? Im other words, did you make any sort of determination or analysis as to whether or not that water could move into other aquifers that are adjacent to the mine cavity?

A No, I did not do that analysis.

Q Okay. Did anybody?

A It is my understanding that the OGS staff would have conducted that analysis pursuant to their rules and statute.

Q Was there a determination as to whether materials that were going to be in the re-flooded mine were inert?

A No.

Q Did you make any sort of determination or did you conduct any sort of analysis as to whether or not there were aquifers that were usable that were adjacent to the mine itself -- to the mine cavity?

A Uh-huh; yes.

Q You did?

A No, not personally. No. I'm sorry.

Q Okay. Who did? It sounds to me as if you're going to suggest that somebody did?

A Technical staff.

Q Okay. And who was that technical staff that did that?

A Geologist, Mr. Chatterson.

Q What did he report to you on that issue?

A Simply that the basic -- the geology of the -- of the area.

Q Do you have an understanding as to whether or not those aquifers are usable?

A I believe they are.

Q They are usable. Okay.

MR. EGGAN: Your Honor, just a minute.

JUDGE PATTERSON: Okay.

Q I've got a question for you about MDEQ Rule 323.2218(2).

MR. EGGAN: Jan, could I have that please. MDEQ 323.2218.

Q Do you have those rules in front of you, Mr. Janiczek?

A Yes, I do.

Q Okay. Good. That'll help.

MR. EGGAN: If you wouldn't mind showing the 2218(2). That's okay.

Q And that rule provides, doesn't it, sir -- and I'm really looking at the main paragraph. Okay. (a) and (b) will come into play possibly in a few minutes. But the main paragraph provides at least in part:

"In addition, the proposed system for treating the wastewater to be discharged shall have sufficient hydraulic capacity and detention time to adequately treat the anticipated organic and inorganic pollutant flow rate."

Did I read that correctly?

A That's correct.

Q Okay. Essentially what we're saying here is that a wastewater treatment facility needs to have sufficient capacity to treat the water that arrives there?
A Correct.
Q Now, in this case -- and we'll maybe boil it down to its essence -- we're talking about inflow. The MDEQ's analysis of this issue really relied on Kennecott's proposal or Kennecott's statement of what that inflow was going to be?
A The information that was contained in the permit application, that's correct.
Q Exactly. Okay. It's essentially Kennecott's inflow numbers that were used by the MDEQ in this matter?
A Correct.
Q And you know that we as Petitioners have suggested a completely different inflow. In fact, we believe they grossly understated the amount of inflow that's going to be experienced?
A I have been present during part of that testimony, yes.
Q Okay. My question to you is, if we are right -- if we are right, the Petitioners are correct, then Kennecott is not going to be in compliance with this rule, are they?
A That's correct.
Q I also want to --
MR. EGGAN: Jan, if you wouldn't mind -- well, no. I think we're okay. Look at (a) and (b) of that particular

rule, the one that we were just looking at. And again for the record, I'll remind us all that this is MDEQ Rule R323.2218(2). And now we're going to look at (a) and (b).

Q And what we're requiring in the basis of design is a requirement of the volume of wastewater to be treated per unit of time. That's (a).

A That's correct.

Q And that's the issue of the inflow. And we talked about the fact that we disagree with it. And if they're incorrect about their inflow, they will not be in compliance with this rule?

A Correct.

Q Okay. (b) of that rule says that they also have to provide Kennecott also has to provide an analysis of the influent or a description of the anticipated influent including substances to be treated to meet the requirements of -- and there's a citation. Okay. I'll go ahead and finish reading -- to meet the requirements of R323.2222 and the concentrations of the substances." Essentially what this is saying is that in the application for a basis of design for a wastewater treatment plant has got to identify the characteristics of the influent that is going to be coming into the -- into the wastewater treatment facility?

A That's part of the characterization required under Rule 2220, yes.

Q Good. And in this instance, Kennecott has provided a description of those characteristics?
A Correct.
Q And MDEQ didn't do its own analysis of what those characteristics were. It simply utilized the characteristics that were provided to them by Kennecott?
A That's correct.
Q All right. And if it turns -- and you know that the Petitioners disagree with that. You were here for that testimony. You know that we disagree with that?
A Yes.
Q You heard Ann Maest testify as to her conclusions?
A I'm aware of that, yes.
Q Okay. The bottom line is, if Dr. Maest is correct and Petitioners are correct that the characteristics of that influent are different than what Kennecott says and if the Hearing Officer agrees with us, then they're not going to be in compliance with that rule, are they?
A That's correct.
Q We know from the testimony of the Kennecott witnesses who testified that they believe that the wastewater treatment plant is tailored -- they used the word "tailored" -- to the influent that they have predicted?
A Yes.
Q Okay. There would be no reason if it turns out that they

were incorrect and their tailoring was incorrect -- there would be no reason in the world why you wouldn't make them go back to the drawing board and redesign that system, is there?

A That's --

MR. BRACKEN: Objection, your Honor. Foundation. It calls for speculation. It depends on what was different about the influent.

MR. REICHEL: I join the objection.

Q Is there any reason why you wouldn't require them to modify their wastewater treatment facility if it needed to be?

A Well, Part 1, Section 1 of the permit requires a pilot study during which time the facility -- Kennecott must demonstrate that they can meet the influent limits in the permit. If they cannot meet those limitations, they cannot discharge according to the permit.

Q I understand that. Although I'm going to ask you some questions about that in a minute. My question is, if it turns out that this system is not tailored as they claim it is, you're not going to hesitate to take action?

A That's correct.

Q And there would be no reason why they wouldn't have to go back to the drawing board?

A The system would have to be designed to meet the conditions of the permit that's been issued, yes.

Q You're familiar with the ASTM standards, I take it?
A Yes.
Q And those ASTM standards apply in Part 31, don't they?
A They do.
Q In fact, there are a number of references both in the rules -- well, in your rules to ASTM standards?
A Correct.
Q Okay. And you would agree and would expect that MDEQ staff that is analyzing groundwater modeling issues for a project like this to have applied ASTM standards?
A For purposes of the hydrogeologic study, the rules give us the flexibility to make evaluations of data on a case-by-case basis.
Q Well, on a general basis?
A On a general basis, I would say yes.
Q Of course. A person who is analyzing an important project like this should apply simple standards like those adopted by ASTM?
A Yes.
Q Okay. And you're also familiar, I take it, with the MDEQ groundwater modeling guidance that has been created by the agency?
A Somewhat familiar, yes.
Q You would expect that MDEQ staff who are analyzing a groundwater modeling project like this one with this

importance to apply the concepts in the groundwater modeling guidance, wouldn't you?

A Yes.

MR. EGGAN: Jan, can you show me, please, document 100228?

Q Is this a document you've seen before, sir?

A Yes.

Q Groundwater modeling guidance?

A Yes.

Q Okay.

MR. REICHEL: Excuse me, Counsel. Can you identify for the record what's --

MR. EGGAN: I will. This is Petitioner's Part 31 Exhibit 26. And what it is is the groundwater modeling guidance document.

Q What I'm interested in knowing, Mr. Janiczek, is, the document I have appears to be dated October 15th of '02. Is there a more recent document than that?

A I'm not aware that there is.

Q Okay.

MR. EGGAN: Your Honor, this is that this witness is familiar with, that this witness has indicated that he would expect people to utilize as they analyze groundwater modeling projects. I would ask that the court admit this document into evidence.

MR. REICHEL: Your Honor, if memory serves me, I think is already in evidence.

JUDGE PATTERSON: I was just going to ask that.

MR. EGGAN: Is it? Okay.

MR. REICHEL: I think it is in evidence.

JUDGE PATTERSON: I'll have to check that but --

MR. EGGAN: Is it 26?

MR. REICHEL: I believe it was your 26 or Mr. Haynes --

MR. EGGAN: I did not bring my list of what's admitted, so I apologize.

MR. REICHEL: No. That's fine.

JUDGE PATTERSON: Whose exhibit was it?

MR. EGGAN: It would have been mine.

MR. REICHEL: In any event, I'm not certain of the designation, but I'm confident that this document is already in the record.

MR. EGGAN: Okay. Very good; very good.

JUDGE PATTERSON: I seem to recall that. I can't find it on the list at this point.

MR. EGGAN: It would have gone in through Dr. Purcha. And I did not have my as I prepared, so I apologize.

MR. HAYNES: Your Honor, my notes indicates that that -- that the Part 31 Exhibit 26, which is this document,

was not offered or admitted. So perhaps we should do it now.

JUDGE PATTERSON: Well, I'm looking at 632. That's why --

MR. BRACKEN: Part 632, Mr. Haynes?

JUDGE PATTERSON: That's what I was looking at. That's probably why I didn't see it.

MR. BRACKEN: It's on Part 31. My notes to that indicate -- or our notes do not indicate that it was admitted.

MR. EGGAN: Okay. Good. Well, then, in that case, I'm going to offer this as Petitioner's Part 31 Exhibit 26 and request that it be admitted at this time.

MR. REICHEL: We have no objection since it's apparently already in the record in another form. I mean, it's already in --

MR. EGGAN: I don't think it is.

MR. REICHEL: I don't mean to argue, Counsel. We're checking here. I'm advised by our staff who keeps track of these things that it came in as a 632 exhibit. In any event, we have no objection.

MR. EGGAN: Okay.

MR. BRACKEN: In which case I'm completely mixed up, your Honor. If it came in through our case, that's fine. I confess error.

MR. EGGAN: It's better to have two than not even one. And that's what we're working under.

MR. EGGAN: It's Petitioner's Part 31 Exhibit 26.

(Petitioner's Exhibit 31-26 received)

Q Okay. Now, what we're looking at, sir, is one of your rules. It is R323.2222 -- excuse me -- R323.2221(2)(c). Okay?

A Correct.

Q Let's look at that together. And just for the record, what (2) says is, "Except as provided in (6) of this rule a hydrogeological report shall be in compliance with the following provisions." And then (c) provides:

> "Determine whether the discharge is to a usable aquifer, an unusable aquifer, or groundwater not in an aquifer. For an aquifer determine the groundwater flow direction, groundwater velocity, three-dimensional flow path of the discharge within the aquifer interconnection with aquifers" --

And I can stop reading at that point. What I'm going to ask you, sir, is this particular permit application, this application did not contain a three-dimensional flow path of the groundwater, did it?

A I disagree with that.

Q Did it have a document that indicated that this is the three-dimensional flow path?

A No. But as the rule says, except as provided in subrule 6 we had adequate hydraulic information in the form of horizontal and vertical gradients within the aquifer to make that -- to make that evaluation analytically.

Q Okay. So you analyzed the materials that were provided and that gave you what you believed to be a three-dimensional flow path?

A Yes; that's correct.

Q But the document itself did not have a three-dimensional flow path in it?

A That's correct.

Q Okay. It sounds to me as if you applied (6) to essentially waive that requirement.

A I would -- I don't agree that we waived the requirement; we simply didn't require a numerical model to make that demonstration.

Q Not in the application?

A Correct.

Q I think you indicated earlier in your testimony on direct examination from Mr. Reichel that it's important to have this three-dimensional flow path to know where to monitor. Am I right?

A Correct.

Q And this is part of -- is this what we call characterization of the groundwater -- of the groundwater flow?

A It's part of it, yes.
Q Okay. And that's a very important step?
A Uh-huh (affirmative).
Q And it was not in the application?
A The data that was -- that we would require to make that evaluation was in the application.
Q Well, you had to make that -- you had to make that particular finding or else this application would have had to been rejected as incomplete; am I right?
A Correct.
Q Okay. Now, we've moved on. We're still in 323.2221 but we've moved on to (4) and we're going to (4)(g)(iv). Okay?
A Okay.
Q And essentially what that requires is a groundwater contour overlay indicating groundwater flow direction?
A Correct.
Q You're familiar with that requirement?
A Yes.
Q Okay. We know that this application's hydro report does not provide this document, does it?
A Which part of this document?
Q It does not provide a groundwater contour overlay indicating the groundwater flow direction with a maximum contour interval of one foot?
A The contour intervals were in excess of one foot; that's

correct. The contours were in there, but the interval was greater than one foot, yes.

Q What was the contour interval?

A I believe it was five feet.

Q It was five feet, wasn't it?

A That's correct.

Q Okay. And that can actually make a difference in some circumstances, can't it? You have it in your rules at one foot.

A Right.

Q Right?

A That's correct.

Q Okay. And they did not comply with this section of the rules, did they?

A That's correct.

Q Okay. And this is a requirement within your rules?

A That's right.

Q Okay. Was there a consideration given at the time to the fact that the application is incomplete as a result of this?

A No.

Q Another waiver?

A The concept of the one-foot contour comes from the fact that most of the sites we deal with are fairly small in nature. Our discharge areas generally range from one acre; in some applications where we are doing land application for

treatment they might be to 40 acres in size. If we had strictly enforced the one-foot contour interval for this facility based on the size and the area it would cover we would basically have one solid black line.

Q What is the size of this facility, if you know?

A Ooh, the -- I do not -- I'm not sure what the exact acreage is of the entire area under consideration for the hydrogeologic study.

Q So you -- essentially you waived the one-foot requirement in this particular application?

A Technical staff accepted five-foot contour intervals for representation of the groundwater flow direction at those intervals because that provided us with some information on the broad scale that we would not have gained if we had strictly adhered to the one-foot contours.

Q Was there a request by Kennecott for this particular waiver?

A I'm not aware of one.

Q Okay. Was there a finding by anybody other than technical staff that a waiver should be granted in this context?

A No.

Q Did you -- or have you reviewed the tech -- excuse me -- the treatment influent data in the application?

A No.

Q Are you aware that the application does not contain -- that the treatment influent data in the application does not

contain important data?

MR. BRACKEN: I'm going to object to the characterization.

MR. EGGAN: I think they'll be able to respond with redirect.

Q Are you aware that it does not contain some data?

A I'm not aware of that.

Q For instance, it doesn't contain data with respect to temperature. Were you aware of that?

A There were questions --

Q Are you aware that it does not contain data pertaining to temperature?

A Yes.

Q Are you aware that it doesn't contain data pertaining to total dissolved solids?

A Correct.

Q Doesn't contain data containing total suspended solids?

A Yes.

Q Doesn't contain data pertaining to alkalinity?

A Yes.

Q Doesn't contain data pertaining to total organic carbon. You're aware of that?

A Yes.

Q You're also aware of the requirement in Rule R323.2220(6) that a discharger shall use the best available information,

aren't you?

A That's correct. That's what that rule states.

Q All right. We can agree, can't we, sir, that boron is going to be an issue at the wastewater treatment plant?

A That was an issue, yes.

Q Okay. You're aware that it was an issue raised by Ms. Mariuzza?

A Yes.

Q Okay.

MR. EGGAN: Your Honor, I wonder if we might take just a short break? This is a document I want to be sure we track down.

JUDGE PATTERSON: Okay.

MR. EGGAN: I have some questions for him about -- and I've got it, but I just want to make sure that we all have it.

(Off the record)

MR. EGGAN: Your Honor, I believe we found what we were looking for.

JUDGE PATTERSON: Good.

MR. EGGAN: It is Respondent's Exhibit Number 166 -- Respondent's Exhibit 166 and it is an e-mail from Eric Chatterson to Jeanette Bailey dated May 10th of 2006.

Q Mr. Janiczek, you are copied on this memorandum I take it?

A Yes, I believe I was.

Q This is from Mr. Chatterson to Jeanette Bailey and as I indicated you were copied on it. My question is, it says, "I have" -- the first paragraph says, "I have reviewed my -- I have completed my review of Kennecott's response to my March 22 comments. I would like additional information regarding groundwater modeling/mounding calculations." And he then goes on to talk about a model, a particular model. Do you know what model he was referring to?

A That was the -- I believe that was the MODFLOW model that was submitted by Kennecott that was used to evaluate the modeling conditions at the treated water infiltration system.

Q Do you know what the name of the company was that -- you probably know there were a number of models done in this application?

A Yes, there were. And I'm not aware exactly of which company's model this was.

Q Okay. In any event, that last paragraph on the first page -- and this, by the way, is a two-page memorandum, but I'm going to draw your attention to the last paragraph on this first page. And what that paragraph says is, "The comment in the conclusion section" and he goes on to a comment. I'm going to read the second sentence to you. "The model is not able to determine this, because it has not been calibrated, does not use realistic boundary conditions, has an

excessively large cell size, and has not modeled relevant surface features such as rivers, seeps or bedrock outcrops." That's a concern that was being expressed by Mr. Chatterson at that time. Am I right?

A Correct.

Q Did you have a discussion with him after this -- after reviewing this document about this issue?

A Eric and I would have had discussions throughout the process.

Q Okay. Did he express his concern over this particular model to you at that time?

A Yes.

Q And did he tell you at any time that those concerns had been addressed?

A Eventually they were addressed.

Q Okay. And do you know how they were addressed?

A They were addressed by focusing the model on the mounting calculations rather than trying to make interpretative statements about groundwater flow direction in the vicinity of the model.

Q That goes back to my question. And I apologize for more or less trying to do discovery through you, but I'm trying to get a sense for which model we're dealing with and how it is that this analysis occurred.

A Eric will have to sort that out.

Q All right. I was afraid you would say that. In any event, pretty critical comments about a model that had been created by the applicant in this case?
A Yes.
Q Okay. And this was part of the application that had been submitted?
A It was part of the information required as part of the hydrogeologic study for the application, yes.
Q Of course. And so, again, this was pretty critical commentary of work that had been done on behalf of the applicant?
A Yes. This is -- this analysis was related to the evaluation of the mound at the water infiltration system.
Q Okay. Do you know whether Mr. Chatterson ever ran his own models?
A I believe he did, but I can't absolutely for sure.
Q There was some modeling done recently by a company called GeoTrans. Are you aware of that?
A I have not looked at that in any detail whatsoever.
Q Okay. My question is, has that GeoTrans modeling that was done in April of 2008 been in any way submitted to the MDEQ for review?
A I'm not aware that it has. I don't know that.
Q Hadn't been reviewed by you in any event?
A That's correct.

Q Okay. If it had been submitted who would it have been reviewed by, or how could it have been submitted without you knowing, I guess?
A It would have simply come through me, but it would have been reviewed by Mr. Chatterson.
Q But you would know about it if it had?
A Usually mail comes through my office; simply that would be the process.
Q All right. Again, the final paragraph here where it says -- where it describes some comments and again suggests they should remove -- be removed, this comment says that the comment in the application is illogical since the Salmon Trout River was not modeled. So again, pretty strong criticism of a model that was presented by and applicant in this case.
A The comment relative to conclusions in the model that really weren't warranted.
Q Okay. You offered some testimony today regarding Rule 323.2222(5)(a), inorganic substances?
A Uh-huh (affirmative).
Q Okay. Whether we agree with your analysis or not, we have the rule requiring something and you apparently deciding that that rule should be waived or interpreted differently?
A Interpreted differently, yes. We did not waive those requirements.

Q Okay. Where in the rules does it give you the authority to do that independently?
A Actually that is contained in the delegation memo from the director that gives the authority to establish permit limits in a permit pursuant to 3106 to the chief of the groundwater permits unit.
Q When was that memo created?
A Can I check my references?
Q Sure.
A I have the date; I have it here. That was -- the most recent version is dated December 16th, 2005. It is delegation letter W, as in "water," B as in "boy," 31-11.
Q Does the delegation memo specifically state that you're allowed to disregard the rules in Part 22?
A It says that I'm allowed to establish discharge limits in the permit that are protective of the environment.
Q I thought that's what the Part 22 rules were for was to be protective of the environment.
A That's correct; they are.
Q This apparently gives you the ability to decide that something is more protective than the protections that are required in the rule?
A The law says that the discharge cannot be injurious, and the permit limitations that actually end up in the permit are not injurious. We did not grant the permittee any waiver

from statutory requirements. We simply have different -- we have different numbers in there that would have resulted from a direct calculation.

Q Would that be the same for the discussion you had of Rule 323.2222(2)(a), the limitations on inorganic nitrogen?

A That's also an interpretation of the application of that rule; that's correct.

Q Okay. And again, you utilized the director's delegation memorandum to make a decision that --

A That's part of it, yes.

Q So we have the rules requiring something, the permit authorizing something else, and so the answer to how this occurred was you applied your judgment and decided that it should --

A We didn't apply limitations that are not contained within the rules. We simply based on the type of discharge chose a different rule under which to establish the limitation. So the limitation in the permit is not outside the Part 22 rules; it is simply a different rule under that group.

Q Okay. You used what you call the "default rule" in this situation?

A Yes. The broad Rule 2204.

Q And what I'm wondering is, is that something that was -- you were authorized to do by virtue of the director's delegation memo, or is that just something you routinely do?

A The authorization comes from the delegation memo. And it is something that we do on a -- not every day, but as stated originally we have 40 or 50 permits that we have used that rule to establish limitations.

Q I wanted to ask you also a few questions about the public comment process. You apparently attended the public hearings on this matter and were there for the public comments?

A Yes, I did.

Q Would you agree with me that a majority of the people who attended those public meetings and who offered comments were opposed to this mine?

MR. BRACKEN: I'm going to object, because it's irrelevant, your Honor. The number of people that come and either say they're pro or con something certainly is not relevant or --

MR. EGGAN: I'd like to respond to that, your Honor. I'm going to resist -- I'm going to resist part of what I have to say, but the idea that Kennecott would suggest that the public's participation in this process and the opinion of the public on this project is irrelevant is -- it just says a whole lot about how Kennecott used this. From our perspective it is entirely relevant given the amount of public participation in this process to have on the record to simply know whether the majority of the

comments offered by the public at the public hearings were opposed to this process.

JUDGE PATTERSON: Well, I think that testimony has come in from somebody else too.

MR. BRACKEN: I may already have been under somebody else. This isn't a referendum.

JUDGE PATTERSON: No.

MR. BRACKEN: It's certainly not a referendum if the people making the opinions state things that are contrary to the rules of law. That's my point. It's in under something else, but --

JUDGE PATTERSON: I think it's relevant. I'm not sure what the probative value of it is frankly, but --

Q The majority of the comments against the mine permit being granted?

A I would say yes.

Q Groundwater permit; against the groundwater permit being granted?

A Yes.

Q Likewise, the public comments or the comments that were received by you -- the written comments; again opposed?

A That's correct.

Q Okay. You indicated you reviewed all of them?

A Yes, we did.

Q And they became a part of the permit as it was approved?

A Certain sections changes were made as a result of public comment; that's correct.
Q Okay. But in any event, public comment was an important part of the determination, the approval of this permit?
A Yes.
Q Talk to me about the ten drafts of the permit. Where did the -- where did the drafting process begin and how is it that you end up -- ended up with ten different iterations?
A That is not -- that's a pretty routine -- ten is a little high, but to have different drafts of permits is a pretty common practice. We will -- based on technical discussions with staff, based on additional information that we receive the development of a permit as it -- prior to public noticing is a dynamic process. And so as even minor changes are made the permit would become redrafted, sent out for technical staff to conduct reviews; they would comment. And in this case it became a ten-permit interactive process.
Q Were those ten drafts maintained? The various iterations, were they maintained in files?
A I'm not sure.
Q Do you have them in your files?
A No, not in my files.
Q Was there disagreement about -- among staff about the various conditions and whether they were protective?
A There was certainly discussions, yes.

Q Were those -- did those discussions include disagreements among staff as to the --
A Occasionally.
Q -- approval of this permit?
A No, I think the disagreements more were where standards -- or how standards were developed. This was a -- this was a process where we had a number of people involved that weren't routinely involved in groundwater permitting, and so some of those technical staff voiced differing opinions and we would always meet and resolve any issues.
Q Were there people on your staff that disagreed that a permit should be issued?
A The final draft? No.
Q With any of the drafts.
A We made modifications to the drafts as the process developed to take into account staff's opinions and technical review commentary.
Q Did Kristen Mariuzza ever tell you that there was never -- that she was unable to find another mine in the world that was operating with this particular unit process system?
A Not that I recall specifically; no.
Q Okay. Did she ever tell you that she was unaware of any other mine operating in the world that would utilize a reverse osmosis system on a 24-hours-a-day, seven-day-a-week system?

A Again, not that I recall specifically; no.
Q Are you aware of that now?
A No.
Q Can you tell me of any mine that is operating anywhere in the world that has this particular unit process system; this series of units?
A Not that I'm aware of.
Q Okay. Or which operates a reverse osmosis system on a 24-hour-a-day, seven-day-a-week basis?
A Not that I'm aware of.
Q Sir, do you recall receiving comments from the petitioners in this case on or about October 17th of 2007?
A I don't recall the date. If you had specifics about the comments I would be better able to recall.
Q I can help you out. We delivered written comments on behalf of the Keweenaw Bay Indian Community, the National Wildlife Federation, the Yellow Dog Preserve, and the Huron Mountain Club on October 17th, which was the deadline date for submission of written comments. Okay?
A Oh, okay.
Q Do you recall reviewing those comments?
A I'm sure we did. We would have reviewed all comments up until the -- up until the deadline for the public notice period.
Q But you don't have a recollection of having reviewed our

comments specifically?

A No.

Q Okay. But again, they certainly would have been part of the consideration that the MDEQ applied in its decision making in terms of approving this particular permit?

A Yes.

Q Okay. And you're aware that all comments were responded to?

A That's correct.

Q Including ours?

A That's correct.

MR. EGGAN: Okay. I don't think I have any other questions. Thank you, sir.

THE WITNESS: Thank you.

MR. EGGAN: Mr. Haynes probably has some.

MR. HAYNES: Good afternoon, Mr. Janiczek. My name is Jeff Haynes; I represent some of the petitioners in this case.

CROSS-EXAMINATION

BY MR. HAYNES:

Q If we could, with Mr. Reichel's permission, turn to your slides. We may have to do some switching of the projectors to do this. And if we could go to slide 15. Do you have that slide in front of you, sir?

A Yes, I do.

Q All right. I'm looking at the bottom portion of the slide

that deals with Rule 2222(5)(a), --

A Yes.

Q -- which describes the limits for concentrations that have to -- that shall not exceed halfway between the background groundwater quality and the generic residential criteria in the Part 201. Do you see that?

A Yes.

Q So for the concentrations that are allowed under this rule, those concentrations in effect allow substances above background; is that right?

A That's correct.

Q So any such concentrations, if allowed, would exceed background; correct?

A That's correct. The rule relative to background groundwater quality says -- indicates that background can be taken into account up until -- up to the Part 201 standard. If the background already exceeds Part 201, then the discharge cannot exacerbate the existent situation.

Q Right. And if background is -- if the background groundwater quality is lower than the Part 201 standards, then the 2222(5)(a) standards allow concentrations to exceed background?

A That's correct.

MR. HAYNES: If we could turn to slide 26, please?

Q Mr. Janiczek, I'm looking at the second bullet on slide 26

and that bullet says, "As part of the permit application process groundwater was no longer part of the treatment system." And I believe you testified, and I just want to make sure the record is clear here, that groundwater was no longer part of the treatment system because Kennecott said it would not exceed groundwater standards; is that right? It would -- I'm sorry. Kennecott would say it would meet discharge standards; right?

A Correct.

Q And so based upon that representation, then groundwater was not -- no longer part of the treatment system?

A That's correct, relative to requiring a numeric transport and fate model to evaluate water quality at the venting location.

Q Right. And so you just took them at their word and said, "We don't need to deal with that groundwater issue in this case"; right?

A Relative to a numerical model; that's correct.

Q Right. Okay.

MR. HAYNES: Now, if we could turn to slide 28, please.

Q Slide 28 deals in part with Rule 409 and Part 632. Do you have that rule in front of you? Do you have the text of it in front of you?

A I have the slide, the paraphrasing of the rule.

Q Well, it's an interesting paraphrase, sir, because I'm going to read you the rule and ask if the rule -- if your paraphrase is perhaps a little too generous. The rule -- this is R425.409 -- says,

> "An operator shall manage overburden or waste rock, peripheral rock and tailings determined to be reactive under R425.203(c)(5) in accordance with this rule and in a manner that is designed to reasonably minimize actual and potential adverse impacts on groundwater and surface water by preventing leaching or runoff of acid-forming waste products and other waste products from the mining process."

The rule says "an operator shall manage." What your slide suggested, that -- is that the rule allows an operator to manage, rather than requires an operator to manage. So the slide isn't exactly accurate, is it?

A Actually, the rule is more demonstrative than the slide; that's correct.

Q More demonstrative; it's --

A It absolutely requires --

Q It's a requirement, rather than a discretion?

A That's correct.

Q Okay. And so under this rule -- with that change, let's look at what your slide talks about here. If the rules requires an operator to manage waste rock, peripheral rock

and so in a manner designed to reasonably minimize actual and potential adverse impacts on groundwater and surface water by preventing leaching -- do you see that portion?

A Yes.

Q Okay. If in fact the waste rock as managed does not prevent leaching, then as I think I recall your testimony, you would then have to require that material to be managed under a groundwater permit, wouldn't you?

A If they did not meet the conditions of 409 Rule, that is a potential, yes.

Q Because I think you testified that this is the rule that you used to say that all of the reflooding of the mine would not need a groundwater discharge permit; right?

A Correct.

Q So if there was leaching from the management of the waste rock and the ore, then there would be a necessity for a groundwater discharge permit for the reflooding of the mine; right?

A Theoretically that is correct.

Q Not theoretically; under the rule -- under your interpretation of the rule.

A If they would no longer be in compliance with 409, that's correct. It would be -- they would no longer have the exemption under 2210(w).

Q Let's turn to slide 38. Mr. Eggan asked you several

questions about the ten internal permit drafts, which you acknowledge is a little bit high for your normal permitting process; right?

A Yes.

Q And I think you said that there was some disagreement among staff that was eventually ironed out; is that right?

A Correct.

Q So that the permit that was issued was really a consensus; was that right?

A Yes; that's correct.

Q It was a consensus by staff that with -- there were some people that may have disagreed but they decided that their disagreement wasn't sufficient enough, or else you overruled them in order to get a permit issued; right?

MR. BRACKEN: I object to the characterization. He hasn't ever testified that that's what happened.

MR. HAYNES: Well, I'm asking.

Q Did you overrule staff?

JUDGE PATTERSON: You can go ahead and answer.

A No, I didn't overrule staff. The final draft that went out for public notice, everybody was in agreement that it met Part 31 requirements to be protective of the environment and not be injurious.

Q All right. And that was the view of your staff and of you; right?

A Yes.

Q Would you agree with me that reasonable scientists comparable to your staff might disagree with that assessment?

MR. BRACKEN: Objection; it's irrelevant, lacks foundation.

MR. HAYNES: I don't understand how it's irrelevant that someone may disagree with DEQ staff about whether a permit protects the environment. That's entirely relevant.

JUDGE PATTERSON: I think --

MR. BRACKEN: I mean, it's a -- he isn't saying which scientists; he hasn't -- there's no foundation for that group of scientists. I mean, that's not the -- and that's not the procedure under state law. It's now how you get there, whether other people agree with the staff or not.

MR. HAYNES: Well, procedure under state law is something that we're heavily enmeshed in here, but certainly if this is a de novo hearing, a de novo review of what the DEQ did by proposing to issue this permit, we can have -- and we have had scientists come in and disagree about conditions in the permit. So it's entirely relevant and it is entirely foundation for the question.

JUDGE PATTERSON: I'll overrule the objection.

Q Do you remember the question?

A Scientists always disagree about things.
Q Okay. And so you in fact have an expectation -- not an expectation, but you've had in your experience with the DEQ situations where persons not in the DEQ may disagree with your decisions; right?
A Always.
Q Always? Okay. And sometimes the DEQ is proved wrong on occasion?
A On occasion.
Q Mr. Eggan asked you about the public comments in this process and I'd like to follow up on some of those questions. On slide 43 you talk about the 138-page compiled responses that you helped prepare?
A Yes.
Q And you helped -- the DEQ prepared those responses to comments because at least some of the comments contain fairly technical questions, observations or objections to what -- to the proposal; correct?
A That's correct.
Q And you felt and the rest of the DEQ, as far as you know, felt it important or believed that it was important to respond to those technical comments?
A In fact the responses were assigned to the individual technical reviewers relative to their area of expertise.
Q Okay. And before you signed the Part 31 permit here you

reviewed the response documents, didn't you?
A Yes.
Q You felt it was important to review the response documents; correct?
A Yes.
Q And you felt it important to consider the comments that had been offered that were technical comments that related to the Part 31 permit; correct?
A Absolutely.
Q Yes. And so would you agree with me that a responsible decision maker in the DEQ should respond to such technical comments?
A That's part of our process; that's how we -- that's how we do things, yes.
Q Okay. You wouldn't just ignore them, would you? You want them in the record that you were considering them, wouldn't you?
A Yes, for our purposes.
Q Mr. Janiczek, you testified that as part of the permit Kennecott once it constructs the wastewater treatment plant has to demonstrate to the DEQ's satisfaction that the wastewater treatment plant will work as proposed before it's allowed -- before Kennecott it allowed to discharge to the TWIS; is that right?
A Correct; that's correct.

Q Okay. And that demonstration can -- may take -- I think it's up to 90 days you said?
A It's a minimum of 90 days; it's as long as it takes to demonstrate compliance.
Q Oh, I see. Okay. So you haven't seen such a demonstration yet, have you?
A No.
Q "No"? And you didn't see such a demonstration as part of the permit application, did you?
A No.
Q "No"? I mean there --
A That demonstration assumes that the treatment plant is built.
Q Oh, I see. But as part of the application that you and your staff reviewed there was no study, there was no citation, there was no paper or any document that showed that the project -- that the wastewater treatment plant would actually -- has actually in the past worked? You didn't see any of that, did you?
A Has in the past worked? No.
Q "No"? Okay. And there wasn't any effort on the part of Kennecott in its application and the various appendices to show that it in fact would work?
A Well, I believe from Kristen Mariuzza's input is that she reviewed each treatment process individually and on its

merits; that in fact based on that treatment process it could achieve the limits as required in the permit.

Q Individually?

A Individually.

Q But there's -- you've never seen a demonstration that all of the components altogether would work?

A No.

MR. HAYNES: Thank you. I've no further questions at this time.

JUDGE PATTERSON: How much do you have?

MR. REICHEL: I'm going to try to keep it brief. Do you need to leave right at --

JUDGE PATTERSON: At the latest I have to leave at 3:15.

MR. REICHEL: I think I have less than that.

JUDGE PATTERSON: Okay.

MR. BRACKEN: I'll be real quick.

REDIRECT EXAMINATION

BY MR. REICHEL:

Q Mr. Janiczek, Mr. Eggan asked you a series of questions about whether or not you had worked on a permit involving a mine or a sulfide mine. Do you remember that?

A Yes.

Q Okay. Let me ask you this. Have you ever worked on any permits or been involved in any permits involving discharged

groundwater where some of the constituents of concern are being regulated for metals?

A Yes.

Q Would these have been metals coming from industrial processes?

A Yes.

Q To your knowledge, sir, is there something that makes a metal coming from one industrial process, mining, chemically different from a metal that comes from some other different industrial process?

A Not that I'm aware of.

Q Mr. Eggan asked you some questions about a document that was identified as Petitioner's Part 31 Exhibit 10F, an e-mail exchange you had with Janette Bailey about project assignments?

A Yes.

Q And first of all, just so the record is clear, is -- Kristen Mariuzza is a environmental engineer; correct?

A Correct.

Q Was Randy or is Randy Conroy an environmental engineer?

A Randy Conroy, my understanding, is a geologist assigned to the U.P. district.

Q Now, I take it that from your prior testimony that you did not assign Mr. Conroy to work on this project?

A That's is correct.

Q Who, if anyone else, did you assign to perform that function of geological review?
A That was assigned to Mr. Eric Chatterson.
Q So it wasn't -- so and were you confident that Mr. Chatterson was technically competent to perform the review that you assigned to him?
A Mr. Chatterson had a number of years of experience in the private sector working for a consulting firm, working with the EPA in evaluating groundwater models. And it was the modeling expertise of Mr. Chatterson that was one of the primary reasons for him being assigned to this project.
Q You were also asked by Mr. Eggan if -- some questions about budget limitations in the water bureau or in the DEQ at that time. Do you recall that?
A Yes.
Q Let me ask you this, sir. Recognizing that all of us would perhaps feel they would like to have more resources than we have, in all seriousness, sir, do you believe that you had adequate technical resources available to you to do a adequate review of this permit application?
A We had the best people available to us within the Bureau to conduct our reviews. The answer to that is yes.
Q You were also asked some questions about whether or not the DEQ had undertaken to collect its own -- to hire its own consultants on various subjects, outside consultants. Do

you recall that?
A Yes.
Q And I think similarly whether you had undertaken your own data collection, or words to that effect?
A Yes.
Q Just so the record is clear, sir, as you understand Part 31 and the Part 22 rules, who has by law the responsibility to provide the information necessary to -- for the Department to make its decision?
A Rule 2206 requires that the applicant has to provide all information necessary for the Department to make a permit decision.
Q Now, you've testified that you relied upon information provided by the permit applicant in this case. In your experience, sir, in however many permits you've worked on over the years, is -- who typically provides the application needed in the permit?
A The information required, both administrative and technical, is provided by the applicant. Can I add a bit?
Q Certainly.
A On occasion even though we really don't have -- the law doesn't require it, we don't have the resources to hire independent contractors, in this case during certain portions of drilling activities staff were present during those drilling activities to have firsthand knowledge of

information being gathered in the field.
Q Okay. And who would that have been?
A Mr. Chatterson.
Q You were asked by Mr. Eggan about whether or not you had referred to or drawn upon expertise of DEQ staff outside of your section, the permit section, specifically a groundwater modeling program staff in connection to your review of this permit application. Do you recall that?
A Yes.
Q You indicated you did not. Again, I think you touched on this, but from your standpoint do you believe the staff that you did assign to work on this project had sufficient technical capability to perform the reviews that you needed?
A Yes, that was the primary reason -- again, based on his professional experience the reason Mr. Chatterson was assigned to this project.
Q I believe Mr. Eggan asked you a series of questions about whether various certain parameters were included within treatment influent data provided in the permit application; for example, temperature, TDS, other parameters. Do you recall that question?
A Yes.
Q Let me ask you this. Did the absence of that particular information he asked you about -- did that adversely affect your ability to review and consider the permit?

A No.
Q Can you explain why?
A Those substance -- those parameters: temperature, TDS, there are no standards in the Part 22 rules for those parameters. And one of the issues for surface water was temperature and we received inquires from the surface water assessment section as to whether or not temperature would be an issue relative to this discharge. Our technical evaluation was based on the travel time and the distance from the discharge at the water infiltration system to the venting location, that there would be ample time for the temperature to equilibrate to that of natural groundwater.
Q Now, you were asked a series of questions about whether or not the permit -- or how you interpreted it, I guess I would say -- Rule 2222(5)(a). Do you recall being asked about that?
A Yes.
Q And again, do you as a part of your responsibilities in administering this aspect of the groundwater discharge permitting program that you testified you've been extensively involved with -- are you called upon on a regular basis to interpret and apply the rules as written in light of what you understand to be the statutory mandate upon which those rules are based?
A Yes; yes.

Q And do you believe that you did so here?
A Yes, I do.
Q With respect to -- Mr. Haynes asked you some questions about testimony you gave earlier about your understanding of the exemption in Rule 2210(w). Do you recall that?
A Yes.
Q Of the Part 22 rules?
A Correct.
Q And again, is it your understanding that that apply -- what does that apply to? Does it apply to another permit issued by the DEQ?
A It applies to the 632 permit which governs the activities within the mine area.
Q And in this case do you have some -- well, first of all, you're aware obviously that the DEQ issued a Part 632 permit?
A Yes.
Q And you're aware, perhaps not in detail, that it requires certain various conditions; correct?
A That's my understanding, yes.
Q And so -- and which presumably are intended to assure compliance with Part 632; correct?
A Correct.
Q And so in making the determination that Rule 2210(w) provided an exemption, were you or were you not relying upon

the parallel permitting decision made by another branch of the DEQ?

A That was the basis for our decision to exempt the mine activities from groundwater permitting.

MR. REICHEL: That's all I have, sir. Thank you.

MR. BRACKEN: Okay. Mr. Janiczek, I'm Jeff Bracken; I represent Kennecott today. I just have a few questions.

CROSS-EXAMINATION

BY MR. BRACKEN:

Q Near the end of your testimony by Mr. -- in response to Mr. Haynes' questions you talked about Ms. Mariuzza. I pronounced it right when she was here. It was your understanding that she believed that each one of the unit processes in the wastewater treatment plant would operate as predicted by the Kennecott; is that correct?

A Yes; that's correct.

Q And was it also your understanding that Ms. Mariuzza agreed that all the units in the series together would also work as predicted by Kennecott, not just individually?

A That was her evaluation, yes.

Q Now, been a lot of questions about the comments that were made and what the -- by the public and persons represented by counsel, including some of these counsel, and what you did with them. It's my understanding that you thought it

was your job to seriously review all the comments you received from the public?

A That's correct.

Q And you did that in your division?

A We felt we did, yes.

Q Okay. Now, and in that respect you looked at them, but did you rely on the entirety of those comments in your reports or in your permit decision? Let me back up. They indicated or they asked you whether you relied on some of those comments. I'm asking you whether it's true that you relied on the comments, or they spurred you to look at issues and then you decided whether or not to put something in the permit that that would be comment.

A If the comment was pertinent to our roles and responsibilities under the statute and the rules and the comment -- for example, the comment of the inclusion of numerical limits in the groundwater. Yes, we did. We certainly took those into consideration and made changes accordingly to the permit.

Q The changes were made on your staff's technical review and the desire that -- or the understanding that those should be included in the permit as conditions or otherwise; correct?

A Correct.

Q It did not make -- it wasn't a reliance on the comments; it was a reliance on your technical review; is that correct?

A Our technical review of those comments, yes.
Q Okay. So if there was a 40-page set of comments by somebody and you looked at those and that spurred your division on to make an evaluation of some of them and even include as conditions in the permit some of them, it wasn't based on the 40 pages of comments, was it?
A Correct.
Q Okay. You also talked -- there was a discussion about a particular mounding analysis that you -- that was commented upon. Do you remember the exhibit that was placed up on the board?
A Yes.
Q Do you know if there were more than one mounding analyses provided; there was more than one provided to the Department?
A On that I'm not actually certain about that.
Q Okay. But you wouldn't disagree that there could have been more than one?
A Yes, there could.
Q And in fact would you have expected once comments like that were made that Kennecott would have addressed them?
A Yes.
Q And in fact you wouldn't have issued the permit, would you have not, until you were satisfied that those concerns had been adequately addressed by your staff?

A That's correct.
Q In the event that during the 90-day period or thereafter in the operation of the wastewater treatment plant after construction Kennecott cannot meet the standards in the permit, what happens?
A Kennecott cannot discharge.
Q So there's no possibility that the environment will be harmed if they can't discharge the water back into the ground; is that correct?
A That's correct.
Q With respect to Part 1, section 12(c), I think it is, of the permit, there's a number days that are granted to the permittee in the event a limit for an effluent is exceeded. Remember those rules?
A Yes.
Q Those reporting time frames; are they more or less conservative than the minimum time frames required in Rule 227?
A As I indicated earlier those are more conservative than the rule requirements.
Q So they are more protective of the public?
A They require a faster response time than is what is required in the rules.
Q And that if there were a problem with an effluent the faster response time would be more protective in the environment,

would it not?
A Yes.
Q With respect to attachment 1 in the expected effluent quality; are the standards lower or higher than the Part 22 standards?
A The expected effluent quality is lower than the Part 22 standards.
Q And you have now made those the standards in effect; the expected effluent qualities are really now the standards; is that correct?
A That is what we expect to -- that is the -- attachment 1 is the effluent quality that we expect to come out of the treatment system.
Q And what if it doesn't come out like that; be in violation?
A There are requirements in the permit for them to evaluate the treatment system to bring them back into compliance with the attachment 1.
Q Okay. Is this -- the review that your Department undertook with respect to this permit application, was it the most thorough review ever conducted on your watch?
A Certainly one of the most --
MR. EGGAN: Your Honor, this is leading and it's supposed to be direct examination, and it's also -- a lot of this has been beyond the scope of cross.
Q Could you characterize how thorough a review you undertook

with respect to this application?

A This was one of the most thorough reviews that we have conducted in the program.

MR. EGGAN: I'm shocked by the answer.

MR. BRACKEN: No further questions, your Honor.

JUDGE PATTERSON: Okay.

MR. EGGAN: Can I just ask one? And it's not even controversial.

RECROSS-EXAMINATION

BY MR. EGGAN:

Q Do you know who it was that actually reviewed the comments that were submitted by the petitioners in this case?

A Well, as I indicated to Mr. Haynes, they were assigned -- permit writer and myself went through the comments and assigned them to the appropriate technical staff depending on the type of question that was -- the comment that was being received.

Q So if it was the wastewater treatment plan it would have been Kristen Mariuzza?

A Kristen.

Q If it was TDRSA it would have been --

A Hydrogeology, Mr. Chatterson. Yes.

Q Very good.

A Actually that's not exactly correct, because by the time comments were received Mr. Porter was now assigned to

respond to questions as Ms. Mariuzza had left the Department.

MR. EGGAN: Thank you.

MR. HAYNES: Nothing further, your Honor.

MR. REICHEL: Nothing further, your Honor.

JUDGE PATTERSON: You brought it in right to the minute.

(Hearing adjourned at 3:14 p.m.)

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