

# In The Matter of: Notice of Intention to Commence Large Mining Operations, PR Spring Mine, Uintah and Grand Counties, Utah PR Spring Mine M/047/0090 

Date Taken: June 30, 2015

Alpine Court Reporting
Locations in Provo and Salt Lake City 801-691-1000

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PR Spring Mine M/047/0090
    june 30, 2015
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| BEFORE THE BOARD OF OHL, GAS AND MINING DEPARTMENT OF NATURAL RESOURCES IN AND FOR THE STATE OF UTAH |  | 1 | appearances |
|  |  | 3 | FOR TIIE DIVISION OI: OIL, GAS AND MJNING |
|  |  | 4 | IOFIN BAZA, Director or Oil, Gas and Mining Hearing Exanniner |
| In the matter of: Protests of the tentative decision to approve the ecvised Notice of Intention to Commence Iarge Mining Operations, PR Spring Mine, Uintall and Grand Connties, Utah |  | 5 |  |
|  |  | 7 | ASSISTANT AITORNEYS GENERAL: |
|  |  | 8 | STEVEN F. ALDCR - Division Attorncy DOUGIAS J. CRAPO - Atlorricy ber the Hearine Examiner |
|  |  | 9 |  |
|  |  | 10 |  |
|  |  | 11 | FOR US OLI SANDS: |
| PR Spring Mine M/047/0090 |  | 12 | A. JOIIN DA VIS, III, ESO. M. BENJAMIN MACHLTS, ESQ. |
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|  |  | 1.7 |  |
| REPORTTD BY: Michelle Mallonee, RPR |  | 18 | TOR IIVING RIVERS: |
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|  |  | 25 |  |
| Page 3 |  | rage 4 |  |
| 333 | LNSEEX CAGE | 1 | PR Spring Mine, M/047/0090 |
|  |  | 2 | Tuesday, June 30, 2015 |
|  | COMMENTS BY. <br> $\begin{array}{c}\text { Prul Baker } \\ \text { Willian Jolnisorl }\end{array}$ | 3 | (The proccedings began at 9:00 am.) |
| 4 | Dariday Cululjert ${ }^{\text {April Abale }}$ | 1 | 1/EARING OFFICHR BAZA: Ladies and Gentiemen, $\mathrm{I}^{\prime} \mathrm{m}$ |
| 5 | Apillabale  <br> Willinsuls 53 | 5 | going to go ahead and get started. |
| 7 |  | 6 | Heilo to everyone, and welcone to the Department |
|  | Vrughan Lovejoy | 7 | of Naturai Resources. I'm John Buza. I'm the director |
| B | Tory Filit! <br> 77 | 8 | Lor the Division of Oil, Gas and Mining. It's 9 oclock, |
|  | $\begin{array}{ll}\text { Jill Mentill } \\ \text { Suzzange Stunsas } & 818 \\ 81\end{array}$ | 9 | and I promised myscif that I would start proonptly so we |
| 9 |  | 10 | can Einish on time. |
| 10 | $\begin{array}{ll}\text { "Tarja London } \\ 1 \text { lins } & 82 \\ 83\end{array}$ | 11 | It's June 30, 2015. This is an informal hearing |
| 11 | Kailian Butter | 12 | to review the tentative approval of the revised notice of |
|  | Tiua Suitlo ${ }^{\text {a }}$ | 13 | intention to commence large mining operations at the PR |
| 12 | Bolverister 89 | 14 | Springs mine. The identifying number for that mine is |
| 13 | Sural s Stuck $\quad 9.7$ | 15 | M/047/0090, located in Uintah County, Utah. |
| 〕A | Miranla Prail Astison Junes | 15 | The Division of Oil, Cias and Mining gave its |
|  | Tonu Paddies 96 | 17 | centalive approval of the revised NOT on April 7th of |
| is | Sean Porter Nency Evensolls | 18 | Ulis year. Afterwards, the Division received many |
| $\therefore 6$ |  | 7.9 | letters in response to the tenative approval, sonme of |
| 17 |  | 20 | which were writter objections of substance, as |
| 19 |  | 21 | contemplated under Líah statute 40-8-13(6)(d). This |
| 20 |  | 22 | portion of the statute is also known as the "Utali Mired |
| 21 |  | 23 | Land Reclamation Acc.." |
| 23 |  | 24 | As described in the statute, we're holding dris |
| 2.48 |  | 25 | informal hearing to review the tentative approval |


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| :---: | :---: | :---: | :---: |
| 1 | decision, and $\mathrm{I}^{\prime}$ macting as the llearing Officer. | 1. | opportunity to speak. |
| 2 | I sce that there are many ncople here in the | 2 | I'd also mention that we do have a signmp sheet |
| 3 | room beyond the parties represcnted by counsel. And 1 | 3 | going around on a clipboard lor those who are attending. |
| 1 | appreciate the pubic interest shown in this process. | 4 | And ['I] also provide some additional instruclions on how |
| ¢ | l'mi hopefut that the statements presented today will | 5 | we can give official comment. |
| 6 | allow the Division's minerals minity program to | 6 | As the informal conference presiding oflicer, |
| 7 | approptiately implement the requirements of its rules and | 7 | it's my role to listen to the appeals of the Division's |
| 8 | stalutes. | 8 | tentative approval decision and either uphold the |
| 9 | Because this is an informal conference, there | 9 | Division's decision or take other action as needed to |
| 10 | are ceally few procedural rulcs for this mecting | 10 | modify the Division's decision. Although I essentially |
| $\therefore 1$ | specitied in the statutes and rules. And because it's | 11. | represent the Division as its director; 1 am committed to |
| 〕. 2 . | such a warm day, I would offer counsel and the parties, | 12 | an objective review of the Division's decision. And I |
| 13 | if they want to shed their jackets, please feel fiee to | 13 | want to hear those constructive comments today that will |
| 1.1 | do so. | 11 | improve the Division's process. |
| 15 | For cxample, most informal conferences usually | 15 | After some considerable thought about how to |
| 16 | take place at a conlerence table. Today we need this | 16 | conduct this meeting, T've decided as follow's -- and this |
| 1.7 | ligger room to accommodate ali the parties who are | 17 | is how I suggest we progress this morning. |
| 18 | interested. I hope that you'll help me make the most | 18 | First of all, l'm going to give the Division a |
| 19 | eflective use of our two hours this moming that we | 19 | Sew minutes, about 15 or so, to present a summary of the |
| 20 | scheduled for this meeting. | 20 | tentative decision. That will lay some background for |
| 21. | To that end, i've arranged for a court recorder | 21 | why we're here today. |
| 22 | to transcribe our meeting. And I would ask, for the sake | 22 | Secondly, ['ll offer time to Mr. Dubue, who is |
| 2.3 | of properly capturing the statements of this meeting, | 23 | representing Western Resource Advocates. And you'll get |
| 2.1 | that we avoial having more than onc person speak at a time | 24 | as much as 45 minutes to present your objection to the |
| 2.) | and that we properly identify ourselves when given the. | 25 | tentative decision, call any witnesses, or present any |
|  | Page / |  | Fage 8 |
| [ | evidence that you wisth to make. After chis period, I | J. | again, with the guideline of keeping our comments brief. |
| 2 | would welcome questions from the other attomeys. I | 2 | importantly, I encourage all parties and |
| 3 | would hope that you'd be willing to help answer those. | 3 | commenters to join togetirer to ensure that comments are |
| 4 | 'Third, we'll allow Mr. Davis, represerting US | 4 | not unnecessarily duplicative or repetilive. For |
| 5 | Oil Sands, to get as much as 45 minutes to prosent your | 5 | example, I would prefer to hear that a dozen people have |
| 6 | position and any witnesses you'd like to call. | 6 | joined to give one comment rather than hear the same |
| 7 | Lastly, we'lt allow the Division, Mr. Dubuc, and | 7 | comment from a dozen difterent people. This advice |
| 8 | Mr. Davis to make some closing comments, about five | 8 | applics to the represented parties as well as the general |
| 9 | minules cach. | 9 | public. |
| 10 | And you can see the timing of this is going to | 10 | l'd also encourage the parties and commenters to |
| $\therefore 1$ | use up a lot of what we have availabic, so I would | 11 | focus on the process the Division undertook in approving |
| 12 | caution you to be wise with your use of time. If you | 12 | the notice of intent. If there is a porceived error, it |
| 13 | don't need the whole 45 minutes, don't take it. Because | 1.3 | is best to explain why it is an crror under the existing |
| 14 | the last thing I wart to do is have the other people here | 14 | statutes and rules that guide and govern the Division. |
| 15 | Loday, who belicve they are parties and have a legal | 15 | So with those introductory remarks, I think we can |
| 16 | right to be heard -- I welcome them to speak. I have a | 16 | proceed with the informal conference. |
| 1.7 | list of people who have received mailed notice of today's | 17 | So with that, I'm going to ofler lime to |
| 18 | meeting, and I'll be checking against that list for | 18 | Mr. Alder and the Division to present some opening, |
| 19 | parties whom we have previously idcntified. Aldhough l'm | 19 | background on the tentative decision. |
| 20 | notofficially timing those statements, I would ask that | 20 | MR. ALDlik: Thank you. Just by way of |
| 21 | those parlies keep their comments hrief, maybe between | 2.1 | introduclion, I'm Steve Alder with the Utah Attomey |
| 22 | two and three minutes each, to allow as many persons as | 2.2 | Gencral's Office, and I gencrally represent the Division |
| 2.3 | possible to speak. | 23 | of Oil, Gas and Mining. This morning, Paul Baker, who is |
| 24 | Finally, any time remaining, I hope to he able | 24 | the minerals mining program dircctor, will surumasize for |
| 2.5 | to open the floor up to just general public comment, | 25 | the Division the history of this permit. |


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| :---: | :---: | :---: | :---: |
| 1 | COMMENTS ISY PAUI, BAKER | 1 | done in a way to minimize andesirable |
| 2 | MR. BAKER: I'ot going to go alicad and stand at | 2 | effects on the surroundings. Mined lands |
| 3 | the pulpit. | 3 | should be rechaimed so as to preverat |
| 4 | HEARING OFFICER BA\%A: Okay. | 4 | conditions detrituental to the general salety |
| 5 | MR. BAKER: So, as mentioned, my name is l'aul | 5 | and welfarc of the citizens of the state and |
| 6 | Baker. I'm manager of the minerals icp, ilatory program. | 6 | to provide for the subsecucat use of the |
| ? | And I warted to just bricfly introduce the others who | 7 | lands affected." |
| 8 | reviewed this permit. | 8 | That's what we operale under. That's what onr |
| 9 | Right here is April Abate. She did the geology | 9 | mission is. |
| 1.0 | and hydrology. Also in the room are Lym Kunzler, who | 10 | I wanted to mention we have received several |
| 11 | did biology; Wayne Western, who did the bonding | 11 | comments that have to do with Permit by Rule and asking |
| 12. | calculations -- whose birthday it happens to be. And | 12 | that we do a full environmental review of this permit. |
| 13 | also, he has one of those birthdays that ends in a zero | 13 | Permit by Rule is not something that is part of the |
| 14 | today. We will leave it at that. And Leslie Heppler, | 14 | Division of Oil, Gas and Mining's review. That's |
| 25 | who dicl engineering on this. | 1.5 | associated with the Division of Water Quality and the |
| 16 | We operate under the Utah Mined Land Reclanation | 15 | ground water section specifically. So I wanted to make |
| 1' | Act and its associated administrative rules. I wanted to | $3 \%$ | that clarification. |
| 1.8 | just briefly read one portion of that, of the Act, the | 18 | We actually do a full environmental review for |
| 19 | introduction. | 19 | everything that we do within the scope of whatever it may |
| 20 | "The Ulah legislature finds that a | 20 | be. Depending on what kind of action we have before us, |
| 2.1 | mining industry is essential to the cconomic | 21 | it may not be quite as extensive. |
| 22 | and physical well-being of the state of (tah | 22 | And fd like to go through just a real brief |
| 23 | and the nation. It is necessary to atter | 23 | history of -- a chronology of what we have done. We |
| 24 | che sulface of the earth to extract minerals | 21 | received the original notice of intention -- and I use |
| 23 | required by our socicty, but this should be | 25 | the terms interchangeably, "notice of intention," |
|  | Page 11 |  | Page 12 |
| 1 | "permit," "mine plan." Even though they're -- | 1 | reclamation surety, and they did not originally do that. |
| 2 | officially, it's a "Notice of Intention to Commence Large | 2 | But last year, about a year ago, they submitted a surcty |
| 3 | Mining Operations," but 1 use the different lerms. | 3 | which allowed for disturbance of up to 64 acres. |
| 4 | So we received the original notice in September | 4 | Now, to backtrack just a little bit. I'm sorry. |
| 5 | of 2007. And in May of 2009, we issued tentative | 5 | Now, the Company does have approval for a small mine, |
| 6 | approval. In the meantime, we went through a review and | 6 | which is up to 10 acres, but this allowed expansion of |
| 7 | response process. And that's typical of what we do, is | 7 | that up to the 64 acres. So we approved that June 181/t |
| 9 | we receive a proposal, and then we review that. And the | 3 | dast year. |
| 9 | operator then responds back to us with something a littie | 9 | And on November 21st last year, we received a |
| 10 | bit different. And so in May of 2009, we considered that | $\pm 0$ | new proposal - and I'll get into that in just a little |
| 11 | to be complete. | 11 | bit -- and issued tentative approval, as Mr. Baza stated, |
| 1.2 | And then there was a series of protests and | 12 | on April 7th of this year. And then subsequently, we |
| 13 | appeals that went - there were two informal conferences. | 1.3 | reccived several protest and support letters. |
| 14 | There were a coupie of Board hearings, where it was a -- | 14 | Just going into a little bit about the mine and |
| 3 3 | the Board of Oil, Gas and Mining is a quasi-judicial | 15 | the proposals. This map shows the general location. |
| 16 | organization that oversees the Division. And so a formal | 16 | It's on the Uintah and Grand County line. It straddles |
| 17 | process goes before the Board. And so there were some | 17 | the border between the two counties, extreme southern |
| 18 | Board hearings as well. | 18 | Uintah and northern Grand counties. |
| 19 | And finally, the last Board hearing associated | 19 | This map shows the proposal that's actually |
| 20 | with the initial approval was done on December 5,2012, | 20 | approved, the approved mine plan right now. And under |
| 21. | at which time the Board upheld the Division's decision to | 21 | this, there would be 213 acres of disturbance. Of that, |
| 22 | approve the notice of intention. The Company did not | 22 | 81 acres consists of pits, actual -- or extraction areas. |
| 23 | originally -- or right off the bat bond for the entire | 23 | And there would be about 81 acres also of dumps, which is |
| 24 | area, and so this was a conditional approval. And before | 24 | waste material, overburden, interburden, and also |
| 25 | mining the entire area, they needed to submit a | 25 | processed sand that would be disposed of outside of the |


|  | l'age 13 |  | Page 14 |
| :---: | :---: | :---: | :---: |
| 1 | pits. And then there are various ancillary facilities as | 1 | Wo you folks thave questions for Mr. Haker at |
| 2 | well. | 2 | Llis point? |
| 3 | Under the current proposal, which is depicted in | 3 | MR. JUBUC: No, sir. |
| 4 | this map, there would be three pits and the total | 4 | HEARING OFFICER 13AZA: Okay. |
| 5 | disturbance area is 317.5 acres. Of that, about | 5 | MR, BAKER: Okay. Thank you. |
| 6 | 263 acres would be mined, and the rest of the area for | 6 | HEARING OFFICER BAZA: All right. Thank you. |
| 7 | the various ancillary facilities: 'the processing plant, | 7 | You ready for me to turn it over, Steve'? |
| 8 | roads, wells, top soil stockpiles, things like that. | 8 | MR. ALDER: Ycs. |
| 9 | Really, the big thing to notice -- the | 9 | HEARING OFFICER BALA: Mr. Dubuc, I hink in's |
| 10 | differcnce between these two plans is that in the current | 10 | your turn. |
| 11 | proposal, the one that's not yet approved, the overburden | 11 | MR. DUB3UC: Thank you. |
| -2 | and interburden and the waste sand would be disposed of | 12 | IFEARING OFFICELR BAZA: Go allead and take the |
| ${ }^{1} 3$ | within the pits. There would not be waste dumps. So | 13 | time you need. |
| 14 | instead of having 81 acres of waste dumps where there's | 14 | MR. IJUBUC: I don't believe I'll need the tull |
| 1. 5 | no mining, all of the waste material is disposed of | 15 | arnount of time. Save some time for the folks in the |
| 16 | within the pits. And so there's not that extra space | 16 | audience to talk as well. |
| $1 \%$ | needed to put that waste material. | 17 | Mc . Baza, good morning. On behalf of Living |
| 18 | So the proportion of area mined compared to the | 18 | Rivers, r'd like to thank you for being willing to meet |
| 1.9 | total amount of area disturbed is much greater in the | 19 | with us this morning andl listen io our concerns. |
| 20 | current proposal -- proposal versus the approved mine | 20 | You can tell by the size of the audience that |
| 21 | plan. | 2.1 | this mine is a lightening rod for those who disagree with |
| 22 | I think that's alf I wanled to say. So I hope | 22 | the State's position on the development on oil shate and |
| 23 | that -- I hope everything I've said is clear: And I'll | 23 | tar sands, who feel that encouraging the developmert of' |
| 2.4 | burn che time back to you. | 24 | these resources is the wrong policy choice. |
| 2.5 | HiLARING OFITCER I3AZA: You had offered -- | 25 | From my perspective as an aloncy, however, I |
|  | Page 15 |  | Page 16 |
| 1. | know that you have to approve or disapprove this permit | 2 | Jike a lifeline, regardless of any other evidence, such |
| 2 | based on whether the Company has complied with your | 2 | as Dr. Johnson's study, that comes to light. DWQ said it |
| 3 | regulations, not whether this is a grod or had policy | 3 | back in 2008, and it must be so. As near as I can ligure |
| 1 | choice. | 1 | out, the Company doesn't feel that there is an expiration |
| 5 | As we outlined in our protest, and as I'll talk | 5 | date on that statement, regardless of the circumstances. |
| 6 | about today, the Company's application falls short and | 6 | DWQ says there's no water, so there's no water. |
| 7 | should be denied. | 7 | The problem is that pretly much everyone in this, |
| 8 | Because this isn't a full-blown hearing and my | 8 | room knows that there's water that could be impacted by |
| 9 | allotted time is short, t'mot going to attempt to cover | 9 | this mine, and it's time for the Company to own up to |
| 10 | everything we outlined in our protest. Although our | 1.0 | that. |
| 11 | protesi points out the deficiencies in the Company's | 1.1 | Mr, Baza, I hate to put your stalf on the spot, |
| 12 | application tegarding such things as air quality issues, | 12 | but even they recognize that there's groundwater located |
| 13 | I'd like to focus our time today on groundwater, and | 13 | close to the mine that needs to be accounted for. In |
| 14 | specifically whether there is groundwater in the area of | 14 | their initial review of the Company's newest |
| 13 | the mine chat could be impacled by mining operations. | 15 | application, your staff wrote, and I quote, |
| 1.6 | The Company's position has always been that, in | 16 | "The narative notes that no" seeps -- |
| 37 | spite of any concerns regarding the residual chemicals in | 17 | "springs or seeps were identified within the |
| 18 | its waste stream, that there isn't groundwater near tle | 18 | Phase I project area during the May 2014 |
| 19 | mine that could be contaminated. As evidence of this, | 1.9 | reconnaissance with personnel From Utath OGM |
| 20 | Lhey point tirst and foremost Lu a 2008 determination by | 2.0 | and DWQ and Utah Gcological Survey. While |
| 2.1 | the Division of Water Quality stating that, "fixecpt Jor | 21 | this is true, the ficid reconnaissance did |
| 32. | small isolaled pockets of groundwater, the nearest actual | 22 | identify seeps and springs flowing within |
| 23 | aquirer is 1500 to 2000 feet below the surlace." | 23 | Long Shot Canyon, which is part of the Main |
| 24 | Fiven though seven years has gonc by since IDWQ | 21 | Canyon watershed. US Geological Survey has |
| 2.5 | made that statement, the Company continues to cling to it | 25 | mapped these springs, along with several |

"
others within the Main Canyon watershed. Access restrictions prevented the group from conducting a more detailed survey of the other mapped secps and springs within the watershed.
"Because the Phase $\{$ mining arca is part of the Main Canyon watershed, it is nocessary to evaluate any inpacts from the mining operation, which is why a baseline characterization of the seeps and springs is needed. Thesc include a baseline characterization, spring and seep survey to begin in the spring in 2014."
llowever, not long after that revicw was issued, your agency issued a letler clarilying DOGM's position as making this a recommendation rather than a requirement, i suspect under pressure from the Compary.

Your regutations requite that the Company provides a sufficicrl description of hocation of and depth of ground water resources found in the area of the mine, which is where Dr. Johnson's study regarding the Maill Canyon springs cornes in.

The regulations also require that the Company account for impacts to tocal groundwater resources and provide a marrative description of any deleterious

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## MR. DUBIJC: Where did you submit your

 manuscript?DR. SOHNSON: The manuscript was submited to the journall, Science of the Total Enviromment. It's a journal that is international, published through -- on subject. And its primary interest is contamination in watcr:

MR. DUBUC: Has your article heen peer reviowed and accepted for publication?

DR. JOHNSON: Yes. The article was peer reviewed and was accepted and is now published.

MR. DUBUC: Okay. When did you begin your sludy of the groundwater in the PR Spring area?

DR. JOIINSON: 'The study of the groundwater, we starled in sumamer of 2013. I happened to be passing througl) the area from Colorado, and I had not secn the sile al that time. So I contacted John Weisheil, who was familiar with the site. I asked hinn to take me on a toun: He graciously took us in his own vebicle -- look me and a graduate student tbrough the site at that time in his velicte.

MR. DUBUC: Werc you hired to do this study?
DR. SOITNSON: For this study, I was not hirced. We, that is me and my graduate students, basically cobbled logether resources from probably about ten
materials that would be letit on site.
Wilh our protest, we also provided a report from Dr. Johnson that disagrees with DWQ's conclusions that the testing conducted on the waste from US Oil Sands ${ }^{1}$ process contains low hevels of total gas and diesel range organics.

With your permission, what I'd like to do now is have a conversation with Dr. Johnson regarding his two studies. And then feel free to ask any questions you have along the way.

HEARING OFFICER BA/A: That would be grcat.
MR. DUBUC: Thank you.
COMMENT'S OF BII, I, JOHNSON
MR. DUBUC: D: Jolmison, good morning.
DR. JOHNSON: Good morning.
MR. DUBUC: Best speak into the microphone so our court reporter can get this.

Dr. Johnson, can you tell us what your credentials are to conduct the study that you did out in the PR Springs area?

DR. JOINSON: Sure, yeah. I have a Ph.D. in civil and environmental engineering fothowing from degrees in earth science. I am a professor in the Department of Gcology and Geophysics at the University of Utaht.

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different sources.
MR. DUBUC: So what prompted you to undertake Lhis?

DR. JOHNSON: The visit with John Weishcit was an eye opener for me. I bad been going based on the court record, the descriptions of the sitc. Which, if you read the court record, it basically describes the site as a dusty, walerless area. And it was chear after spending aboul 15 minutes at lhis site that, in fact, if you go into ary of the canyons surrounding the mine site, there are perennial springs that feed, for instance, al roservoir that is relied upon by a ranching family in Main Canyon. It's clear that livestock and agriculture and receationisis all rely on those perennial springs.

MR. DUJBUC: So there is a fanily, the DeLamberts, I believe?

DR. IOHNSON: Right.
MR. IDUBUC: That reside below the mine, somewhat downstrean?

DR. JOHNSON: That's right.
MR. DUBUC: Bul they ranch -- the ranch includes the area directiy below the mine, does it not?

DR. JOHNSON: Right. Their ranch house and the teservoir are approximately two-and-a-half, maybe three miles downstream from the mine, the original

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permitied mine area. But their ranch extends atl the way up to directly underneath the permited mine area.

MR, IJUBUC: And are there springs in the arca of the mine directly below the mine?

DR JOIINSON: Yes, there are several percnnial springs dixectly below.

MR. IJUBUC: Okay, So what was the scope of the slucly? What was the arca that you looked al?
I)R. JOIJNSON: The scope of the study included Main Canyon. 'There were, if I remember' correctly, fou' or live peremial springs in Main Canyon. And then Jor a contrest, we also looked at the liook Cliffs side on the other side of the divide; that is, the sureams that flow towards the Uinkal, Basin on the north side of the divide and streams that flow towards the Moab area on the southern side of the divide. And so we had several streams on that side as well to undersland the contrasts between the two sides of the divide in terms of groundwater chemistry,

MR, DUBUC: How long did this study go on?
IDR. JOIINSON: Approximately two year's, two-and-a-half years.

MR. DUBLJC: Does it continue, or have you wrapped it up?

DR. JOHNSON: Well, we wrapped up the initial

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the valley boltonz.
MR. DUBUC: llow often did you sample'?
DR. IOHNSON: We sampled, I think probably four times during the course of that two-year period.

MR. DCJBUC: Okay. What werc you trying to show specitically?

DR. JOHNSON: We were trying to show whether or not the waler chemistry indicated a flow palh from the ridge top to the valley bottom.

MR. DUBUC: What kind of Lesting do you do to confint or deny that? on spring samples. We perform field analyses to look al just general characteristics, such as how much salt is dissolved in the water, so it's the total dissolved solids. What is the oxygen conteni of the water? What is the pH of the water? What is the temperature?

And then there are more sophisticated analyses that we bring back to the labs here at the university, where we look al the environmental tracers to understand the extent of water-rock interaction through things like stromtium isotopes, through alkalinity, through age-daling tracers, such as trilium, sulfur and hexatluoride. So we have al whole battery of analyses we run to understand whelher of not there is a regular
.
investigation in terms of tooking at the water chemistry. We would like to be able to install boreholes at the ridge top to directly determine the amount of recharge that passes through the ridge top to reeding the groundwater system at the site.

MR. DIJBUC: What was the conclusion of your stukly? And we'll get to some of the aspects ol the study, the specilic aspects. What was your conclusion?

DR, JOI INSON: The conclusion is that there is a hydrologic connection between the ridge top, where the mining and disposal activities take place, and the perennial splings in the valley bottoms.

MR. DUBUC: Okay, lel's talk aboul some of the methods that you used to confirm that comection, if you don't. mind.

DIR. JOFASSON: Sure. What we did was to sample springs at multiple clevalions. So there are springs that are in elevation close to the mine sile, within sevcral hundred fect of the clevation of the minirg and disposal site. And then there are springs that are lower down, extending down to the elevation of the Del amberi. ranch house and reservoir. And so we sampled four or five springs in that elevation range to see whether or not the water chemistry showed a change wilh clevation that suggested a flow path coming trom the ridge top io
change in the water with elovalion.
MR. JIJPUC: What was DWQ's conclusions regarding those springs, the source ol water in those springs? Do you recall?

DR. JOHNSON: Well, the court secord, it stated that there's no potential impact to glound water because there is no groundwater at this site. And so inmplied in that is an absofute lack of connection betuveen the ridge top and the springs.

MR. DUBUC: And you disagtee with thet?
DR. JOHNSON: Certaimy.
MR. DUBUC: What level of certainty do you have regarding your conclusions?

DR. JOINSON: One hundred percent.
MR. DUBUC: No doubt?
1)R. JOHNSON: No doubt. Because if 1 werc to take the results and pul them in liont of. 100 lydrologists and ask them, What is the most obvious conclusion that you would draw from these results? They would say that there was a flow puth between the ridge top and the valley bottoms.

MR. DUBUC: Did you invited DWQ to attend any al your tesling?

DR. JOHNSON: Ycalt. Throughout the course of this study, I provided preliminaty reports. I asked them
if they wanted to join us at the site so that we could describe what we were finding. And so I made sure that they were completely aware of what we were doing.

MR. DUBUC: And would you welcome cןuestions from Division stafl if they have questions about your study? DR. JOIINSON: Oh, certainly. Yeah.
MR, IUUBUC: Mr. Baza, do you have any questions for Dr, Jolitison?

HEARING OFPICER BAZA: I see that your study was Exhribit B of the letter that you submitted.

MR. DUBUC: Yes, sir.
HEARING OFFICIBR BAZA: As T'n reading that, at leass therc's a cover tcter that tatks about this manuseript being submitted.

Has lhis undergone a peer review, than?
DR. JOIINSON: Yealt, absolutely.
MR. DUBUC: Yes, sir; it has. And 1 can provide copies of the linal manuscript, if you'd like. But it has been published.

HEARING OFFICER BAZA: Okay.
MR. DUBLC: Would you like to do it later?
HEARING OFFICIRR BACA: Centainly you can provide that.

MR, DUBUC: Okay. I'll provide and that and ['11 give copies to --

HEARING OliliCER BAZA: Yeal, I would welconc any information you want to provide.

MR. DUBUC: Okay. I'Il do that atter my presentalion.

FIEARING OFFICER BAZA: Okay.
MR. DUBUC: Do you have ary other questions?
HEARING OFFICER BAZA: I to not at this point, but I may have some atter the presentations are complete.

MR, DUBUC: Okay. The second report that Dr. Jobnson included in -- it's included -- think it's Hxthibit H of our protest. li has to do with testing that the Company did on its waste strean that was gencerated up, and thelieve it's in the Alberta facility. And they did leach testing, SPLP testing, on that waste strean.

DWQ concluded that line were low Icvels of -and correct me if T'm wrong, Dr, Johnson -- Latal diesel and gas range organies in that waste stream. And ('cl like to talk to Dr. Johnson just a few minules about that testing.

Did you review the aclual test results from that testing, Dr, Johnson?

DR. JOHNSON: Ycs, I did.
MR. DUBUC: Do you agree with CWQ's amalysis ol that waste stream?

DR. JOIINSUN: No, 1 to not.

MR. DUBUC: Do you mind lelling me what aspect ol' thal you disagree with?
[J]. JOHNSON: The result of the leach test showed that the concentration of organics in the leachate in the water were in the range of tens of mifligrans per lier. And tens of milligrams per liter is a, quate, unguote, low concentration in a put-together context. And I think the context that was being considered is something like an inderground storage tank for gasoline,

But we we not examining gasoline compounds licre, we're examining polycyclic aromatic hydrocarbons and other much Iarger molecules thal are much less soluble. And the concentration ranges of concern for those compounds are in the micrograns per liter range.

MR. DUBUC: So parts per million, parts per bilion, how do those equate to --

DR. JOHNSON: Factor of 1000.
MR. DUBUC: But $T$ mean in terms of -- the terms you used, the tems that were used by --

DR, JOHNSON: Microgeam per liter is $1 / 1000$ a milligran per fiter: Or a milligram per liter is 1000 times a microgram per fiter.

MR. DUBUC: Okay. And what were the results that you reviewed? What did they show?

DR. JOIINSON: They showed something on the order
of 20 milligrams per liter was in the feachate water that had been equilibrated with the residual material.

MR. DUBUC: And is that a cause tor concern?
DR. IOHNSON: I bclieve that's a cause for concern in the context that the stance that has been taken is that there is no polential impact to groundwater. And so there's two aspects to that. First. there is a hydrologic connection between the disposal site and the peremial springs. And if that's the case, then one has to consider the potential impact ol the solvent on the bitumen compounds in terms of theil propensity to dissolve into the water.

MR, DIJBUC: l et's talk about that for a second.
What is -- bitumen is a solvent that the company uses to process the tar sands; is that correct?

DR. JOHNSON: No bitumen is the tar itself.
Those are the compounds --
MR. DUBUC: I'm sorry. I'm soryy.
DR. JOHNSON: - of the tar jiself:
D-J.monene, I think, is the solvent being used in the process.

MR. DUBUC: Yes. Okay. And so how do those interact?

DR. JOLANSON: So in the interaction between just water and tar compounds, those compounds are very
insoluble. They will dissolve to a range of tens of compounds. And so they are not prescrt in significant quantities in just ambiene water. fowever, if you have al residual material that is equilibrated with bitumen compounds and d-L. imonene or a similat solvent, now you've changed the dynamics. Pecause the d-Limomene is much more soluble in the water thate the bitumen compounds are. So it acis als an intermediary, so to speak, in that it will enhance the dissolution of tar compounds in the water and gicatly increase the concentration you'd expect in the waler.

MR, JuBUC: And are there residut chemicals, the bitumen and $d$-linuonene in the waste stream?

DR. JOHNSON: Ycs. You certainly expect there to be both of those phases present.

Mir. DUBIJC: So putting, those two pieces of the puzale together, the fact that there is a connection betwees the riclge top where the mine is and the spring, and the fact that the process they use tends to mobilize petrochemicals, what is the concern in terms of these springs and the dauger to these springs?

OR. JOIINSON: Well, I just don't belicve the stance of no polential intpact is tenabie. I think that the situation needs to be cxamined in terms of the
possibility of impact of the disposal on the water quadity of the springs. And so to -- what needs to be done is to analyze the possibility of transport to those springs, getting our -- that a great deal is known about the transport behavior of these compounds, and to take that possibility more serious and quantify it.

MR. DUBUC: So if you were Mr. Baza and you were pulting conditions on this permit, what would you require?

DR. JOITNSON: I would think it would be reasonable - and of course, this is all contingent on what analysis determines - but I would think it would be reasonable to expect some sort of monitoring system, certainly with the springs themselves, but also some kind of intermediate location through the disposal sites. Possibly some kind of leachate collection system to protect the groundwater, those kinds of measurcs.

MR. DUBUC: Okay. Do you have any linal comments?

DR. IOHNSON: No.
MR. DUJBUC: Okay.
Mr. Baza, do you have any qucstiens for Dr: Johnson?

IIEARING OFFICER BAZA: Those last things you jusl mentioned, Dr. Johnson, as tar as requirements to
lage 31
put on the permit,
I guess, Mr. Dubuc, would you be willing to submit that as your recommendation? I don't know if that was also part of your letter. But if those are specific requirements you want the Division to analyze and include, those should probably be written down somehow.

MR. DUBUC: We would be happy to submit those, Mr. Baza. We did not include those as part of our protest. This is a conversatiou with Dr: Johnson. Those are his recommendations in terms of --

HEARING OFFICER BAZA: Sure.
MR. DUBUC: -- conservative measures to take. We'tl be happy to submit those in writing.

HFARING OFFICER BAZA: Well, it gocs along the lines of what I indicated initially: If you have suggestions on how to improve what the Division is trying Lo do in this case, I would like to see those.

MR. DUBUC: Okay. We will be happy to do that, and we'll give copies to the party.

IEARING OFFICER BALA: Okay.
MR. DUBUC: So Mr. Baza, as you can see from [ 2 . Johnson's discussion, not only is there cvidence of groundwater in the area ol mine, but the waste stream from the mine has dangerous levels of petrochemicals that could well pollute that groundwater.

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The Company is continuing to deny that groundwater cxists. I imagine they will continac to deny that today. But it's cleariy present, and it's clearly -- this mine clearly poses a danger to that groundwater.

And I think that when it comes to these types of technologies, that the Division should lake a conservalive approach in its permitting. It should not assume the best, but perimaps assume the worsh.

And so that's what we're asking, is that the Division acknowledge that thete is groundwater om there, that there's a connection, thal Lhere's a polential to pollute that ground water, and take appropriate measures to prevent that.

I have to say that I honestly have never understood the Company's position regarding groundwater and why it refuses to monitor. This has been ongoing for some time now. I think the summer of 2009 is the first time that we had a conversation about this mine. And in the interim, the Company continnes to say there's noy groundwater, there's no need for monitoring.

I think the evidence that's come to light relutes that contention, and I think icts time for the Company to just acknowledge reality. The Company continues to say that their process is environinentally

|  | Page 33 |  | Page 34 |
| :---: | :---: | :---: | :---: |
| $\cdots$ | henigit. And so it's difficult to understand why they | 1 | to allow that. |
| 2 | take that position and at the same time refusc lo agree | 2 | MR. Al.DER: So this is April Abate, who is a |
| 3 | to any kind ol monitoring. | 3 | hydrologist, who is going to do the questioning. |
| 1 | So in spite of the Compary's position, the | 4 | MS. Al3ATS: Good morning. My question is for |
| 5 | Division has before in scicntitic proof that the atinc | 3 | Dr. Johnson. |
| 6 | site is a recharge zone for the Main Canyon springs. It | 6 | First ofy , 1 applaud the fael that you're cloing |
| 7 | should not ignore that prool. | 7 | the studies and you'te collecting the data out there. |
| 8 | For all the reasons outlined in our prolest, | 8 | However, i did have a question about, in reading the |
| 9 | especially because of the evidenec outined in | 9 | report, why there was no flow data thet was documented in |
| 10 | Dr. Johnson's testimony, we ask that the Division rescind | 10 | the roport. |
| 11 | its Lenlative decision to approve the mine and require | 11 | DR, JOHNSON: Yeath, thal's a good question. |
| 12 | the Company tordicss these deficiencies in its | 12 | deally, we would have flow data. L3ut it was me |
| 13 | application. That's all I have. | 13 | and some graduate students and cobbling together funding |
| 14 | HIARLNG OH'PICER BAZA: Thank you. | $\underline{1} 4$ | as we could. So there were many things I would like to |
| $\pm 5$ | We'll now turn to Mr. Davis. | 15 | have done that we didin't do. |
| 76 | Mk, DAVIS: Did the Division have any questions | 16 | 1 can tell you that ancedolally, the springs, |
| 17 | of Dr. Johnsor? | 17 | some of thememit lrom the pipes that have been driven |
| ? 8 | MR. AI DER: I didn't know, Director, if you | 18 | into the hillsides. And so, youknow, there is some |
| 19 | wanted to open the -- or ask -- have the parties ask | J. 9 | record of flow in those pipes from the precipitates from |
| 2.0 | questions of the witness. If you would, April has a | 20 | the water. And so you can actually see that -- because |
| 21. | elatification she'd like to ask Dr. Johnson. | 21 | we're in a ground situation potentially, or possibly |
| 22 | HCARING OFFICER BA7A: Okay. And ] would jusk | 22 | other influences - - that the flow in these spritugs has |
| 23 | caution that we're here as parties trying to improve the | 23 | declined somewhat over time. |
| 24 | process, not necessarily adversarial in this. So as long | 24 | MR. Al.OIER: Thank you. |
| 25 | as your questions are aligned along that, I'd he happy | 2.5 | HEARING OSPICER BAZA: Okay. Thank you. |
|  | Page 35 |  | Page 36 |
| 1 | Mr. Davis, your turn. | 1 | in the revised notice of intent and in the groundwater |
| 2 | MR. DAVIS: Thank you, Mr. Baza. John Davis on | 2 | discharge Permit by Rule demonstration that was liled |
| 3 | behalt of Holland \& Harl representing US Oil Sands. I | 3 | with DWQ and appended to the revised NOP, but there is |
| 4 | have to my left out VP ot oporations, Mr. Barclay | 4 | also an extensive record belore the Division of Oil, Gas |
| 5 | Cuthbert, whos ( believe you've met in the pask; and to my | 5 | and Mining, the Board of Oil, Gas and Mining, and the |
| 6 | right, my associate Ben Machlis. Also present loday with | 6 | Utah Divisjon of Water Quality in the form of studies, |
| 7 | us ate Di: David ilansen, who is a protessional geologist | 7 | reports, deposition Lestimony, and live testimony; and |
| 8 | with flansen, Allen \& Luce -- I'm sorry, an erigineer. Mr. | 8 | importantly, this Board, the l board or Oil, Gas and |
| 9 | Hansen is not here to testity but to observe. | 9 | Mining's findings of fact, conchnsions of law and order |
| 10 | To begin, we do appreciate the efforts that | 10 | that go far, far beyond the requitmments of the statute |
| 11 | Dr. Jolmson has taken, and we know that he lias made those | 11 | and regulations. |
| 12 | cfforts in good faith. It's -- at the state that this | 12 | Nonetheless, Living Rivers is raising once rgain |
| 1.3 | record is at, I thenk that the Division and Mr. Baza | 13 | the two central issues that were soundly repudiated by US |
| 14 | needs to -- you need to recognize that Living Rivers' | 14 | Oil Sands' cyidence and rejected by the I3oard and DWQ. |
| -15 | continued complaints that the revised NOI is deticient in | 15 | The first issue, again: Is there groundwatior |
| 16 | failing to adequately account for possible existence of | 16 | present for the project to impact? Nol potential, not |
| 0.7 | groundwater and for failing to account for possible | 1'1 | possible, but groundwater. In that circumstance, or in |
| 18 | impacts on the groundwater, that that standard -- that | 18 | response to that question, the Buard found the answel to |
| 19 | 1.he standard in the regulations is for the NOI to provide | 19 | thett question to be no. |
| 20 | a narative description of the depth to groundwaler and a | 20 | In paragraph 40 of its lindings of fact and |
| 2) | genetal narrative description identifying the projected | 21 | conclusions ol law and final order, which was filed on |
| 22 | impacts to the surlace and groundwater systems. | 22 | February 27, 2013, the Board found that: "The |
| 23 | As the record indicates, this issue has been | 23 | preponderance of the evidence in the record indicales |
| 24 | ongoing since 2007. And not only has US Oil Sands met | 21 | that shallow water docs not exist in the project area." |
| 2.5 | this burden repeatedly in both its notice of intent and | 25 | In support of that, it stated in paragraph 30 |

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that it recognizes -- recognized that the zone of saturation for groundwater is the Mesaverde aquifer, which is some $15-$ to 2000 feet below the surface level and that other groundwater is generally absent and has not been located in the project area, despite good faith actempts to find shallower groundwater.

In paragraph 32 of its findings, it states (as read):
"During the summer of 20 s , US Oil Sands dritled 180 holes in and around the mine site, with a density grid of 55 holes within the project area" -- and that, by the way, includes the project -- the new project area that we'te talking about, the expansion of the project area -- "up to 300 feet in depth," although most of those were around 150 feet in depth, "which" -- and I quote again -- "which is more than twice the depth to which US Oil Sands will mine. The drilling was conducted, in patt, to dotermine the presence or absence of ground water. The means and methods utilized would have yielded signs of ground water if there were any. The drillers and geologists who matwed the drill rigs were instructed to
watch for, and record, any signs of ground water. No ground water was encounlered, and no sign of it was recorded. The 2011 dilling and coring progian is strong evidence of the absence of ground water that may be impacted by the project."
Those findings are binding on Living Rivers as a party to that hearing and to all the proceedings before this coutt -- or before this tribunal -- before the tribunal and the Board. And nothing material has changed in this precess. Living Rivers has cited no new evidence of the presence of groundwater in the project area, although Dr. Johnson's report does say that there must be some recharge. And we wouidn't deny that there would be recharge from precipitation events, but there's nothing above that area, because it's isolated on a ridge, that would allow additional subsurface tlow.

And in his additional submission, Mr: Lips doesri't actually claim that there is any groundwater to be impacted.

Now, the second issue and the issue that Dr. Johnson has addressed today is whether there is a hydraulic connection between the mine site and the perennial springs in Main Canyon. Dr. Johnson's study has focused on theec primary springs in thal area

Again, though, I would point out that the Board of Oil, Gus and Mining record speaks cleally to this issuc.

It paragraph 38 of the findings of fact, the
Board states in part:
"... the springs south of the mine
site are hydrologically [sic] disconnected
from the mine site and will nol be
impacted."
That is the finding -- that is the finding of the Board based on competent, uncontroverted evidence presented at the hearing, both the hearing before DWQ and adopled by the Board in its hearing.

Now, Living Rivers points to Dr. Johnson's study in support of its contention that there is a connection between the area of the mine site and three peremial springs in Main Canyon. And we've heard Dr'. Johnson's testimony to that effect today.

One of the issues we have with that is that the fomal putblished report that was published in the journal of total environment isn't the same report that is appended to the protest. And as near ats we can tell from our careful revicw of that report, nowhere in that report does Dr. Inhnson come out and say that there is a bydrologic connection between the ridge in which the mine site is encompassed and these three springs. Now, he
said so today; but frankly, thal's the hirst we've heard or that.

And in our teview, we believe that the study' doesn't show what Dr. Johnson now claims that it shows. First, it ignores the fact that the springs are located on the sonth, or opposite, side of Main Canyor from the mine site.

Sccond, Dr, Jomson acknowledges in the report. appended to the protest that -- and then ignores the fact that the slip of the formations and the resulting gradient How from the south to the north. And the mine site is located to the east of these three springs.

Now, that would preciude a hydrologic connection unless, as Dr. Johnson states in the appendix to his report, there is -- there exists significant fracturing. But there's no proof of any significant fracturing. There was none found in the 180 exploratory holes that were drilled. And even for this fracturing theory to work, it would require water, one, to migrate downwards from the mine site to the west, rather than in the $\because$ gradient to the noth, to below the floor of the canyon, and then move against thei gradient towards the springs to the sonth on the south side of the canyon, and thiten somchow elevate back uphill to above the bedrock on the south canyon wail, where they emanale. They don'i
cmanate in the bottom of the canyon in the alluvium, they cmanate from bedrock on the south side of the canyon wall.

In the DWQ hearing, onc of our expert witnesses, Bob Bayer, testified that there was no hydraulic utechanism present capable of drivilg water movement of that type in that direction. And that's in the EWW hearing transcripl Bayer af page 358.

Bayer further testitied that those springs are sourced firom recharge dircctly above the springs to the south, from the south side of the canyon. See again Bayer's testimony at 356 through 365.

In reading Dr. Johnson's conclusions in his report, the conclusion of that study at page 18 of Exhibil B to Living Rivers' protest is that, "The perential springs arc nol derived solely from alluvial waler and must therefore receive water from the surrounding ridges."

We don't disagrec with that conclusion. But unwhere does the study contend that the mine site itsell ${ }^{\circ}$ contributes to those splings. And the Board came to the opposite conclusion, a conclusion that we believe is binding on Living Rivers.

Quickly with regard to the disposal of the deleterious materials and the mobility issuc. I'm not a
scientist, so I'm going to leave some of that to Mr. Cuthbert to discuss. But Dr. Johnson's alssessment and his conjectures regarding the SPIP tests that were undertaken by US Oil Sands are again arguments thal were rejected by the Board, by the DOGM Board and also by the DWQ Board.

The analysis assumes a saturated system where the bitumen and $d$-Limonene residuals are equilibrated in the water. And Dr. Johnson has previously concerled that thuse conditions are not present in the tailings: or won't be present in the lailings. And that's in the goGM findings, the Board findings, al palagraph if. Let me just quote quickly from that tinding.
"The preponderance of the evidence in the record indicates that residual
(d-limonene in the tailings will not impact groundwater. In the IWQ matter, Living Rivers prescnted the testimony of
Dr. William Johnsom, whe opincd that residual d-limonene in the tailings from US Oil Sands' operations will make the residual bitumen compounds in the tailings 1.440 times more soluble than they are in the natural state. His testimony fell short: however, as he acknowledged that his
solubility and mobility calculations were
premised on inmediate cntry of the byproduct
into groundwater, which was not prover."
Now, Dr. Johnson is using the same calculations that he used in that testimony in his most recent report. And he provides no explanation of why a comparison of the diesel range organics and the tailings to an MCL for benzo(a) -- I can't pronounce that -- pyrene, that's right, is relevant.

It is also, in our opinion, a quanturn leap to assunne that dicsel range organics can be cquated to the prosence of benzo(a)pyrenc, where, as Dr. Johnson acknowledges, the DRO results from that testing are comprised of thousands of organic compounds, one of which may or may not be BaP. His selection of the MCL for BaP points -- or paints to us an intlated, and we believe, biased picture of the potential risk posea by the tailings.

I Whink that a would like to turn my time, our remaining time, now over to Mr. Cuthhert. He has some comments regarding both chemistry and also an overvicw of why we're actually seeking this revision to our original large mine plan. 'lhank you.

COMMENTS BY BARCLAY CUTHBERT
MR. CUTHIBERT: Goodmorning, Mr. Baza.

IItARING OFFICER BAZA: Good moming. MR. CUTHBEERT: So 1 thought first that 1 would discuss, again, some of the background to our submission of the revision to our Notice of Intention to Conduct. Large Mining Operations.

As we talked about, as l'aul mentioned this morning, our original approved NOI consisted of a total disturbance area of 213 acres. In that plan, there were 93 total acres of pits planned as wall as 70 acres of outside storage areas, where we would place overburden and tailings and whatnot because we weren't able to replace those in the mine areas untit a sufficient area fiad been opened to allow backfilling of those areals.

After we conducted our resource cvaluation work in 2011 and 2012, it gave us a much belter picturc of the resource, allowed to us optimize our mine plan.

So we went back and looked at the dala and realized that if we started our mining operations to the south of where we'd originalify planed in what's now called "Pit 1 ," what that would allow us to do is to cxtract the resource, but we would be able to stant our [cclannation efforts much more quickly and minimize the amount of material that would have to go outside of our pit areas.

So in the revision, if you look at the total

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where the Board has made decisions on this under previous Board orders, would you see those as slift applicable in tcinss of the additional acreage, those findings of the Board order? Maybe that's a question for Mr. Alder inslead, but.

MR. BAKER: I would say that we would certainly consider those, and we would be looking at the testimony that was presented in the hearings and things. But if there if there was additionat evidence, additional information that we conne across that countered what we had previously tound, we would certainly consider that.

HFARING OFFICER BAZA: Okay. A couple of things have been brought up in both of the parties' presentations here. One was conncctivity to groundwater that may exist in the form of springs around the mine site. Another was can the mine material, solvents, bitumen, whatever, can they move off of the mine area?

I think there's probably a pretty substantial responsibitity by the Division to ensure that there are no offisite impacts to the work that we approve; is that correct?

MR. BAKTR: Yes, I wouid agree with that.
ItEARING OFFICER BALA: Okay. Was there any information chat you may lave heard today which changes oru perspective on connectivity to groundwater resources,
and was that part of the analysis that the Division did?
MR. BAKER: Yeah, that was certainly part of the analysis. As far as the technical details or that, I would defer to April Abatc. But I'm obviously hearing conflicting information. But yes, that's something that we would be corsidering, yes.

FIEARIG OFFICER BAZA: ) know one of the questions Mr. Dubuc brought up was the idea of monitoting being part ol the Division's review or requirement. And I gucss what I would oper up to all three of these parties herc is: Is that monitoring a requirment? And if it's done, how should it be made part of the analysis thal the Division does?

MR. DUBUC: I assume you want ine to responal directly to that question?

HEARING OFFICER BAZA: Surc, yeal.
MR. DUBUC: So in the initial review, Ms. Abale basically said, "which is why a baselinc characterization of the springs and seeps is needed." She notes that hydrologic connection, potential hydrologic connection because the Phase I mining area is part of the maintaining the watershed.

So if you're going to do a baselinc characterization, what's the point of that unless you have some follow-up to that? So, yon know, basically, il
you're going to characterize what exists now, then what's the point of that unless you go back and characterize what happens over time? And so I think that the logical exiension of that observation would be that you would lave to monitor in sone way going forward.

Now the extent of the monitoting -- 12i. Johnson had some recommendations. You know, you might want io bave -- dritil some boreholes and tave some immediate monitoting of points and stuff like that.

So what the Division requires, I think, is, you know, obviously your decision based on your staffs recommendations. But we would say that there's ino point in doing a characterization unless you do a tollow-up of some sort.

HIAARING OFPTCIR BAZA: Okay.
Mr. Davis, do you have a response trom US Oil Sands on that question?

MR. JAVIS: Yeah, we do.
The original statement by Ms. Abate was, in fact, a recommendation. We discussed it as part of the permitting process -- I mean, I didn't, but the Company did. And the iden was that the monituring would be or could be trelplal in providing additional evidence demonstraling the lack of a lydrologic connection.
it's our posilion, and I think that it's been

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validated by expert Lestimony and a certain amount of just plain common sense, that the springs adjacent to the ranch and the springs upstreant trom that are on the wrong side of the canyon to be impacted by these operations. I[ we're going to do nonitoring for potential impacts, it would probably inake nore sense to do that in another area of the mine where the actual llow seems to be most likely. But again, there's such a small amount of potential flow, and nonc of these - nonc of the monitoring -- or excuse me, none of the exploratory holes encountered any water whatsoever. It seems to be a waste of resources at this point to put in monitoring wells where Lherc's nothing to monitor:

HEARING OFFICER BAZA: Okay.
April, Paul, do you have a comment on thal?
MR. ALDER: Mr. Bata, if t could -- first of all, whether it's a legal requirement or not, it really depends on the facts of the mine application. 'the Division, by its rules, is required to detemine impaets and to derermine methods to mitigate impacts. And so the question of whather monitoring is legally requited or not is sorl of fact-dependent. And with that, I think April probably should address the question.

COMMENTS ISY APRIL ABAI'E
MS. ABATE: So when I reviewed the permit, I

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|  | Page 53 |  | Fage 5 |
| :---: | :---: | :---: | :---: |
| 1. | based it on the various inventoried hydrologic resources | 1 | So the fact that they're all to the southeast |
| 2 | in the watershed where the mine is as well as the | 2 | indicates to me that I'm seeing a recharge arca that |
| 3 | sumounding watersheds and taking all that into account. | 3 | would be funther to the southeast of where these springs |
| 1 | This site is permitted by rule by JWQ, which does not | 4 |  |
|  | have any specific -- does not require any | $b$ | As you go down the canyon inio Main Canyon, |
| 6 | water-tronitoring protocols. | 6 | where I understard these alluvial springs are, or what |
| ' | As a result, and in our rules, we are required | 7 | people are calling "alluvial springs," then you might |
| 8 | to monitor lor impacts to the water quality, and that | 8 | have a situation where water runoti is coming down and |
| 9 | does not specifically state any water-monitoring | 9 | they're actually being recharged by alluvial material. |
| 10 | protocols, cither. So that is the reason why we made a | 10 | The one thing I was -- that you don't sce is you |
| ${ }^{1} 11$ | recommendation to the Company to do some baseline | 11 | don't see any springs that are coming oft these |
| 12 | characterization of the water resources in the area. | 12 | northwest -- excuse me, northeast trending side canyons |
| 13 | Most of the springs that are in the watershed | 13 | off of Main Canyon, which there is a direct adjacent |
| 14 | are to the southeasl. And the ones that I was able to | 14 | canyon right to the mine disturbance area and there's no |
| 75 | observe when I was out there last May did emanate from | 15 | springs there. So that tells me that there's no-- |
| 16 | the ridge, and they were coming out of bedrock. | 16 | there's no water resources that are coming directly oft |
| $1 \%$ | The interesting thing about themi is that they | 17 | the mine. |
| 18 | all follow a similar elevalion and they all kind of crop | 18 | So I don't see this as a potcutial |
| 1.9 | nut on a northwest slope. So there's an interesling | 19 | contribution -- signi ficart contribution to techarge just |
| 20 | pattern you can sce with them. Usually when you see that | 20 | simply because there are no springs in that area. It's |
| 2.1 | situation, it's that the springs are all following a | 21 | nol to say that, you know, there isn't some runoll and |
| 22 | contact where the water is dripping down, percolating | 22 | eventual percolation that could hit those alfuvial |
| 23 | down, and then hits an impervious contact. And that's | 23 | springs. |
| 2.4 | why they're cropping out. Anel that's whal's probably | 24 | Thal's why I really feel that there should be a |
| 25 | happering in this situation. | 25 | case for making -- doing some water monitoring there just |
|  | Page: 55 |  | Page 56 |
| 1 | because, to me, the evidence docssn't poilut to a specitic | 1 | partnership. There's some expertise that DWQ has that |
| 2 | counection. But that's what data is going to dio: It's | 2 | the Division relied on. But when that prermit was |
| 3 | going to tell you wheller there is, or it's going to | 3 | reviewed by DWQ the lask Lime around and then the permit |
| 4 | contirm that it's not. So that's why I made that | 4 | was scriewed again after that by the Division of Oil, Gas |
| 5 | statement in my review of the signiticant revision. | 5 | and Mining, it was to determine if out expertise kind of |
| 6 | ILEARING OFFICER BALA: I have one last question | 6 | concurred with those evaluations and also that if it mel |
| \% | for the Division before we nove on. | 7 | the separale requirements of the rules and statutes that |
| 8 | I know that we have sone ongoing coordination | 8 | govern the Division of Oil, Gas and Mining. There's not |
| 9 | and correlation with what the Division of Water Quality | 9 | a specific line drawn in the law that says, DWQ looks at. |
| 10 | docs. | 10 | this and DOGM looks at something else. |
| 11 | But I guess I'm asking: Who has the primary | 11 | I think that answers all of your questions. |
| 12 | responsibility of idemifying potenlial inupacts to | 12 | You did ask aboul -- and [ think it was |
| 13 | groundwater or surface waler? Is that us related to the | 13 | correctly answered -- about the effect of the prior |
| 14 | mine permit, or is that something that we expect Water | 14 | rulings. I think, as Paul said, the Division looks at |
| 15 | Quality to do? | 15 | the prior evidence, the ficts, the records that were |
| 16 | MS. ABATE: The way I understand the rules, we | 1.6 | presented at those hearings. |
| $1 \%$ | are in charge of moniloring for impacts, so whether a | 17 | But in reviewing this significant revision, that |
| 18 | spring drics up or nol. | 18 | means you look at it as if it's a mew application. And |
| 19 | They are more concerned with the actual water | 19 | the evidence was looked at without feeling bound by the |
| 20 | quality, so the constituenls in the solvents and those | 20 | Board's order. So we were not required to approve the |
| 21 | lype -- and the waste streams. Those are kind of the | 2.1 | permil just because it had been approved betore. |
| 22 | things are more under the DWQ. | 22 | HEARING OFFICER BAZA: Thank you for that |
| 23 | HEARING OFFICER BAZA: Okay. | 23 | clarification. |
| 24 | MR. ALDER: But thirk we would -n and in the | 24 | Well, at this point, I don't have liurther |
| 25 | previous review, we've acknowledged that it's sort of a | 25 | questions of these three parties. But why don't we go |

14 (Pages 53 to 56)
ahead and move into some closing statements, and l'lk offer the time to Living Rivels and Mr. Dubuc first. MR. DUBUC: Thank you, Mr. Baza. Let me first pass oul printed copies ol Dr. Jolnson's published report.

Let me first -- on that reporl that you have in fiont of you on page ! in the abstract, f'd like to point to the last sentence. It says on that page, on the first page:
"Progression of hydrogeochemical
parameters witl elevation, in combination wilh the relatively short groundwater residence times, indicate that the recharge zone for these springs includes the surrounding ridges, and thereby suggests a hydrologic connection bctween the mining, processing, disposal area and thesc
springs."
โ just wanced to clarify that Dr. Johuson's eport, his artiele, does actually state that corncction. The reason that you did not frave that as part of the protest is because it didn't exist at that time. We gave you a manuscript that had been submitted for publication. As oftentimes happens in the peer-review process, changes to the initial manuscript were made. So I just wanted to
clarify why you were sceing something different now than you did at the lime is because il didn't exist at the time. So it is now published and it does stale specifically that connection exists.

One of the things I'd like to -- and I think the Division clarified this. You are not bount, we are not bound by findings that occumed -- that are part of ancient history at this poinl. This is a new application. You have new information in front of yout. The fact that the Board al some point in the past found that -- T mean, even prior to Dr: Jolinison's study -found that there was no hydrologic connection is irrelcvant. You have new information in tront of you presented to you today.

One of the things I'd fike to do, if I might, because we used so litlle of our time to begin with, 1 just want to ask De. Johnson to clarify just a couple things having to do with 180 boreholes, if I might.

HEARING OFFICER BAZA: Surc. Go alnead.
FURTIIER COMMIENTS BY WILLIAM JOHNSON
MR. DUBUC: Dr. Iohnsom, could you explain -- 50 the Company drilled 180 holes, and they claim - and apparently there was no cvidence of groundwater.

How docs that equate -- how does that jive wilh your lindings?

DR. JOLINSON: Well, it has no comtradiction to our findings becaluse the purpose of those borcholes was not to examine water. Now, they did ask the drillers to report copious amounts of water if they observed then. But that's now not how a hydrologic study is conducted.

The site is at the ridge top, which would be the zone where techarge of precipitation and snowmett occurs. The residence time of waler moving through the ridge top would be short because it's moving downwards towards the zone of saturation, or water tables, that then are evidenced by the spings in the valley bottoms. So if I may - stop me if I'm going on too long here, Robs, but 1 want to address this -- becausc all of those boreholes, as they stated, were drilled to a depth twice the zone of intended mining.

The target was to map the resource, the bitumen. It was not to determine possible impact to groundwater. And as suct, it did a very good job of mapping the resource, but it did not do anythine towards interpreting wheller or mot there's a hydrologic impact. And unfortunately, every decision that has been made, every stalement in conchusion that has been drawn up until our study, las been based on the absence of water in those borcholes. And to use that as the evidence of a lack ol impace 10 a bydrologie system is the same as looking ouk
at the sky today and saying it's impossible for water to come from the sky. And I find that infursating as a scientist. Because this is -- this process is turned upside down by reliance on data that was never intended to answer the question of hydrologic impact.

And I'm sensing an unfortunate bias on the part of the Division in the sense that statements were made that have absolutcly no dala behind them. The statement was made that ail of the springs are alt the same elevation. That is absolutely discounted by the sludy of the plots that show plots of the springs versus elevation. So I have no idea where that statement was coming from.

Statemenls were made that they were all on the particular side of the canyon, supposedly on the opposite side from the mining sitc. That is absolutely unt true and reflects a bias that is not supported by data. Statements were made that -- and I can name those springs. The 1 ambert $A$, the Lambert 13 are two springs that arc clearly on the side of the canyon that is on the permitted mining site side of the canyon.

Statements made by Barclay Cuthbert basically mount to slander. There were no errors in the report, and yet he's referring to errors.

MIR. DUBUC: Wc'll talk to that in just a litte
bil.
Apologize, Mr, Baza. He's obviously passionale abouthis --

DR, JOHNSON: I am, but there's one more imporlant point to make.

MR. IUIBUC: Okay.
DR. JOLNSON: The statement in the court record before our study that the only zone of saturation is 2000 feet below the site in the Mesaverde aquifer is absolulely discounted by the study. We, in fact, obtained a sample fiom that level of groundwater. Its chemistry is completely different fiom that of the springs.

MR, DUBUC: Thanks.
Obviously, there's a difference of opinion. And I think that the difference is, is that De. Johnson's. study and his analysis of this is based on best available sound science. And I really hrink that the Agencies are obligated to make decisions based on that. And if there is a possible diclerence of opinion, that the possibility, as Ms. Abate acknowledged, the possibility that there is a connection warmats a conservative approach to protecting these springs.

And I would remind the Division that these springs are used to support a ranch in operation directly

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Dr. Johnson's report that, to us at least, show that those springs, which Dr. Johnson calls "L.ambert $A$ " and "Lambert i3" are on the south side of the canyon, and that is Figure $\mathrm{Si}-1$.

In addition, I'd mentioned to you carlier thal we have Dr. Hansen here today who was just going to observe. Hin Dr. tlansen has been at this site and has inspected these springs. And because this is an informal hearing, if you would like to hear from him, I would like to put him on and ask a couple of questions. But 1 don't -- if it would be unfair to Living Rivers and Mr. Dubuc, I won't do that.

MR. DUBUC: The only observation ( would make, Mr. Baza, is that, you know, you'le opening a door that is going to have a back-and-forth to it, because were going to want to, obviously, respond to that. I don't know if you want to open that door.

HEARING OFFICLR BAZA: Well, and there are no hard rules of cvidence or testimony today, I mean, we're having a liscussion, I bope, thal will heip the Division.

So Mr. Davis, I would say: is there a way to maybe paraphrase what Mr . Hansen might offer so that we cantake illat under consideration somehow?

MR. DAVIS: Yeah. 1 do have a copy of his internal report to the company that I would -- that I
below the mine, te's not like this is in the middle of nowhere. There are people down there that depend on this water. And so f think thic obligation to protect that water resoutce, even it that means going above and beyond, is inperalive.

And so I do encourage you, Mr. Baza, to teconsider your tentative approval of this mine. And we will subrnit to you our recomnendations in terms of ineasurcs that could be used to ensure thar these water resources are protected.

And I thant you for your time today.
HFARING OFFTCER BAZA: Thank you.
Mr. Davis.
MR. DAVIS: Yeah, Mr. Baza, hark you, 1 couple of points.

MEMBER OF 'TIE PUSBLIC: Please speak into the microphone.

IHEARING OFHICRR BAZA: You know, I can hear him just fine.
(1.aughter)

MR. DAVIS: Ts that better?
MEMBER OF THE PUBLIC: Thank you.
MR. DAVIS: I apologize.
I hink to bring clarity to this issue, I think
there are a couple of exhibits and pholographs in
could do some paraphrasing from.
HEARING OFPTCER 13AZA: Okay.
MR. DAVIS: But I thitik probably, fiom our standpoint, we've responded to Dr. Jolnnson's position by pointing out that this extribit, Figure $S 1-1$, shows where he located those two springs. And to us, they cleatly are shown to be on the north facing, or the south side, of Main Canyon. So I would submit that.

MR. CRAPO: What page are you --
MR. JAVIS: That is page 7 of -- is it the adidendum or aclual teport?

MR. MACHLIS: The addendum.
MR. DAVIS: The addeluduri to Wr. Johnson's report, which is Exhibit B to the protest.

MR. DUBUC: is there a figure with that?
MR. DAVIS: Yeal, it's Figure $S$, I think that is i-I, or SI-i.

MR. CRAPO: This is the inage you were looking at?

MR. DAVIS: That's the image.
MR. CRAPO: Would you restate what we should be seeing on this map'?

MR. DAVIS: If you look -- he just took it away from me.

If I'm understanding Dr. Johuson's statement

|  | Page 65 |  | Page 66 |
| :---: | :---: | :---: | :---: |
| 1 | currectly, he celerred to Lambert A and Lambert 3 as the | 1 | which side of the canyon the flow came from is teally a |
| 2 | two springs that are shown here as "MC-A" and "MC-B." | 2 | waste of time. It cannot be defended as a gemuinc |
| 3 | MR, DUBlJC: D as in "dog." | 3 | antalysis, right? You cant assune because a site is |
| 4 | MR. IJAVIS: "Dog." Oh, I'm sorry. | 4 | located on onc side of the canyon or the other that it |
| 5 | Mik. DUl3uc: I dorit believe it's on that | 5 | cane fromi one particular side of the canyon nceessarily. |
| 6 | MR. IJAVIS: Okny, sir. Where is it? It's not | 6 | And so it would be a waste of time to rely on that |
| 7 | depricted? | 7 | evidence to say the flow is only coming from that side of |
| 8 | MR. DUt3UC: It's not depicted. I believe | 8 | the canyon. |
| 9 | it's -- Dr. Johnson, where is that? Is it this? | 9 | And the statement was made that it's coming from |
| $: 0$ | DR. JOHNSON: Right. It's on the other side of | 10 | the ridge lops, you agice to that, but not fromoul ridge |
| 11. | Whe canyon; that is, on the minc sile, permitted side of | 11 | top, which is pretty magical. |
| 12 | the canyon across from Main Canyon C. | 12 | MR. DUBIJC: Thank you, Dr. Johnson. |
| 13 | MR. DAVIS: But it's not depicted anywhere on | 1.3 | HFARING OFFICER BAZA: I think I would jusi say |
| 14 | your exhibits, correct? | 14 | to the Division and April: April are you following this? |
| 15 | DR. JOHNSON: Well, I don't know which version | 15 | Do you lave an understanding of what wc're talking about? |
| 16 | of the manuscript this is, okay. So as Rob Dubue said, | 16 | MS, ABATE: ('m still strugeling to find this |
| 17 | these thitugs go through an cditiog process in the process | 19 | page, the page they're -- |
| 18 | ol peer revicws. And so these figures have changed, and | 18 | HTARING OFFICFR BA7A: Sol think that there |
| 19 | l'm not sure which version this came from. | 19 | meeds to be some clarity that can be shared with the |
| 20 | The point is, in the fital version we have Main | 20 | Division on this. And in a sense, that's what 1 was |
| 21 | Caryon's site D thicre, and it is on that side of the | 21 | asking for in terms of aryything that you would want us to |
| 22 | canyor, and it is a flowing spring, jusc like the ollter | 2.2 | look al or do. And t'm still willing to accept that ats a |
| 23 | perennial springs. Sume with Main Canyon A. That is on | 2.3 | written brief or statoment front your group. |
| 2.4 | the same side of the canyon as the mine site. | 24 | Mr. Dubuc: We will do that, Mr. Baza. And |
| 25 | But what I want io say is that finagling over | 25 | that's why 1 said, cven though Dr. Johnson is going out |
|  | Page 67 |  | Page 68 |
| 1 | of town tonorrow, he will be hack throughrul the summer: | 1 | The addition of the expansion of this mine sile, |
| 2 | And he would be happy to meet and charily directly with | 2 | which is primarily an expansion of the actual pits where |
| 3 | your staft arty queslions that they have -- and if the | 3 | less overburden and lailings will be placed on native |
| 1 | Company wants to, you know, attend that session. | 4 | soil, also has been studied and reviewed and initially |
| 5 | HEARING OFPICER BA7A: I'll take that into | 5 | approved by the Division. |
| 6 | account. | 6 | So that would be-e my only other comment would |
| 7 | MR. Dubuc: Okay. | 7 | be that Dr. Johnson's report doesn't say there's a |
| 8 | HISARTNG OFFICER BAZA: Mr. Davis, did you have | 8 | connection, it suggests there's a connection. And that's |
| 9 | anymore you wanled to add at this point? | 9 | really what we come back to is the suggestion, the |
| J. 0 | MR. DAVIS: Youknow, Ithink at this point the | 10 | potential. How far do we have to go in disproving this |
| 1.1 | only commertt I would make abrout all this is that it | 11 | suggestion or this negative? Thank you, sir. |
| 12 | appears to me that it's unreasonable. As much as it may | 1.2 | HEARING OFFICER BAZA: Thank you. |
| 13 | be unreasonable in Dr. Johnson's view for us to make the | 13 | Steve, comments from the Division? |
| 14 | statement that the springs that emanate from -- by | 14 | MR. ALIJER: Yes. Thank you, Mr. Baza. |
| 15 | crianating from tic south side riust come trom the soulh | 15 | We have looked at all the data that has been |
| 16 | ridges, Ithink it's equally unreasoutble for the Agcncy | 1.6 | submitled and made an evaluation of the mining permit |
| 17 | to require us to continue to try to prove ancgative, | 17 | using the best abilities and scientific training of the |
| 1.8 | that there isu't something there, when cverything that we | 18 | Division. And we would welcome any additional data. |
| 19 | have donc to date demonstiates that there will be no | 1.9 | Unfortunately, 1 think that, legally, the position and |
| 20 | impact or minimal inipact. | 20 | the posture this is in is that atter a decision is made |
| 21. | I mean, we have in our hands a valid Permit by | 2.1 | by the Division on this permit after this hearing: taking |
| 22 | Rule from the bivision of Water Quality stating that | 2.2 | into consideration additional information, there's only a |
| 23 | Lhere will be a de minimis inpact on groundwater | 23 | ten-day period before the matter is to be appealed to the |
| 24 | resources by this nuinc. That has been reviewed and | 24 | Board, at which point 1 gucss all this cvidence will come |
| 2.5 | approved by your agency now twice. | 25 | forward again if there is an appeal. |


|  | Page 69 |  | Pago 10 |
| :---: | :---: | :---: | :---: |
| 1 | We would encourage Dr. Johnson, if the has a | 1 | thing. |
| 2. | spring that's ons the south side that shows some different | 2 | We do have time, and I wank to offer this up to |
| 3 | data, that Luat rot be waiting until dater in the summer: | 3 | as many of the parties that had submitted letters of |
| 4 | I meari, that's information the Division has gone out and | 4 | appeal to the Division. Again, 1 have a list ol those |
| 5 | made its own investigations on and tried to understand | 5 | folks who werc noticed as part of this licaring. |
| 6 | the hydrology the best that it can, The same would go | 6 | So those who want to put their name on the list |
| 7 | (or Dr. Hanseuts iutemal report. | 7 | as faress attending, I think Vickit -- back of the |
| 8 | Leet me just say that the Division has taken | 8 | room -- still has that list if you want to show yourself |
| 9 | consideration of all the lexets. It is not biased by | 9 | as a participani. |
| 10 | prior delerminations. Tt's not biased by any particular | 10 | If you ace goirig to comment, again, I ask you to |
| 11 | facts. It's open to determining the iorpact. And, in | 11 | try to be brict and allow as many people as possible to |
| 12 | fact, Ithink the suggestion that monitoring might be | 12 | come forward, 13ut come to the microphome and identily |
| 13 | helprul iudicates their opern-mindedness on this subject. | 13 | yourself. If you had a letter that was submitted to the |
| 14 | Sol guess I'm not sure where it leaves you, as | 14 | Division, youn might mention that. But ! think now is the |
| J. 5 | the presidingr officer, whether this matter can be | 15 | time that we open it up for your comment. |
| 76 | conlinued or delayed, or if it should be. But certainly, | 16 | And again, please identify yoursclves so that we |
| 17 | I know the operator is anxious to get a decision and to | $1 \%$ | can have a record of your name. |
| 18 | move forward. | 18 | MS. LON1OON: Who has the list to say something? |
| 19 | The Division wants its decision to be cortect, | 19 | It's kind of gotten lost back here, |
| 20 | and we think it has been tully evaluated at this point. | 20 | HEARING OFFICR'R BAZA: There's not a list to |
| $2:$ | [ don't llink wic want to enter into a debate about the | 21 | speak, it's just lo show that you were here. So if you |
| 22 | specitic bias that may or may not exist. | 22 | want to speak, I'd say now is your time to line up at the |
| 23 | UEARING OFFJCER BA7A: Well, thank you for that. | 2.3 | poditim. |
| 24 | I, too, am wondering what the next step is going to bc, | 24 | COMMENTS $13 Y$ VAUGHN IOVEJOY |
| 25 | so) I will be conferring with Mr. Crapo on that very | 25 | MR. LOVEIOY: My mame is Vaughn I ovejoy. I'ma |
|  | Page 71 |  | Page 72. |
| $\pm$ | fatlice and a grandfather, but to have some professional | 1 | you kinow, usc up all your resources all at once, that |
| 2 | eredentials here, I was co-founder of TreeUtah, project | 7. | would be a coss, but it wouldn't nearly be the cost if it |
| 3 | director for 20 ycars. And the collective karma that I | 3 | turned out that there was a God. |
| 4 | lring is Thelped plant a cuarcer of a million trees in | 4 | If we're damaging the planct, the consequencos |
| 5 | this statc. And I just really want to speak from my | 5 | to that, to oun childten and grandehitdren, are |
| 6 | hearL. And jor | 6 | absolutely immense. So T'm just going to read the very |
| 7 | There's a letter which ['m going to pass | 7 | last paragraph of this to you. |
| 8 | around -- I'm not going to read this whole thing because | 8 | "l ask you from the very botusm of my |
| 9 | there's mary wonderful people speaking. I just want to | 9 | heart to not only use your professional |
| 10 | say this: There are ditferent opinions and different | 10 | capacity to ensure |
| . 1. | worid views about what's happening on the planet right | 11 | envirommentally-acceptable activities" -- |
| 12. | now. And let's just grant that no one of es is for sure | 12. | that's in your mission, guys, "bul to |
| 13 | how this is alf going to play out. | 13 | seriously relect" -- and this is frompope |
| 14 | So what I would like to suggest is that we look | 14 | Prancis' encyclical that was just released |
| 75 | at the scientific evidence. And the scientific cyidence | 15 | this montlı -- but, "reflect on your |
| 16 | has some pretty, pretty dire consequences. And in order | 16 | accountability beforc those who will have to |
| 17 | to avoid that, we would have to make some challenging | 17 | endure the dire consequences." |
| 18 | changes, economic changes, that kind of thing. | 18 | Before you make this decision, whoever you are, |
| 19 | ['d like to refer to "Pascal's Wager." And l'll . | 19 | please go home and look into the eyes of youl children |
| 2.0 | end with this. Pascal, back in the 1600 s , said the big | 2.0 | and your gramdelildren and ask yourself whether the |
| 21 | question is, is there a God? And it there's a God, then | $2:$ | continuing dovelopment of projects like this is really |
| 22 | there's conscquences to our actions. And he just noted | 22 | worth risking theil future, whom we have all been |
| 23 | Lhat if there is a Crod and there's consequences, those | 23 | cntrusted with. |
| 24 | conscquences can be dire in the Jong (erm. | 24 | 'thank you for listening. |
| 25 | If there's not a God and you chose to party and, | 25 | IITARING OFFICER BA7A: Mr. Lovejoy, could you |

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spell your name lor us.
MR. LOVEJOY: Ycs, 1 carr. Actually, thal's a (unislelligible). V-A-U-G-H-N, Lovejoy is just like it sounds, I-O-V-E-J-O-Y, one word. Thank you very much.

ILEARINGOFFICER BAZA: Thank you. For those of you who have not ever worked with a court recorder; it heips if you speak slowly. And if your name is not a conmon uame, please spell it for her.

## COMMENTS BY TMM WAGNER

MR. WAGNER: Good morning. My name is fim Wagucr. ['m the executive director of Utah Plysicians For at i-feal thy Euviromment. I want io thank the Utal, Division or Oit, Gas and Mining for holding this hearing.
$U P$ PIE is an organization of roughly 350 medical protessionals in Utah and several hundred members of the pubfic as supporters. Wc're dedicated to protecting the health andel well-heing of the citizens of Utalh by promoting science-based health eduation and interventions thal result in progressive, measurable improverneuts to the enviromment.
['malso here representing the Colorado River Connected Campaign, a cuordinating body tor organizations in six weslern states committed to protecting the headwaters of the Colorado River system for the bencfit of the 35 million people who use the river and thousands
of species and nalural communitics that rely on it. We provide a colloctive voicc for the preservation of the headwaters in the Colorado Rivor watershed.

The organizations represented by the Colorado River Connected Canpaign, in addition to mine, include the Los Angcles Waterkccper, the Gleir Carlyon Institule, the Center for Biological Diversity, Living Rivers, the San Dicgo Coastkceper, Savc The Colotado.org, the Sierta Chub of Utah Chapter, Utah Rivers Council, Waterkeeper Alliance, and Wild Utah loroject.

This parlicular project lics smack dab in the midilic of the watersthed of the Green River, which, of course, is the largest single tributary to the Colorado Kiver; and hence, it's ant integral part of the Colorado River watershed. This walershed provides water for multiple uses, including drinking water for roughtly 35 million people in the America southwest.

This water reachics the cities of Tucson and lhoonix, Las Vcgas, Los Angeles, and San Diego, and many communities in between. As wo are seeing now playing before our very eyes tnday, the river's watershed is in scrious trouble -- onc of the most severe droughts the region has cver experienced - to over-approprialion, to more planated diversions, to conlamination, and it goes on and on.

More specifically, as thoroughly demonstrated by the comments subuitted to the Division from Western Resource Advocates representing Living Rivers, there is no doubt that the region of the PR Springs mine has a dircet relationship to the various bydrogeology, incleting the area groundwater resources, seeps and springs, all of which are part of the previously-described watershed.
[t is apparent in me, at least in my oreanization, that the Division has not taken the full responsibility it needs to adequately assess the groundwater resources in the area of the proposed mine. it has also ignored the potential disruption and contamination threat to those same groundwater resources. Additionally, it goes without saying that the Division's investigation and permit review only took a very small local snapshot of the proposed mining operation and failed to even consider the relationship between this project and the much larger Colorado River watershed.

While I recognice that there isn't any stipulation or requirement that the Division lake a larger and fonger analysis, turning a blind eyc doesin't moan the problem thessin't cxist.

We are also cxtremely concerned about the issue of air quatity, also which is pointed out in WRA's

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prepared comments. It's obviously an issue that we beficve is very important. But the lack of adequate oversight is the fact that PR Springs is just one of the numerous oil sands projects proposed or in the construction phase within the Uintah Basin. This is a region already with some of the worst air quality in the nation at times, and with what appears to be some very serious consequences for the people who live and work in the region. I seriously doubt that this is the best the Division can do in terms of addressing this very critical issue.

So in light of these two very significant issucs, water and air quality impacts, and the lack of adequatce information gathering and analysis, UPIIE and the organizations of the Colorado River Connected Campaign agtec that this permit must be denjed and deferred until the adequate and proper in formation has been submilled to the Division.

And one final comment. Just based on my observation of this hearing this morning, when I bear the Division of Oil, Gas and Mining ask his staffers from the Division of Water Quality who is supposed to be in charge of -- who has the authority to regulate the water issues and assess this potential inupact, here we are cight years into this project. Ithink that's a qulestion that should
-
have been deterinined before the project started. Just saying.

That's all I thave to say. Thank you.
IEARING OFFICER BAZA: Thank you. COMMENTS BY TORY HILI.
MS. HIIL: My name is Tory Hill, and fun a town council member at Castle Vallcy in Grand County, I speak to you today for myself and for Grand County Council Member Mary McGann, who could not be here; also, yur voters.

Our last November election for county council were won across the board on the promise to get us ont of this scven-county coalition, because the majority of peopic in Grand County do not want tar sands mining or a road through our counly to get the tar sands to refining and manket. I'ar sands are the dirtiest oil on the planet with the greatest destruction.

This ruine sits above the Green River. It is the trinking waler for millions of people in Utah, Arizona, Nevada, and California, to say nothing of our prolonged drought. The eco system that is living on the lavaputs is called the "Screngeti of the West;" with beaver, elk, decr, ruming streams, and inccedible wilderness.

Please take a good look at the Curiadian tar sands and ask yourself if this is truly something that is
good for Utah, our country, or our planct. Do we really want to let a foreign company strip smine our Serengeti, pollute our air and water, and increase our chances of: cancer and other diseases? They've ruined ferever a huge part of Alberta, and now they want lo destroy the Tayaputs.

They say they will use a new way of gelling the oil out. But il it is such a good way, why haven't they used it in Canada? Why are you so eager for us to the the test subjects on this? Grand County is stili cleaning up the mess from the uranum mines in the 50 s . It is a toxic legacy that is going on and orl. This will be a toxic legacy also.

They say they will reclaim the land, but this is an impossible promise. You cannot reclaime a strip mine. We should not throw away the Tavaputs Plaleau for any price -- any price.

Please, please be good stewards and save this land for our future gencralions. L.el our grandkids have a chance to hurit and fish and play in clean ail and water with aburdant wildlifc.

We ask you now to act responsibly and not only deny this additional permit, but take back the ones that are already issued and say no to tar sands now and forever. Please. And thank you.

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COMMIENTS BY KATIIRYN AIBUJRY
MS. A1,BURY: My name is Kathryn Albury, K-A-T-H-R-Y-N, A-L, B as in boy, U-R-Y.

Director Baza, thank you for giving us an opportunity lu speak. I'm spealking today on behalit of Peace [ul Uprisiag and Whal Tar Sands Resistance, two hocal grassioots emvironmental justice groups. We stand fimbly agatinst the expansion of US Oil Sands' PR Springs open pit mine, and we believe it's unconscionable for the State to allow the mine to begin operations at all, for: they'te wreaking havoc on the valy environment that we depend ons.

I think we've talked a lot about the water. III skip through that.

I want to say something about the amount of precipitation there. We have maintained a vigil at this sitc for live months last year, and a vigil is carrying on again this year as soon as the snow is melted chough for us to be there. Our campers have spent days in their lents bechuse of heavy, heavy rains. Anything that's being piled up is being washed below. Water flows downtill, from the sky, it hits these piles -- it goes somewhere. It's not staying up there on the top of this high ridge. This precipitation eventually washes the stuff into the Colorado walershed, and so it's affecting

40 million peoplc downsticam from this.
Just disturbing the tar sands rock releases toxins into the atmosphere that don't betong there and are not healthy for the penple that are either working or living in the area.

Furthermore, the bitumen that US Oil Sands hopes to cxtract from this mine will be hauled in trucks burning diesel to Salt Lake City to be refined over here, right in this neighborhood, further damaging our air guality and the Wasatch Front, which is already bad. We're already in a red zone yesterday and probably today too.

I just want to close by challenging those of you that are making this decision and those of you with US Oil Sands to go up there and take a look. This is a berutiful area. It is not a dry, sandy clesert, it is a beautiful upland area. There are lots of -- there's lots of wildlife there. Tory listed some for you. I've gone to bed in my sleeping bag listening to the turkeys gobbling in the trees and the coyotes howling. This area is used by a lot of differcnt people for camping, for exploring, for hunting. It needs to be maintained as this. And I encourage you to take a look at this before you choose to destroy it. Thank you.

COMMIENTS BY JILL MERRIT'T

MS. MERRIIT: My name is Jill Merrill, M-E-R-R-I-T-i'.
$\int$ just would like to point out that the hearing notice says that this hearing is being held for the purpose of hearing objections of any person or agency aggrieved ty the tentative decision to approve the revised notice of intent. It does not meet that standard, in that the Company was presenting objections to the objections. So the whole two hours has been given over to -- with some portion of it given to the Company to state its case.

This hearing docsn't qualify as a mechanism for proflem input, so I think you peed to hold another one; or belter yet, just withdraw your tentative approval.

COMMINNTS BY SUZANNE STENSAAS
MS. STENSAAS: My name is Suzanne Stersaas, S-I-E-N-S-A-A-S. 1 speak as a private citizen. l'nu a member of many of the groups that have been represented by Tim Wapner.
l'm reminded of my mother's story of the little old lady in the vinegar botule. She had all these wishes, and sthe wished for too much and she cuded up back in the vinesar bottle, I don't know if you've cyer heard that story. But it ieminds me that this Canadian company -- we are lere toklay because maybe they were a
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considerations can be taken into account for the decision, I have a printout here, it's also online.

And I ficel even if there's a new process and a new solvent, where is the scientilic prool that it's not doing the same lhing than up at Aberta? That's my question: Who wants this?

HEARING OFFICER BAZA: Thank you. COMMENTS BY HANS ElFRBAR
MR. EHR BAR: Okay. My name is Fans Ehrbal; that's [i as in Edward, $H$ as in Henry, $R$ as in Robert, $B$ as in boy, $A$ as in apple, $R$ as in Robert. I ann a professor of economics at the University ol' IJtah. ['m emeritus as of tomorrow marning.

And il'you could prove me wrong, I would be happy about it. But it seems the principles by which DNR seems to be operating is about the following: Miring has a bencticial impact on our lives; thereforc, mining operations should be permitled unless there's good reason not to do this. And that is basically a deviation from the "Poiluter Pays Principle," because it says that we, as a society, want to bear the pollution of mining because mining is so bencficial.

So this is probably buried in some legistation and stufl like that, but it is a principle which I'd like to question in the - in the light of more recent
research, which focuses more on the previously-neglocted side effects or many things which we are cloing, including mining, including what is called here "disturbance of the environment," which is regular destiuction ol enviromment for a long time.

And tharefore, we need -- we need mote strict adterence to the "Polluter Pays Principle" and also to the principle that a mining operation, someone who with wants to conducl a mining operation, has the obligation to do everything they can to make sure that there is no pollution or to measure fow much pollution theie is.

So 1 was quite taken aback by the attorney or the Company saying, "I- How far do we have to go to disprove a connection?" You have to go all the way to disprove a connection. If there is no evidence, then you have to replace at that cvidence and take il into account instcad of saying, "Oh, we did alrcady. We already have a permit from the water quality department, and wo don't have tos do this amymore."

That is my comment.
HEARING OFIICER BAZA: Thank you.
COMMENTS BY KAITLIN BUTLLER
MS. BUTT.FR: My name is Kaitin Butter, K-A-I-T-L-I-N, last name Butler with one F .

I'm an envitomental sociologist with a focus on

|  | Page 85 |  | Page 86 |
| :---: | :---: | :---: | :---: |
| 1 | climatc ctunge, but l'm speaking today as a community | 1 | borders. |
| 2 | member and as someone who was horn here. My friends and | 2 | I'm not going to go into what we know about |
| 3 | also the people who have been testifying today or have | 3 | climate change, but I will say that we do know that. most |
| 4 | been spaking today have covered so much of what I was | 1 | of the fossil tiel reserves need to be lefl in the ground |
| 5 | going, to say, se l'ml going to cut it short to allow for | 5 | if we are going to have any chance of limiting a 2 |
| 6 | more people to speak. | 6 | degrees warming, which we also know could have |
| ; | But I did want to tonch back to what I lans had | 7 | irrevocable damage on the people and the planel. |
| 8 | spokent about, about principles and ahout the scientific | 8 | But fossil fiel companies are understandably |
| 9 | method for underslanding whether an activity will bc | 9 | heavily invested in pumping this fossil fuel because it |
| 10 | hatroful or not, for whom, and for how long. | 10 | is tied to their profits. |
| 3.1 | Wc're talking alout a projoct area and about | 11 | They can make the case for growing their profits |
| 3.2 | bourdaries that we can see on this map. But we know that | 1.2 | and the case for short-term local jobs. But the |
| 1.3 | the impacts from these projects arc not bounded in space | 13 | cost-benefit analysis $T^{\prime} m$ interested in is the fiture |
| 3.1 | and time in the same way. The facts around tar sands | 14 | gencrations who will not receive the economic benetit |
| 1! | projects ase incontrovertible. We have other sites that | It | from this mine, they will not use the energy from this |
| 1.6 | we can look at to sec what the impacts are. Whal we have | 16 | mine, but they will be liable for its clearnup. |
| 17 | now yet had the opportunity to do is see how long thesc | 17 | We know from other sites that with the messy, |
| i8 | impacts will last. | 18 | costly case of tar sands and oil sands, that future |
| 19 | We do know that they destroy ccosystems. We do | 19 | generations are inheriting a land trust that includes a |
| 20 | know that they use insufficient amounts of energy and | 20 | ruined landscaped that cannot be restored, has not been |
| 21 | water; hence, the desite to use a solvent. And to | 21 | proven to be capable of being remediated. And in this |
| 22 | contribute to kocal and global heat-trapping greeuhouse | 22 | way, the State is incurring a debt and passing it on to |
| 2.3 | gas emissions, which in tum contribute to climate | 23 | future generations. |
| 24 | change. Like the watcr systems, the mine will impact the | 2.4 | I ask here today: Who is representing the |
| 2.5 | almospheric properties thal are not bounded by stale | 25 | inlerests of future gencrations? I helieve wc have a |
|  | Page 8\% |  | Page 88 |
| 1 | resporsibility to do so in the economic delates we lave | 1 | that we need as citizens and as a govermment to make an |
| 2. | about our enviromment ard the decisions wa make ahont our | 2 | informed decision about the use of this new solvent and |
| 3 | economy. And I helieve that the government has the | 3 | the impacts that this will have today and for longer lime |
| 1 | responsibility of holding certain things in trust, and | 4 | horizons that are not being included in the remediation |
| 5 | that this responsibility includes serving as a trustec | ¢ | claims being made by the mining .... |
| ¢ | for the things that we need to aclually live, which is | 6 | I encourage cveryone who is gathering inore |
| , | water, air, land, plants, biodiversity, a stable climate, | 7 | information to include longer time horizons, include |
| 8 | and on health. | 8 | boundaries that do not reside within the lines that are |
| 9 | We can source this responsibility in our own | 9 | bounded by the mine. And l encourage people to also |
| 1.0 | Utaln State Constitution, which I will not read off now | 10 | think about how we fulfill our responsibility to a moral |
| 11. | bocause it is long and we can all look it up. But the | 2.1 | question that is, in lact, rooled in how we cleline |
| J\% | language is there, and we do have a responsibility to do | 12 | cquality. |
| 13 | this, and the goverinment does as well. | 13 | It's easy to view this idea that we are |
| 14 | I'm going to conclude and skip forward to the | 11 | cventually ancestors as abstrach. But when we think |
| J. 5 | comment that was made by Jlaus aboul the purpose of | 15 | aboul it in terms of us passing on, we undersland that |
| 16 | research. And in sociology, we use this term called, | 1.6 | and it resonates with us. We know whal it means to draw |
| 17 | "Free, prior and informed consent." And we have ro do it | 17 | up a will, we know what it means to bequeath something to |
| 18 | when we want to involve a human subject in our | 1.8 | people that we care about. And we know what it means to |
| 19 | experiment. And that human subject las to know | 19 | understand and want to be remembered by the things that |
| 20 | everything aboul the experiment hefore the cxperitnent | 20 | we've done in our life. |
| 21 | begins to make an intorned decision about whether or not | 21 | My guestion for the people who have heen asked |
| 2.2 | they will be part of that experiment. There are | 22 | to gather more information and make this decision is to |
| 23 | communitics around the country and in olther areas who are | 23 | ask themselves about what will happen after the short |
| 24 | claming this right is a comenunity right. | 24 | period of time that this land has been ruined, the |
| 25 | Right now, we do not have alt of the infarmation | 25 | company las been allowed to sell this product and Icave? |

22. (Pages 85 to 88)

Alpine Court Reporting

What will we be passing on? What will be lett in this trust? And how will we be remembered?

## COMMENTS BY TINA SMITH

MS. SMITH: Tina Smith, $\mathrm{T}-\mathrm{I}-\mathrm{N}-\mathrm{A}, \mathrm{S}-\mathrm{M}-\mathrm{I}-\mathrm{T}-\mathrm{II}$. And I'm a private citizen from Park City. I just -- י'וll keep it quick.

Ditto on most of the points that have come up regarding the heavy metals and poisons and toxins that are going to be produced from this procedure for doing the tar sands, the air quality, ground scarring, water contanination, short-term, environncutal, trucks, wildific kill, the whote thing.

I vole to denty thcir permit.
COMMENTS BY BOB BRISTER
MR. BRISTRR: My name is Bob Blister, B-R-i-S-T-E-R. I'ma a resident of Salt I ake City, I've been an advocate for public lands and wildlife protection for amost 20 years now.

Mostly we heard earlier in the session about water quality, and that's an extremely impontant issue. And 1 thank I jiving Rivers for carrying the ball on that. There are a lot of olher issues involved as well. I have three quick questions maybe you could answer.

Has there been any quantification of the greenlouse gas emissions from the mining, processing,

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habitat?
Third question would be air pollution from the refining of these projects. Has there been any quantification of that? What is the impact on public health? Do the decision makers care about that?

There's something called a "Precautionary Principle." We licard ahout the "Polluter Pays Principle," which is very important. There's also the "Precautionary Principle," which means you don't move forward on something or a project unless you know that it's sale and it's good.

Don't gamble with our healch. Dun't gamble with the planct's health. Please take these considerations into account.

Thank you for the public who's shown up here. Thank you for the -- thank you to the ron-govermental organizations who have been fighting this. Our pubtic health depends on it. Our planetary health depends on it.

## COMMINTS BY SARA CALDWEJI.

MS. CAL.DWLid.: Hi. My nane is Sara Caldwell. I'm al resident ups in Coalville, Utah.

I've been really concerned about his project from the get-go. I aclually moved to Utah -- i grew up here, moved away when I was grown up. I moved back
transportation, and luse of a product from this project? MR. CRAPO: You know, we can take your questions as just metorical questions.

MR. BRISCIER: 1 Las there beer any guantification of the greenhrouse gas cmissious from the mining, processing, transportation, and use of the product from this project?

FIEARING OHFCCBR BAZA: No. This isn't a time For us to do a Q8 A willi you.

MR. BRISJER: Just a "ycs" ot "no" is good, IIEARING OFFICER BAZA: I really don't want to go into this.

MR. BRTSTER: I'm sure you don't.
HEARING OFFICIR BAZA: We'll just take your questions. They are part of our recorded material. And, you know, we'll take that into account as part of our review.

MR, BRIS CIR: Okay. The second question would be: What about wildlife habitat and wild life corridors? The Tavaputs Platcan is an extremely inportant wildlife labitat area. If we are to get wolves back into Uteh, one logical way for them to come here is to come here hom Colorado, follow the Book Clifts going west and there on the lavaputs Plateau.

Jtas therc been consideration of wildifie
$\square$ movement tighting for justice, equality, and a tiving fight locally using counly governments and dircet action.

## COMMENTS BY SARAJ STOCK

MS. STOCK: Hello. My name is Sarah Stock. I'm from Giand County. I've lived there for most of my life. And I also represent the Rising Tide Network, which is a grassloots movement to confiront the root causes of climate change.

Dear Department of Oil, Gas and Minitig, how diliticult it must he for you these days to have your jobs. You sit on a board designed to regulate an jubcrently toxic and destructive sector of sociely, which you acknowledge. Your joh is to put pcople's lives, health, hunting grounds, and homes on one side of a balancing scale, and curporatc profits on the other.

You must often ask yourselves: How much can we get away with hefore people stop us, before the human cost is so ligh?

Well, 'l'll tell you: The cost of tar sands, any tar sands mining, is ton high. As a global society, we are forced to tackle the gian problem of climate change. High carbon fuels will be the first to go, and we're alreaty seeing this.

We are all part of a strong, growing, diverse

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2
3
4
5

We fight on the state level with lawsuits aimed at enforcing already-existing regulations. We light on a national level by coordinating and cormmunicating so that folks all over the country can take action where it's relevant.

Look at the massive public demonstrations recently and costly direct actions happening across the country: Seatule export teminals, Texas pipelines, the Tavaputs Plateau, this very mine, Michigan, California and beyond, all targeting infrastructure for tar sands development. It's obvious that you should fisten to the sound logic and science presented here todaly. L3ut if that can't break through your blind mission to develop dirly energy at any cost, I'm hoping that my blunt honcsty might.

This is an ethical batile, and you are going to lose. You will lose if your agenda is to stubbomly hold onto the promise of oil slale, tal sands, and dirly energy.

Will you be the people who allow this unacceptabic damage to people's heatth and the climate to continue unchccked? Or will you be the pcople to step up to the challenge and heip us transition our society to one that docsn't place curporate jrofits for a tew over the needs of all people on the planel? It starts here
with this mine expansion permit, and it contimues every day for the rest of your life. Change with us.

MR. CRAPO: Just one sccond, please.
(Mr. Clapo and Mr. Baza conferred.)
MR. CRAPO: Go ahead.

## COMMENTS BY MIRANDA PRATT

MS. PRAII: Thank you. My name is Miranda
Pratt, that's M-I-R-A-N-D-A, P-R-A-T-T.
Will you remind me of your name, the gentleman with the mustache?

MR. DAVIS: I'm sorty, what?
MS. PRAT"T: Will you remind me of your name?
HEARING OFFICER BAZA: Mr. Davis.
MR. DAVIS: John Davis.
MS. PRATT: Mr. Davis, Awesome.
You spoke to the ideas of common sense and a waste of resources. I just wanted to point out that the resources I'm assuming you're speaking of arc time and money, but it makes no common sense to waste the resources of clean water and destruction of habitat.

Thank you.
COMMENTS OF ALJISON JONES
MS. JONES: Hi. I'm Allison Jones, director of Wild Ulah Project. That's A-L-L-I-S-O-N, Jones.

Our scientists and biologists conduct research
and assemble scientitic data to be used to try to positively affect public land and wildlife management in Utah. And white it is the position of Wild Ulah Projecl that we hope that the permit expansiou is not approved and, ideally, the current permit is revoked, in that the case that any tar sands mining occurs up on PR Springs, 1 just have one small piece of advice to DOGM and to US Oil Sands. And that is, if you want to apycar to not be biased -- an issue that come up this morning -- I would stggest that instead of saying, We don't aeed to comparc arry pre-project spring characterization to post-project implementation and spring characterization -- instead of saying that, regardiess of where you think the recharge zone is or the flow pathway to those springs, go alcad and commint to post-project monitoring of those springs so we can see if dury of the hydrocarbons or anything else from the project end up in them. That's how you will appear to not be biased. Thanks.

COMMENTS OF TOM FADDIES
MR. FADDIES: My name is Tom Faddies. I manage the mining group all Stale or Utah School and
Instilutional Trust Iands Adminisitration. It represent the landlod.

We apprecialte this process, and we have great corlidence in the ability of the Division of Oil, Gas and

Mining and Dt:Q to address the issues that have been raised today. We think US Oil Sands is a high-quality lessee, They have the cconornic strength to sec this project through to a successtul completion.

This stage of the process, in reality, is a very small endcavor: It's a pilot plan stage. It's a very expensive pilot plan stage. Trust Lands Administration traded into a large block of lands in this area, working over decades. And our objective was to acequire lighevalue mineral propertics. It's uur job to make money for our bencifiarjes, as crass as that sounds.

We trust the Division of Oil, Gas and Mining to do their job. We trust DEQ. And we would ask for all yout support and your contimucd comments in helping them reach a successful conclusion in this endeavor. These are problems to be solved. Thank you.

COMMENTS OF SEAN PORIER
MR. PORTER: My name is Sean Pouter, it's $S-E-A-N, 13-O-R-T-E-R . I$ an an intern with Peaceful Uprising as well as Civically Engaged Scholar. I'm a student at Sall Lake Community College. My major' -- I'm going into ecology. But for now, I just speak as a concerned citizen.

I have no doubt that you have the economic backing to complete the project.

With all due respect, Trom, I belicye that you are the minority. Because for every face here you sce of concerned citizens icpresents hundreds of people that couldn't make it here today. And our voices will get louder, and we will -- our crowds will get bigger until you realize that the majority of the peoplc here -- and not here -- are against this forcver.

That's all I lave to say.

## COMMENTS BY NANCY EVENSON

MS, EVRNSON: I'm Nancy Evenson, E-V-E,N-S-ON', retired auclitect.

There are two things. The first is l'ni new to this process. Can you tell us when and where the information that we've heard todaly will be posted -hopefully on the Internct -- so that we can go home and give corred information to people who are not here?

HEARING OFFICER BAZA: I'm going to make a closing comment in just a minule, and !'tl try to address. that.

MS. EVENSON: Thank you. And the other question is: Ilas anyone from the Division here been to visit this: company's latest olher projects somewherc else?

HEARING OFFICER BALA: You know, we lave all been on site at this company's opcrations.

MS. EVENSON: Well, you've been on sitc here.

Have you been on site to other --
MS. HIT L: Have you been to Alberta?
MS. EVINSON: -- projects for this company?
HEARING OFFICER BALA: I honestly don't have to answer that, but: 1 will. I have been to Alberta, so --

MS EVIENSON: You have. Thank you.
MR. CUTHBERRS: Iust to clarify on that last comument, this project at PR Spring is the company's first commercial production project. We do not operale in Alberta. We have a test facility in Alberta, where we spent 13 years developing this process and tesling it to unctersland how it works. But we do not have any commercial operations.

HisARING OFFICDR BAZA: I have extended this beyond our initial two hours. I appreciate the time that you have taken to ruake comments to us. I did not went to close down dris process because I thought it was valuable to hear your statements aud your comments. Thope you have not felt that il's been a waste of time.

The public process that we have to go through is the fact that we are a public agency. All of the decisions we make arc public record. If you go to the Division's website, you'll find all of the documents that have been submitted and that we have revjewed relative to this application. You'li sec many comments and
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statements by the Division ats part of thal process and as part or our tentative approval.

I -- you know, I dan't wanl. you to feel like my mind is made up. Ithink you need to understand that there are things that have been said here coday that have touched ine, and l'm sensitive to those. And I'll be visiting with my legal collisel here to see how that is to be included in a final decision that I have to put out.

You know, we are bound by the rules to do a decision very quickly, within a reasonable length of time. 1 think it says approximately 10 days is what we have to do that in. Ard I'm going to try and be as ciose as possible to that. It may slip a day or two if we find oursclves necding over a particular issuc.

But know that the comments received totay, the information presented by Western Resource Advocates for fiving Rivers, I think is important. And it's important not only to the Division, but I think the Company has heen here to listen to all his as well. And it thelps to tailor this process to be betler and better. The process of regulating state government changes by degrees takes a lot of time. But I think this may be onc of the activitics that allows it to move forward with some improvement.

So having saicd all that, know that i will be
issuing a decision. Some of the questions that you have asked today, I have written down points that we probably should include in the decision thal I make. So know that within the next 10 days or so, you'tl sec that coming out, and it will be part of the public documents that are lound online at the Division's websitc.

MS. EVENSON: And this meeling will be on it?
FIFARING OFFICER BAZA: Io terms of the transcript, probably not. Bccause the transcript
itself -- I hate to say it, but you'll probably have to pay for it to get a copy of it.

The Division has contracted with the court recorder for my purgoses to obtain that transcript. But our contrad with them is that if any other parties request a copy of that, they would need to pay for it. We have to pay for it.

MEMBER OF THE PUBLIC: Will you continue to take written comments for a period of time, or is this the17 closure of auy public comment for people who are working 19 and are not here?

HEARING OFFICER BAZA: No, it's not the closwe. But as lar as what we need to do to progress to the next
2. step in this process, 1 need to issue a decision because the Company and Western Resource Advucates will have to decide if this is going to appeal to a more formal
24decide if this is going to appeal to a more tormal25

## CERTIFICATT:

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setting in front of the Board or Oil, Gas and Mining.
So the process is not over and done at this point, alhough we have to close this part to move to the next step.

So I appreciate all of you being here. I thank you for your time. I thank the Company and Mr. Dubuc for your time.

And at this point, we'll put an end to this informal conference. And you'll see something come out: of my oftice in a short period of time. Thark you.
(lise matter concluded al $11: 22$ a.m.)

Stale of (Jtah )
County of Sall Lake)
I, Michelfe Malknce, a Registered
Professional Reporter in and for the State of Utah, do haisby certily:

That lue proccedings of said matler was
reported by ine in stentutype and thereafter transeribed juto lypewritten form;

7'hat the same conslitutes a true and correct
transeriplion of said proceedings so taken and transeribed;

I liurther certify that I ann nol of kin or otherwise associaled with any of the parties of said cause of action, and that 1 ain not interested in the event thereof.

WTTNESS MY LAND at Salt Lake Cily, Utah, this Gth day of July, 2015 .

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# Before the Utah Division of OiI, Gas and Mining Department of Natural Resources State of Utah 

| In the Matter of: Protest of the tentative | Final Decision Approving |
| :--- | :---: |
| decision to approve the Revised Notice of | Revised NOI |
| Intention to Commence Large Mining |  |
| Operations, PR Spring Mine, Uintah and | M/047/0090 |

The Division of Oil, Gas and Mining ("Division") held an informal conference to review its tentative decision to approve a revision to a mining permit. The mine operator, U.S. Oil Sands, Inc., ("Operator") had filed a Revised Notice of Intention to Commence Large Mining Operations ("Revision") with the Division last year. After multiple requests to amend and responsive amendments, the Division issued a tentative approval of the Revision to which it received written objections, which resulted in the informal conference.

The conference was held at 9:00 AM on June 30, 2015 in the auditorium at the Department of Natural Resources, 1594 West North Temple, Salt Lake City, Utah. John R. Baza, Director of Oil, Gas and Mining presided over the informal conference with the assistance of Douglas J. Crapo, Assistant Attorney General. The Division presented Paul Baker, Minerals Program Manager, and April Abate, Enviroumental Scientist III, and was represented by Steven F. Alder, Assistant Attorney General. Protestant Living Rivers, represented by Rob Dubuc, Western Resource Advocates, presented Dr. William Johnson and his work to the Presiding Officer. The Operator U.S. Oil Sands, Inc., represented by A. John Davis, III and M. Benjamin Machis, Holland \& Hart, presented Barclay Cuthbert, Vice President of Operations.

In addition to these parties, the Presiding Officer heard from Vaughn Lovejoy, Tim Wagner, Tory Hill, Kathryn Albury, Jill Merritt, Suzanne Stensaas, Tanja London, Hans Ehrbar, Kaitlin Butler, Tina Smith, Bob Brister, Sara Caldwell, Sarah Stock, Miranda Pratt, Allison Jones, Tom Faddies, Sean Porter, and Nancy Evenson.

The Operator had previously obtained a mining permit in 2009. The Board upheld the Division's approval in latc 2012 and issued its Memorandum Decision in early 2013. Last year, the Operator submitted a revision to the existing mining plan, which expanded the disturbed area. On April 7, 2015 the Division issued a tentative approval to the Revision and published its decision on June 14, 2015 in the Salt Lake Tribune and Deseret Morning News; June 16, 2015 in the Uintah Basin Standard and Vernal Express; and June 18, 2015 in the Moab TimesIndependent (Emery and Grand Countics). Becausc the Division received timely written objections of substance, the Division held this informal conference under the Utah Mined Land Reclamation Act, Utah Code Ann. § 40-8-13(d)(3) (West 2014), the Utah Administrative

Procedures Act, § 63G-4-203, and the Division's Administrative Procedures Rule, Utah Admin. Code Rule R647-5 (2015), http://www.rules.utah.gov/publicat/code.htm. In addition to the submitted objections, the Division received comments supporting the approval of the Revision.

When submitting an NOI, operators must describe potential surface and/or subsurface impacts. R647-4-109. The description must include projected effects on surface and groundwater systems, R647-4-106(8), and -109(1); identify any deleterious material that will be left on the mine site, R647-4-106(2); and projected effects on air quality, R647-4-109(4).

After careful review and consideration of the comments and objections presented before and at the conference, the Division gives its final approval of the Revised NOI conditioned on the Operator amending the NOI to (1) establish a monitoring program for potential effects to the possible subsurface water system, and (2) include further evidence of the Operator's compliance with the appropriate air quality regulatory authority or authorities. Those amendments must be submitted to the Division by November 1, 2015, and the Operator must not process ore until the Division approves the amendments.

An aggrieved party that participated in the conference or an applicant that is aggrieved by a conditioned approval may appeal this decision to the Board of Oil, Gas and Mining as a formal adjudicative proceeding under Rule 647-5-106(17) and Rule R641 by filing an appeal with the Board Secretary, Ms. Julic Ann Carter within ten (10) days of receipt of this decision. Ms. Carter's address is Board of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, Salt Lake City, Utah, 84116 and her phone number is (801) 538-5277.

DATED this $17^{\text {th }}$ day of July, 2015.

DIVISION OF OIL, GAS AND MINING


# Utah Division of Oil, Gas and Mining Upholds Tentative Approval of PR Springs Mine Expansion with Conditions 

U.S. Oil Sands, Inc. Cannot Mine Ore Until DOGM Approves Conditions

Salt Lake City (July 17, 2015) - Following an informal conference and review by the Utah Division of Oil, Gas and Mining (DOGM), the division has upheld its tentative approval of the PR Springs mine expansion proposal, but with two new amended conditions.

DOGM's approval requires U.S. Oil Sands, Inc. to establish a monitoring program and plan for potential effects to the area's subsurface water systems. It must also submit evidence that confirms the mine is in compliance with the appropriate air quality regulatory authorities..

Both amendments are to be submitted to DOGM by Nov. 1, 2015 and U.S. Oil Sands, Inc. is not permitted to process ore until the division has approved both conditions.
"The informal conference held last month was extremely helpful. The feedback we received from concerned individuals belped us determine that these two additional amendments were necessary for the expansion to move forward. I believe the direction we've gone helps mitigate their concerns," said DOGM Director John Baza. "We're committed to accessing our state's abundant natural resources in an environmentally responsible manner. To ensure responsible mining at PR Springs, we have asked the mine operator to provide more information."
U.S. Oil Sands, Inc. initially obtained a tar sands mining permit in 2009 to mine ore and extract bitumen, a hydrocarbon used to fuel refineries. The approved mine included 213 acres of land on the border of Uintah and Grand counties near Tavaputs Plateau. Last year, the operator submitted a revision to its existing mining plan that would add another 104 acres to its operation. DOGM held an informal conference late last month under the Utah Mined Land Reclamation Act to hear from those who opposed the expansion.

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