

Public Comments Received On Kennecott Bingham Canyon Mine

The following comments have been received either in writing or by e-mail during the public comment period. Although DEQ is not required to post these comments on its website, it has done so to aid the public discourse.

2-14-2011 Brad Garner

I fully support the Kennecott Utah Copper projects currently under consideration. The mine and related facilities such as the concentrator, smelter and other facilities are some of the safest, and cleanest in North America if not the world.

Related projects such as the new generators and clean-up of old polluted areas on site show the willingness of KUC to work with local municipalities and take responsibility to work as cleanly as possible.

Please approve the projects as this will keep KUC, who has proven to be a good partner for Utah, running for many years to come.

2-17-2011 Terry Marasco

What documentation are you using to base this on? Thanks!

DAQE-IN0105710028-11

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For sources located within the pit influence boundary, a 20 percent escape factor will be applied to the PM10 emissions with primary control and a 21 percent escape factor will be applied to the PM2.5 emissions with primary control.

2-22-2011 Kristine Wadsworth

I am writing to ask you to take whatever measures you can to IMPROVE the air quality we have here along the Wasatch front. I am unable to attend the hearing today, but am watching with great concern what the outcome will be of Rio Tinto's request to increase its permitted PM10 emission limits. It is my understanding that they have applied for approval of a 32 percent increase in overall production of PM10 emissions. As a citizen of Davis County, I am aware that Salt Lake and Davis counties already do not meet the federal standards for PM10 emissions. As a mother of a child with asthma, I am even more aware of the air quality each and every day. I plead with you to move the standards for any sort of pollutants to a stricter code rather than in the opposite direction. Please do not approve Rio Tinto's request.

2-22-2011 Starr Hailey Campbell

Kennecott Hearing Feb 22, 2011

- My name is Starr Hailey Campbell and I am the President of the Magna Town Council.
- Thank you for the opportunity to comment on this important matter.
- If you are unable to attend both hearings, state that you wish your comment to be entered into the record for both matters.

- Kennecott is valuable community partner with Magna. They support our community programs both with donations and attendance. We have a large group of our population in Magna that are either employed there now or have been employed there in the past.
- We value these jobs in these tough economic times, and we want these jobs to be available for a very long time. Kennecott provides jobs to over 2,400 employees with an annual economic contribution of \$900 million
- In 2010, Kennecott contributed over \$1.3 million to more than 150 community organizations.
- In addition to corporate contributions, the Kennecott Utah Copper Visitors Center Charitable Foundation, funded by proceeds collected at the mine's Visitors Center, has given more than \$2.4 million over 19 years to help the poor and needy, with an emphasis on the disabled, children, veterans, homeless and the elderly.
- Kennecott has shown continued leadership in building high-efficiency buildings and promoting energy initiatives to reduce its carbon footprint and dependence on traditional energy sources.
- Kennecott oversees the Inland Sea Shorebird Reserve, which provides feeding, staging and breeding habitat for thousands of migratory birds on the south shore of the Great Salt Lake. The 3,670 acre reserve is one of the largest wetland mitigation banks in the United States.
- I urge you to approve this permit without further delay. Delays in the permitting process are very disruptive and costly to business. Utah companies compete in an international marketplace and compete for limited capital. Their ability to deliver timely projects is critical. In this environment it is necessary that permits are reviewed in accordance with the established process and in a timely manner. Any unnecessary delays or arbitrary requirements put Utah manufacturers at a disadvantage in a competitive global marketplace.
- As demonstrated by the public documents this project has been through a thorough and robust technical review.
- In addition to the regulatory process, Kennecott has demonstrated good faith in
- proactively engaging the community regarding this project.
- Anytime the Magna Community has questions about health safety and environmental impact we are able to go to Kennecott and get the answers quickly and completely.
- The Magna Town Council is fully and completely supportive of the Cornerstone project and any permits need.
- If all regulatory requirements have been met, we urge the approval should move forward as quickly as possible.

2-23-2011 Terry Marasco

Cheryl, when Mike Styler took comments on the Snake Valley agreement he openly posted each on the DNR website for all to see. The public could click on a name and see the complete comment.

Given this issue with the Kennecott expansion, it would be in the interest of maximum transparency for the DAQ to do the same.

Could you set this up soon?

Since the public needs to access comments but moreso to further prepare itself to comment appropriately on this complicated and controversial matter I am requesting the comment period be extended 10 business days for the SIP modification and the ITA(AO).

2-23-2011 Jill and Nick Thomas

Please, please, do not allow any air-emission permit changes that will allow Kennecott to further pollute the air in Utah. We have 4 grandchildren living in Salt Lake City, all under 8 years old. It is completely unacceptable to put their health at risk to profit Kennecott's bottom-line and Utah's economy.

2-23-2011 Dennis Gardner

Thank-you for your service to our wonderful state. You have a very difficult job. Currently it seems there are serious conflicts between balancing environmental needs against business needs relative to Rio Tinto's business plan. I'm a local businessman and appreciate the positive attitude toward business in Utah. Having said that, I recognize that our air quality is increasingly problematic. We simply can't ignore the evidence that Utah is experiencing greater air quality issues. As much as we all want Rio Tinto to expand and fuel our economy, we just can't accept additional environmental costs. Please protect our air quality.

02-23-2011 Terry Marasco

Cheryl, Chris Kaiser made a comment into the record yesterday that stated the mine change, digging deeper, would keep more emissions in the pit. Two things here you need to be concerned about:

1. Chris offered no substantiation for this comment
2. It is one more reason that the student thesis, outdated by 15 years, be stricken from the record.

I recommend you stop the SIP/ITA process until December 1, 2011. Ask Kennecott to withdraw the SIP modification and NOI which they can resubmitt without the student thesis after Dec. 1. Their resubmission needs to include, which they can do in the meantime a real field data study with validation and peer review.

02-23-2011 Leta Howard

The attached letters are in support of Kennecott and the Cornerstone Project.

Public Hearing for Kennecott Utah Copper LLC, Mine & Copperton Concentrator Modify Approval Order DAQE-AN0107490007-09

Dear Ms. Heying,

As President and Vice President of Brahma Group, Inc., a company headquartered in Salt Lake City we wish to offer our comments in support of Kennecott and the Cornerstone Project.

In doing so, we appreciate the Utah Division of Air Quality (DAQ) giving us an opportunity to comment on such a critically important matter that will, no doubt, have great and lasting impact for our community.

Brahma is an industrial general contractor that employs a diverse, skilled workforce of approximately 400 people. Our employees work hard, and in turn, are able provide a good quality of life for themselves and their families. Kennecott is a significant component of that

equation. Indeed, because of Kennecott, we are able to provide hundreds of jobs to Utahans each year.

Kennecott alone provides over 2,400 direct jobs, which, if you dig into the direct numbers, equates to \$250 million in wages, salaries, pensions and benefits for our residents each year. If you look at the indirect numbers, Kennecott spends approximately \$650 million dollars each year with approximately 1,000 different Utah businesses. It is obvious that Kennecott, both directly and indirectly, plays a significant role in carrying the banner of economic wellbeing for our community.

Any disruption in the approval process could be detrimental to our industry, and more broadly, our community. One only needs to look at our neighboring state—Nevada, and its 29.9% construction unemployment rate to see what happens when the construction industry leaves, or is significantly diminished.

Now, finally, a word about Kennecott. Kennecott has been a part of our Culture and history since 1903. In over a century of work here In Utah, Kennecott has proven time after time that is committed to our community and our future. As a community we cannot afford to delay the Cornerstone Project. We as a community must value these jobs and the industry that provides them.

David W. Miller

Sean Davis

Dear Ms. Heying,

As Senior Management of Brahma Group, Inc. (Brahma), a company headquartered in Salt Lake City. We appreciate the Utah Division of Air Quality (DAQ) giving us an opportunity to comment on such a critically important matter. We wish to offer our comments in support of Kennecott and the Cornerstone Project. Brahma has been involved in Kennecott's maintenance construction activities for over a decade. As the Senior Management, we wish to offer our personal experiences as it relates Kennecott's health, safety and environmental values.

At Brahma, we work for some of the largest names in the mining, refining and power industries. It has been our opportunity to meet with the Health, Safety & Environmental Directors of many of these large companies and experience first-hand their programs and control systems. We can state, without equivocation, that Kennecott is the gold standard in terms of Health, Safety and Environmental standards and systems. In our politically charged environment, where talk is so often cheap, Kennecott walks the walk.

Kennecott's programs, in every instance, meet (and in most cases exceed) all federal and state health and environmental agency standards. Kennecott is an Innovator in safety and environmental risk assessment, analysis, and control. For example:

- o Kennecott requires each contractor to complete an action plan prior to the commencement of any project. A key component of the plan addresses air quality including fugitive dust control and opacity control for all work activities. Depending on the project, Kennecott may even require a separate environmental mitigation plan.
- o Brahma is actively involved in maintaining air pollution control systems at Kennecott's properties. We can say, without reservation, these systems are given top priority at Kennecott.
- o Contractors receive Level I and Level II environmental management training, and Kennecott requires full compliance, with its ISO 14,001 Environmental Management Standard.

o Kennecott has a "No idling vehicle" policy.

The results are indisputable; Kennecott has an incident frequency rate well below, even dramatically below, industry standards. In many respects we take cues from Kennecott in our individual efforts to improve our Company's safety and environmental programs. Moreover, one only needs to look to where they office to show they are serious about environmental impacts to the community. Kennecott owns more LEED certified buildings than any other entity in Utah ranging from Platinum to Certified. Kennecott has a track record of investing in environmental improvements while creating Jobs. Kennecott has spent more than \$400 million over the past two decades on the cleanup of historic mining sites and \$100 million on groundwater remediation. Kennecott oversees the Inland Sea Shorebird Reserve, which provides feeding, staging and breeding habitat for thousands of migratory birds on the south shore of the Great Salt Lake. The 3,670 acre reserve is one of the largest wetland mitigation banks in the United States. Indeed, Kennecott is not only heading in the right direction — it is leading. Finally, what does all this mean for the hundreds of Utahans we employ to go to work at Kennecott? It means our employees go home safe to their families each night. It means our employees can provide a living for themselves and for their families. It means our employees enjoy increased quality of life. It means our community, that requires industry to survive, is lucky to have an industry leader like Kennecott In our midst. For these reasons alone, we urge you to approve this permit, without delay.

Brahma

Robert S. Fox
General Counsel

Kirk Christenson
Business Unit Manager

02-24-2011 Richard E. Kanner, MD

All:

As a former member and chair of the AQB I am writing to express my opposition to the proposed Kennecott expansion. In many ways Kennecott has been a good corporate citizen but at this time the proposed expansion is ill conceived. We have had too many days on non-compliance with Federal Air Quality Standards and any increase in pollutants in our air shed would only make matters worse. The mission of the DAQ and its Board is to protect the health of Utah's citizenry and to bring the State into compliance with Federal standards that are designed to protect our health. The economic consequences are not to be considered. The Rio Tinto/Kennecott expansion adds significantly to the health risks and costs of Wasatch Front communities. Those supporting the expansion cite the economic benefits of this project. However, you must strike these comments from the record as they are completely unrelated to your mission.

Kennecott needs to find ways to reduce the release of air pollutants into our environment. If they can reduce an equal amount of particulate air pollution from other sources in their operations to compensate for what this project would add to our air shed then they could proceed with their plans.

I completely oppose the current Cornerstone expansion project and wish that my comment be entered into both the SIP modification and the ITA regarding the Cornerstone expansion.
Thank you.

02-24-2011 Steve Stanko

The mission of the DAQ and its Board is to protect the health of Utah's citizenry. The Rio Tinto/Kennecott expansion adds significantly to the health risks and costs of Wasatch Front communities. While you have heard Rio Tinto/Kennecott staff and certain government officials state at a recent meeting the economic benefits of this project, you must strike these comments from the record as they are completely unrelated to your mission.

I completely oppose the Cornerstone expansion and wish that my comment be entered into both the SIP modification and the ITA regarding the Cornerstone expansion.

02-24-2011 Tim Halstead

The mission of the DAQ and its Board is to protect the health of Utah's citizenry. The Rio Tinto/Kennecott expansion adds significantly to the health risks and costs of Wasatch Front communities. While you have heard RT/K staff and certain government officials state at a recent meeting the economic benefits of this project, you must strike these comments from the record as they are completely unrelated to your mission.

I completely oppose the Cornerstone expansion and wish that my comment be entered into both the SIP modification and the ITA regarding the Cornerstone expansion.

02-24-2011 Cecilee Price-Huish

Dear Governor Herbert,

I would like to strongly voice my opposition to the Utah Department of Environmental Quality (DEQ) and the Utah Division of Air Quality's (DAQ) proposed modifications to the State Implementation Plan (SIP) regarding production limits currently placed on Rio Tinto. As a public servant given the charge of protecting the citizens of Utah, I urge you to do everything in your trusted position of power and influence to prevent a "special" exemption or modification to the SIP, which if allowed would permit Rio Tinto to add multi-millions of pounds of PM10 annually to our air shed, which as you know currently does not meet federal clean air standards for PM10 emissions.

The current limits set forth in the state-promulgated SIP were put in place in order to provide a mechanism by which the state could help lower PM10 pollution and improve overall air quality. Truly, it would be a breach of the public trust to allow Rio Tinto to increase its permitted PM10 emission limits, especially on such a grand scale, due to the pending approval (via SIP modification) of a 32 percent increase in overall production. If such measures are approved by state regulatory bodies that exist to protect air quality for the citizens of Utah, namely the DEQ and the DAQ, Rio Tinto could potentially add between 4 to 12 MILLION pounds of PM10 pollutants to its existing annual emissions.

As mentioned, Salt Lake County does not meet the federal standards for PM10 emissions â "air pollution evidenced by fine particles, 10 micrometers or smaller, that are suspended in the air which can penetrate the deepest part of the lungs and can cause respiratory distress, asthma,

increased risk of heart attacks, cancer and even death (approximately 22,000 to 25,000 deaths annually in the U.S. are attributed to heightened levels of PM10).

Allowing Rio Tinto, one of the largest industrial polluters in the state, to increase its production by 32 percent, and thus its emissions proportionately, seems counterintuitive to the guidelines of the SIP. Again, the SIP is intended to assist the DAQ and the DEQ in its planning, compliance and permitting efforts in order have a mechanism by which the State of Utah can help its citizens enjoy better, cleaner air quality through attainment of clean air standards set forth by federal law.

The DAQ's mission should be to develop an effective plan so as to help industries implement measures to improve air quality, especially if they operate in those highly populated geographical areas currently not meeting federal guidelines for clean air standards. The DAQ should not simply change the rules of the game in order to help Rio Tinto circumvent current restrictions on PM10 emissions. Industry that helps our economy grow and creates jobs is a good thing, but allowing an unprecedented increase in production (which will require a new special Rio Tinto modification to the SIP), thus resulting in millions of pounds of additional PM10 pollution annually along the Wasatch Front is bad for all Utahns.

02-24-2011 Jolynn Darton

Herriman and Daybreak are beautiful family communities with unique demographics. Over half of the citizens are children! With childhood diseases on the rise like leukemia, other cancers, asthma and other respiratory diseases, it would be foolish to consider expanding Rio Tinto/ Kennecott. I know that your major concern is the almighty dollar, but history has taught us that it's never worth the cost. Your bottom line, versus the health of every citizen in Salt Lake County. I vehemently oppose the expansion of Rio Tinto!

02-24-2011 Joan Gregory" <jmg@csolutions.net> 2/24/2011 2:35 PM >>>

The mission of the DAQ and its Board is to protect the health of Utah's citizenry. The Rio Tinto/Kennecott expansion adds significantly to the health risks and costs of Wasatch Front communities. While you have heard RT/K staff and certain government officials state at a recent meeting the economic benefits of this project, you must strike these comments from the record as they are completely unrelated to your mission.

I completely oppose the Cornerstone expansion and wish that my comment be entered into both the SIP modification and the ITA regarding the Cornerstone expansion.

02-24-2011 Garry Blake

I would like to comment on Modify Approval Order DAQE-AN0107490007-09, Kennecott Utah Copper LLC, Mine & Copperton Concentrator.

I am strongly against approval of any plans for expanded or extended development at Kennecott Utah Copper. We should be doing everything we can to improve the air in Salt Lake City. The LAST thing we want to do is permit the quality of our air to deteriorate.

This a real issue for me, because I suffer serious sinus problems that are clearly agravated, and perhaps caused, by particulate matter pollution. I suffer every winter during our infamous air inversions. The state should not allow Kennecott to make things even worse, or permit them to pollute our air for years to come.

02-24-2011 Leo F. Stanko

First, thank you for your time and any consideration of my concerns...
The mission of the DAQ and its Board is to protect the health of Utah's citizenry. The Rio Tinto/Kennecott expansion adds significantly to the health risks and costs of Wasatch Front communities. While you have heard Rio Tinto/Kennecott staff and certain government officials state at a recent meeting the economic benefits of this project, you must strike these comments from the record as they are completely unrelated to your mission.

I completely oppose the Cornerstone expansion and wish that my comment be entered into both the SIP modification and the ITA regarding the Cornerstone expansion.

02-24-2011 Willy Star Marshall

I received the following solicitation to cut and paste and email to you. But I FAVOR the Cornerstone expansion, whatever it is! I sincerely doubt any "health risks" the opponents are claiming. This is just another example of radical environmental obstructionism. It is high time we developed Utah's resources in every way possible. Let the rest of the country stagnate and decline. The whole environmental premise is that "we are killing the planet". I say baloney. I am 58 years old, and I know from my own experience that this country is MUCH cleaner in regards to air, water and land than it was when I was a kid, and wildlife has not only recovered, it has become a downright nuisance in many cases. You can hardly drive anywhere in the 48 states without risking hitting a deer with your car. So whatever it is that Rio Tinto/Kennecott want to do is fine with me. They have enough hurdles to jump with the feds. They shouldn't have to jump even more with the State of Utah.

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Rio Tinto/Kenn is mailing cards to universities and businesses with a stamped return post card to the DAQ asking for support for the expansion.

We need to have everyone you know counter this. You may go to the UCAA website to get comments and email addresses to send to or simply cut and paste the following into your email and send:

to: P. E Cheryl Heying <cheying@utah.gov>, Ernie Wessman <ewessman@integrity.com>;

The mission of the DAQ and its Board is to protect the health of Utah's citizenry. The Rio Tinto/Kennecott expansion adds significantly to the health risks and costs of Wasatch Front communities. While you have heard RT/K staff and certain government officials state at a recent meeting the economic benefits of this project, you must strike these comments from the record as they are completely unrelated to your mission.

I completely oppose the Cornerstone expansion and wish that my comment be entered into both the SIP modification and the ITA regarding the Cornerstone expansion.

Terry Marasco

02-25-2011 Randy Crane

Your reply as to why you cannot post the requested comments from the SIP hearing are inconsistent with those stated by Nando Meli during the hearing. He was questioned as to why the permit process was allowed to proceed, without the SIP permit, which has yet to be approved. He stated that the reviewing of the permit did not affect the budget of your department as KUC paid for that activity through the fee structure. He also stated there was adequate staffing in your department to review the permit application. This should include all posting of public comment.

However, now you state you do not have the resources to post the comments. I submit that your activities are not in the public interest. The permitting review process needs to halt until the SIP is reviewed and acted on by all applicable agencies.

You also state that all documents that have been submitted in support of the SIP and permits are posted. Please provide me with the site link where the NOI for the KUC permit is located.--

02-25-2011 Adam McMullin

Ms. Heying and Mr. Wessman,

The mission of the DAQ and its Board is to protect the health of Utah's citizenry. The Rio Tinto/Kennecott expansion adds significantly to the health risks and costs of Wasatch Front communities. While you have heard RT/K staff and certain government officials state at a recent meeting the economic benefits of this project, you must strike these comments from the record as they are completely unrelated to your mission.

I completely oppose the Cornerstone expansion and wish that my comment be entered into both the SIP modification and the ITA regarding the Cornerstone expansion.

02-25-2011 Tim Brown

The mission of the DAQ and its Board is to protect the health of Utah's citizenry. The Rio Tinto/Kennecott expansion adds significantly to the health risks and costs of Wasatch Front communities. While you have heard RT/K staff and certain government officials state at a recent meeting the economic benefits of this project, you must strike these comments from the record as they are completely unrelated to your mission.

I completely oppose the Cornerstone expansion and wish that my comment be entered into both the SIP modification and the ITA regarding the Cornerstone expansion.

02-25-2011 Bob_Brister" <bob@uec-utah.org>

I am adamantly opposed to the Rio Tinto/Kennecott expansion. Utahns should not be forced to breathe dirty air. The air is bad enough as it is and should not be made worse with this expansion.

The mission of the DAQ and its Board is to protect the health of Utah's citizenry. The Rio Tinto/Kennecott expansion adds significantly to the health risks and costs of Wasatch Front communities.

I completely oppose the Cornerstone expansion and wish that my comment be entered into both the SIP modification and the ITA regarding the Cornerstone expansion.

02-26-2011 Terry Marasco

O: Amanda Smith

CC: Gov. Gary Herbert, Ted Wilson, Spencer Eccles, Rep Rebecca Lockhart, Rep. David Litvack, Rep. Bradley M. Daw, Rep. Roger Barrus, Senator M. Waddoups, Sen. Ross Romero, Sen. Kevin T. Van Tassell, Mayor Peter Carroon, Mayor Ralph Becker, Ernie Wessman, Cheryl Heying, Todd Bingham, Tom Bingham, Andrew Gruber (WFRC), Alan Matheson (Envision Utah), John Njord, John English, Catherine Roberts (US EPA)

RE: Potential Litigation and potential threats to Utah's economy emanating from questionable DAQ actions regarding Rio Tinto/Kennecott (RT/K)

Dear Amanda:

The pending actions advanced by the UT DAQ violate the UT DAQ's stated mission, the public trust, and its "commitment" to science and pollution prevention. The discussion below makes a case for violation of UT DAQ's mission setting it on a course of entangling legal problems, and setting up threats to Utah's economy.

UT DAQ Mission The mission of the Department of Environmental Quality is to safeguard human health and quality of life by protecting and enhancing the environment.

Vision A quality environment will be achieved through:

Careful, open, and fair consideration of the concern of all Utahns;
Excellence in science, communications, and operations;
Timely, effective, and consistent response to all customers; and,
Actively promoting pollution prevention

BACKGROUND: Rio Tinto is restricted from mining more than 197MM tons of material per year by a current condition of the State Implementation Plan (SIP) for Salt Lake County. Rio Tinto is proposing that the State DAQ modify the SIP to allow for an increase in material mined to 260 MM tons of material per year – a 32% increase in mining operations.

Salt Lake County currently does not attain to the clean air standards for PM10. The SIP, then, is prepared by the State of Utah to demonstrate to the EPA a reasonable plan for re-gaining attainment status, as this is required by Federal law. The SIP is a federally-enforceable document, and must be approved by the EPA. Once a SIP is approved, rulemaking by the State is completed so that air planning, compliance, and permitting efforts support the goals of the SIP. The SIP, then, is the cornerstone of building an effective plan for PM10 emissions so that the air quality of the County improves and eventually meets the federal clean air standards.

LACK OF PROMOTING POLLUTION PREVENTION: There are concerns with the quality of the current PM10 SIP as written by the State Division of Air Quality (DAQ) and submitted to EPA for federal approval:

1. Despite the existence of the plan, Salt Lake County has encountered “excursion events” where monitoring has indicated that the County’s air exceeded the PM10 standard several times over the past several years. This indicates that the SIP as currently developed is not protective;
2. The EPA has not yet approved the Salt Lake County PM10 SIP; and,
3. EPA, in December of 2009, published their intent to disapprove almost all portions of the Utah SIP.[1] EPA will act on this recommendation by December of 2011.

LACK OF COMMITMENT TO SCIENCE: Despite a troubled SIP whose planning does not appear to be moving Salt Lake County closer to clean air standards for PM10 as required by federal law, and which has been proposed for disapproval by the EPA (who provides primacy authority for Clean Air Act enforcement to the State of Utah), the DAQ has proposed to allow a change to the SIP where Rio Tinto will be able to increase their production from 197MM tons to 260MM tons per year, increasing PM10 emissions by 2,035 tons per year, according to their own documents. Additionally, this PM10 (and PM2.5) number offered by Kennecott is based on a student thesis noted with many statements by the author that much more needs to be done to verify this study. The actual tonnage of PM 10 may be closer to 6,000 tons per year.

It is my understanding that the UT DAQ makes a source permit on “worst case” numbers. The student master’s level thesis states a “worst case scenario” with winds of 30 mph. First of all winds greater than 30mph are regularly seen across the Oquirrh. At a minimum, remembering the worst case may be winds of 50-80 mph, this would lead to an increase from 33% of PM10, making it out of the pit. In a more realistic worst case scenario perhaps 50% of PM10 would be released out of the pit but a new study with real field data needs to be conducted before any of these considerations are moved on.

The UT DAQ was called on by the EPA re: fugitive dust emissions before when RT/K asked for a production increase. In a letter from the EPA to the UT DAQ dated June 30, 1999 EPA (RE: ITA DAQE-357-99) stated:

“We are aware of the argument expressed by your staff that most PM10 emissions never leave the Bingham Pit Mine. While we believe this may be true for some or most of the ore hauling which occurs entirely in the pit we do not believe this is true for the projected emission increase in this permit action. . . .most of the allowed increase in truck hauling will be for waste rock, not ore, which is hauled out of the pit...We would not expect fugitive PM10 emissions from that hauling to remain mostly in the pit” To Ursula Trueman UT DAQ Exec. Sec. from Richard R. Long, EPA Director, Air and Radiation Program

LACK OF THE FAIR CONSIDERATIONS OF ALL UTAHNS: Herein a contradiction is observed: How can the DAQ, in spite of a faulty SIP which has been proposed for disapproval, propose to allow an additional 2,035 tons or much more of PM10 into the airshed, which already does not meet clean air attainment standards?

Additionally, concurrent with their SIP Modification Proposal Submittal (December, 2010), Rio Tinto also submitted a Notice of Intent (NOI) to change their current air permit (Approval Order, or “AO”) to allow for an increase of material mined to 260 MM tons per year. Since the SIP

provides the foundation for PM10 air permitting in Salt Lake County, the SIP change must first be approved. Once the SIP is changed, only then would a permit change, based on the newly revised SIP, be considered.

A public hearing has been scheduled for 3:30 PM on February 22nd, for the public to make comments on the proposed SIP modification. However, a second public hearing has been scheduled at 6:30 PM on the same day to take comments on a new AO already written for Rio Tinto (called an "Intent to Approve", or ITA document), based on the concurrent NOI submitted on the same day in December, 2010, which presumes a new operating limitation of 260MM tons.

This action is concerning, because the SIP must first be changed prior to any permits being issued based on the SIP changes. The very fact that the DAQ has allocated engineering resources and time to review, author, and "intend to approve" a completely modified AO, which is based on SIP changes which have not been made, nor have even received public comments on the change, is troublesome. This indicates that the DAQ presumes that the change will be made, and has already prepared the first permit based on the change. This points to the underlying assumption that the DAQ (and by reference, the Air Quality Board) are already planning on changing the SIP, DESPITE not yet having received any public comments, and DESPITE EPA's expressed concerns regarding the SIP.

DAQ's response may be that they are simply preparing for an eventuality of a SIP change occurring. However, their actions already contradict this argument; why would an agency who has publicly gone on record as being "strapped for resources and FTE's" assign those very critical existing resources to completing a very extensive permit process which may not even be approved due to an overriding SIP condition which disallows it? The DAQ may already have reached a conclusion to approve the SIP, and the permit based upon the change.

This is presumptive, and makes a mockery of the public process, required by law, in which the members of the public can voice their opinions on the proposed SIP change. In fact, their action may be illegal, in that they have already decided the outcome of the Board vote prior to the Board even meeting to vote on this issue. This violates public trust in the Agency, and may violate terms of due process for public hearings on the issue, which are required by State Air Rules.

LACK OF CONSISTENT RESPONSE TO ALL CUSTOMERS: Finally, there are many industries along the Wasatch Front who have been waiting over one or two years for permit approvals. That an action this large, involving thousands of tons of additional emissions into an airshed which already does not meet clean air standards, can be addressed in under two months, with permits already written based on a rule change which has not even yet occurred, much less publicly discussed, is incredibly disingenuous and violates every principle of service to the public as well as to industry. At a WFRC air quality committee meeting last year a participant noted that "Kennecott is dominating the airshed" and "we'll never be in compliance".

DAQ ACTIONS INVITES LEGAL PROBLEMS: In addition, by violating due process, the DAQ may be exposing the State of Utah to legal action which will cost the State additional monies and resources to address. It is not certain if the DAQ recognizes this potential liability that they have created by asking for public comment on a permit they intend to approve which by law can't even be submitted until after the overarching rule (the SIP) is changed, IF it is changed.

This action is a blatant example of favoritism to a single industry, over the voice of the public, and at the expense of other industries, who's permits have been in process longer, and were inevitably delayed so as to "fast track" this permit.

IMPACTS TO UTAH'S ECONOMY: Other segments of Utah's economy are impacted by these maneuvers. Transportation funds may be denied if the airshed is perennially out of attainment. The Governor's projections for growth alone may keep the air shed out of attainment without any other segment's growth.

The DAQ needs to cease this process immediately. It also needs to temporarily end the review of any RT/K permits that emits PM 10 until the SIP is addressed by the EPA which is required by a ruling to occur December 1, 2011. Then and only then will the UT DAQ redeem itself in the eyes of the public and may wholly remove itself from potential litigation.

These maneuvers also move Utah closer to loss of primacy with the EPA vis-à-vis The Clean Air Act.

02-26-2011 Terry Marasco

Comments submitted to the UTDAQ 2/27/2011 re: SIP Modification and ITA for Bingham Canyon Mine Expansion (aka Cornerstone Project)-Terry Marasco

Comments (and thoughts) on brief review of the following KUC documents:

- 1) the NOI Application, and
- 2) Technical Support Document.

Over-arching Comments.

1. Emissions Summary

KUC is currently limited by a "materials moved" limitation of 197 million tons/year of ore/rock at the shovel face. Their goal is to increase this production amount to 260 million tons/year, or ~32% (nearly 1/3rd more).

The proposed production increase means only a small increase of 5.32 tons of PM10 from stationary sources, and a 1,239 ton/year increase of PM10 from fugitive sources, primarily from increased traffic on haul roads.

There is no requirement to permit NOx increases, as they only occur from mobile sources (haul trucks and offroad equipment) which are not required to undergo permitting. It can be roughly assumed that NOx emissions from mobile sources will certainly increase by the correlating amount – the existing NOx emissions are around 4,800 tons/year, and will increase to ~6400 tons/year if the production increase is granted.

2. Big Picture Questions/Observations

A. The current AO, as well as the SIP, both limit KUC mine to 197 million tons/year of production. A higher AO limitation (ie. 260 million tpy) cannot exceed the PM10 SIP limitation This raises a few questions:

- A change to the SIP typically cannot be orchestrated by a single source. This sets a dangerous precedent – if KUC can do it, then other major sources may follow suit.

- A SIP can only be approved... and changed ... after EPA approval and extensive public process. Since the EPA has currently proposed that the PM10 SIP be DISAPPROVED, KUC is attempting to circumvent this fact and may be supported by the UTDAQ.

- If the Utah Air Quality Board approves a change to the SIP, that is 'legal', KUC can hide behind the AQB, even if they know that the EPA will disapprove the change. The SIP change cannot be approved

B. It appears that KUC has managed to separate the “Copperton Concentrator” from the Mine... these two facilities have always shared the same AO, but a recent AO modification (August 2010) was issued to the concentrator only. This AO should have contained all the info for both mine and concentrator, yet the mine info was absent. Since the point-source totals of both units are combined in applying total tons of pollutants towards the major source threshold of 100 tpy, KUC is trying to avoid future major source status by quietly separating the two now... thus the emissions will have to be counted separately at each facility, making the 100 tpy limit much further away... if it is ever reached. This is unacceptable as these units share the same property, and are immediately adjacent to each other... they are one facility.

C. KUC has developed a plan to defend a change to the SIP, which is based on “reverse engineering” the Urban Airshed Model (UAM) that was used by DAQ to model the 1994 and 2005 SIPs. They did not re-run these early versions of the model, rather, dissected the findings and re-evaluated sector concentrations with the “what if” scenario of 260 MM tons of production vs. the current 197 MM tons. The Technical Support Document (TSD) is that it is very hard to understand, as it is not written in a cogent manner; it does not enable easy understanding of the complicated method that KUC has used to try and make their case. And much of the supporting data that is used in the various assumptions appears to be missing or incomplete. I argue that the DAQ is not qualified to review this document, and that the document is written in a way that intentionally obfuscates the data and the resultant conclusions.

D. This study states that of all PM10 emissions created in the pit, only 20% of these emissions escape the hole and enter the airshed. The percentage is 21% for PM2.5. This is difficult to argue against. KUC has reduced all emissions by this quotient for all of their sources in the mine.

- Site-specific real-time data not used in the study. It would have been easy to place a meteorological station with a windspeed indicator in the bottom, mid-level, and near the top of the pit, to better understand the varying wind conditions... this would have been a good way to check the validity of the model.

Comments Related to the NOI

1. The NOI requests a production increase from 197 MM tons/year to 260 MM tons/year. Note that this is 10 MM tons more than they asked for one year ago (in the NOI that was successfully refuted by Terry Marasco and UPHE). This amounts to an approximate 32% overall increase in production... and resultant emissions. At that time KUC used emissions numbers that were not certified, validated or approved.

2. The NOI acknowledges that EPA has proposed to disapprove the current PM10 SIP. (1-1)

3. Footnote #4 on page 1-2 is disingenuous – the SIP is outdated. (1-2)

4. KUC admits that the majority of their emissions come from fugitive sources, i.e. roads, and states that they are controlled via the plan laid out in the fugitive dust control plan (FDCP). The latest plan need to be submitted with the NOI. It contains all the control strategies currently employed by KUC in controlling the largest portion of their air pollution. (1-2)
5. Lime silos are included in the NOI, although it plainly says that they are ‘part of the concentrator’. There is no other concentrator information included in this document. The NOI will be for the overall facility... unless they are trying to separate the two... see above comment 2B. (2-4)
6. Control efficiencies for drilling, blasting, and off-road equipment (dozers, graders, backhoes) appear to be SWAG’ed... not defended in NOI, so veracity of control claims (i.e. 50% control for dozing emissions) cannot be checked. The DAQ needs more information. (2-4) (3-9)
7. Haul roads – the major source of PM10 emissions in the mine – are not adequately addressed in the NOI with the assumptions and resultant emissions. It is unclear of the traffic patterns and number of trips on each segment... and by which vehicles. Usually this is illustrated with a set of figures... so we can’t check the veracity of the calculated road emissions. In addition, material that is rehandled, ie. low-grade ore... it is hauled, then dumped, then loaded, then hauled again, then dumped again.... Are trips need to be accounted for with backup information to check against. (3-5)
8. Electrowinning emissions are not controlled (VOCs) – not a huge issue, but raises questions... (2-5)
9. Regarding the 20% escape quotient used (i.e. 80% of emissions remain in pit, and therefore are not accounted as emissions, rather, only the 20%), The NOI describes that approximately 1800 acres of new, undisturbed ground will be ‘disturbed’ by expanding mining.
 - Surface area emissions from disturbed ground must calculated from this new acreage.
 - Is the acreage reflected in the “pit influence boundary figure”? (Section 3.0 appears to indicate that this answer is “no”. The figure gives little to no information of any use.
10. Best Available Control Technology (BACT) assessment is substandard and incomplete. Control technologies for each source should be listed, and then eliminated where not technically/economically feasible. This process should be described within the NOI. Instead, various controls are eliminated without demonstration of efficacy. More info should be provided.

Comments Related to the Technical Support Document

1. As stated above, very hard to understand, as it is not written in a cogent manner; it does not enable an easy understanding of the complicated method (read: SWAG) that KUC has used to try and make their case.
2. Since when can a single source make changes to the SIP that affects the entire county... especially when it involves an emissions increase?
3. The study states that NOx, as a gaseous pollutant, is subject to deposition on the mine walls similar to PM10. Gaseous pollutants do not “depose”... they remain as a gas, and are dispersed. This comment indicates that NOx may be underestimated.

4. Consultant did not attempt to rerun UAM model using adjusted numbers, because model inputs are not available (i.e. cannot be provided by DAQ). UAM is not a linear model, therefore, cannot be easily adjusted using end output pollutant concentrations without reconsidering all inputs that are addressed by algorithms.

5. Questionable control efficiencies used for fugitive dust from roads, also, mention of seasonal variation in fugitive dust not allowed by DAQ policy.

DEMANDS:

1. REJECT OF ANY AND ALL COMMENTS FROM KUC, ITS CONTRACTORS, GOVERNMENT OFFICIALS OR THE PUBLIC REGARDING THE ECONOMIC BENEFITS OF THE EXPANSION. The stated mission of the DAQ and its Board is health. No where in its mission does it state to proffer jobs or any other economic benefits especially above the health of the citizenry. Such comments are irrelevant and cannot be counted as “favorable” comments for this project in DAQ calculations.

2. REJECT OF ANY AND ALL COMMENTS FROM KUC, ITS CONTRACTORS, GOVERNMENT OFFICIALS OR THE PUBLIC REGARDING THE ECONOMIC CONTRIBUTIONS BY KUC SUCH DONATIONS TO HOMELESS SHELTERS, THE SOCCER TEAM, PLANTING TREES, OR ITS DAYBREAK RESIDENTIAL SALES OPERATION. . No where in its mission does THE DAQ state AS A REQUIREMENT FOR A PERMIT TO FOR A COMPANY TO PROVIDE ECONOMIC BENEFITS TO THE STATE TO OFF SET POLLUTANTS. The stated mission of the DAQ and its Board is health. No where in its mission does the DAQ state AS A REQUIREMENT FOR A PERMIT TO FOR A COMPANY TO PROVIDE TANGENTIAL BENEFITS TO OFF SET POLLUTANTS. Such comments are irrelevant and cannot be counted as “favorable” comments for this project in DAQ calculations.

3. DISMISS THE SIP MODIFICATION AND THE ITA UNTIL ALL THESE REQUIREMENTS ARE MET:

A. The EPA rules on the SIP on December 1, 201;

B. KUC conducts a valid study updated with references from 1996 to the present as well as those preceding 1996 on PM10 emissions from all sources in the pit executed by competent consultants outside of the DAQ and KUC staff;

C. Before and KUC process is advanced a table should be provided to the pubic stating the current real emissions (without offsets) from all KUC operations followed by a table of real emissions (without offsets) for the Cornerstone Project and all other new/changes to operations.

D. All pending AQ permits-rules-et al, if any, dated prior to KUC’s submission of its NOI and SIP modification be processed to completion (approval/rejection) BEFORE THESE ITEMS PROCEED

02-27-2011 Terry Marasco

The DAQ has proposed to allow a change to the SIP where Rio Tinto will be able to increase their production from 197 million tons to 260 million tons of mined material per year. According

to Rio Tinto's own information submitted to the DAQ, this will increase PM10 emissions into the airshed by 2,035 tons per year. All of the calculated total "in-pit" emissions of PM10, (emissions occurring within the mine excavation itself) presented by Rio Tinto have been reduced by a factor of 80%, based solely on the results of a "study" submitted to DAQ by Rio Tinto. This study is actually a masters degree thesis from the University of Utah, authored by a Department of Engineering graduate student Navin Tandon in 1996 – 15 years ago.

Mr. Tandon's thesis evaluates the potential of particles created within the mine pit to 'escape' into the surrounding airshed of Salt Lake County. It is critical to note that without reliance on Mr. Tandon's thesis, Rio Tinto's estimated emissions may be two to four times as much as they calculate for the SIP modification: instead of 2,035 tons, the actual emissions could be as high as 4,000, or even 8,000 tons greater.

The Utah DAQ states on their website that as part of their vision statement, they support "Excellence in Science". It is in light of this expressed statement of the DAQ that we make the following over-arching comments based on the nature of this paper. Today we will only touch on the general concerns we have with this thesis; specific technical comments regarding the thesis itself will be submitted as written comments, as they are too detailed for today's public hearing.

1. An original thesis was authored and copyrighted by Navin Tandon in 1996. Mr Tandon is noted as the sole author, however, as is customary in academia, his Supervisor and Thesis Advisor at the University of Utah, Dr. Ragula Bhaska, is listed as a co-author. It appears that Rio Tinto (then Kennecott Utah Copper) printed a new cover page for this study, which lists Dr. Bhaskar first as primary author. This type of change is misleading and disingenuous, as it plays upon the strength of Dr. Bhaskar's Ph.D. credentials, and leads the reader to believe that Dr. Bhaskar is the primary author of this paper. In actuality, when a proper literature search was performed for this paper, Dr. Bhaskar's name never appears, only the name of its only author, student Navin Tandon.
2. It appears that this paper was written at the request of Kennecott Utah Copper; we can only surmise that because the study was submitted to Kennecott, that it was fully funded by Kennecott, which calls into question a potential conflict of interest in regards to their reliance on this thesis to support their position.
3. The thesis has never been a) peer-reviewed, b) presented at a conference or published in a conference proceedings, or c) published in a peer reviewed scientific journal. If a scientific paper is referenced or relied upon for its results, or is referred to as a "study", it must have at least been subjected to one or more of these types of reviews. The fact that this paper has never been peer-reviewed discredits its use as a "study", and in fact, requires that it simply remain a masters degree thesis.
4. This paper is now 15 years old. Why has Rio Tinto presented no additional corroborating studies or other types of assessments that may support the findings of this graduate student's work that have been conducted in the engineering field in the 15 years since this thesis was written?
5. Perhaps our most important comment today is that the thesis paper lacks proper validation. The thesis author, Mr. Tandon, states clearly in his summary and conclusions that observational data must be made in order to compare predicted modeling results with actual events that occur. Specifically, he states that meteorologic and source parameters should be monitored on-site within the pit to verify the results of his thesis. He also implies that the sensitivity analyses

conducted as part of his modeling effort are computationally-limited, and suggests more improved methods of completing modeling evaluation which may not limit the modeling study presented within the paper.

6. In addition, the author has stated clearly that he has made various assumptions in completing this paper that must be clarified with actual data. The author has made assumptions of various types of values based on literature searches, and has incorporated them as fixed constants into his modeling calculations. However, the author himself cautions that these constants are actually variables which need to be accurately measured on-site in order to validate his modeling findings. A further discussion of these specific variables, such as the finite-element assumptions, mesh node placement and refinement, limitations inherent to a k-epsilon model, the meteorological assumptions, etc., will be included with our written comments.

7. The Utah DAQ should well-understand this thesis author's concern over the validation efforts that would be required to verify the precision and accuracy of the results presented in this thesis. The DAQ is an agency that conducts airshed modeling, yet also conducts extensive and on-going monitoring of the ambient air. Oftentimes, the DAQ is required to study why the monitoring data do not agree with modeling predictions, and in fact, are oftentimes very disparate from each other. This has most recently been the case in development of the current PM2.5 SIP, where DAQ has stated on record publicly that they were not able to get the selected model to simulate or predict past, well-documented days of non-compliance that have occurred in the past, when all meteorological variables and air monitoring data were well-known.

8. CLOSING

Rio Tinto's entire technical support documentation submitted to the DAQ in support of the proposed SIP modification is based primarily upon this single thesis, which has numerous question marks raised by its very own author. In fact, this thesis is not comprehensive enough to be called a "study"; rather, it only represents a good evaluation of the tools that may be used to accomplish such a study, with limitations as well as specific areas of further required research specifically pointed out by the author.

Why, then, is DAQ prepared to accept a single study, never peer-reviewed, or published, and whose author cautions against its use without verification of its claims? Based upon this document, Rio Tinto is proposing to eliminate on paper, with the stroke of a pen, 80% of all PM10 emissions created within the pit. However, this may actually be thousands of tons of very-real particulate air pollution that will enter the air that we breathe.

The Salt Lake County Airshed already struggles with non-attainment with the PM10 standard, despite what DAQ may claim to the contrary. This is the very reason that we are still classified as "non-attainment" by the EPA, who has already stated their intention in the Federal Register to disapprove the current SIP because it doesn't accurately present a plan that will, at the end of the day, reduce and control PM10 emissions in the County, and provide us a way back to PM10 attainment. By allowing this single, non-published thesis to be used as a basis for large-scale emission reduction by the County's largest source of air pollution represents poor application of the scientific method by the DAQ, and appears to violate that very statement regarding the support of "scientific excellence" that the DAQ makes on their website.

I am adamantly opposed to the Rio Tinto/Kennecott expansion. Utahns should not be forced to breathe dirty air. The air is bad enough as it is and should not be made worse with this expansion.

The mission of the DAQ and its Board is to protect the health of Utah's citizenry. The Rio Tinto/Kennecott expansion adds significantly to the health risks and costs of Wasatch Front communities.

I completely oppose the Cornerstone expansion and wish that my comment be entered into both the SIP modification and the ITA regarding the Cornerstone expansion.

02-28-2011 Terry Marasco

Another reason to delay the SIP mod and Cornerstone expansion processing:

In an email dated Feb 25, 2011 from a Rio Tinto staff:

1. "The Molybdenum Autoclave Process Plant (MAP) is not considered a Cornerstone Project. In any case, projected annual emissions from MAP account for less than 0.5% of total KUC current emissions. " In fact the moly plant is part of Cornerstone as the Cornerstone is to process the moly on site, which was previously outsourced. Cornerstone will mine copper and Molybdenum. This operation will add to the air and water pollutant burden. The slurry from moly processing will be disposed of here, not somewhere outside the state. It is unacceptable that the DAQ and the DEQ would not consider this a part of the project.

2. "are currently in the study phase for some projects and permit applications have not been submitted, technically reviewed or finalized by the agency. Specific numbers for each project will be available at the time of regulatory submittal and technical review."

This second statement alludes to the fact that many more pollutants are likely to be emitted.

This process must be stopped until the public knows the entire pollutant burden for RT/K operations. In fact if the DAQ does not know the future pollution burden of the entire project it cannot make incremental health affecting decisions in an air shed that is already overburdened and out of attainment.

Furthermore, since both the water and air pollutants from the full scope of the project are large, it is best for the full transparency of this process that all permits be stopped until the complete burden of pollutants is explained to the public.

02-24-2011 Kirsti Ringger

I am very upset about the proposed expansion of Kennecott and vigorously oppose it. Air quality in Salt Lake and Utah County is atrocious. We have much more to lose than to gain.

03-01-2011 Chris Karcher

Please OPPOSE changing the SIP and do NOT allow the Rio Tinto expansion.

We have some of the worst air pollution in the country. 1,000 to 2,000 people DIE every year because of it.

The EPA's' limits were violated 51 days.

Rio Tinto made \$14.3 BILLION in profit. Not sales, PROFIT!!! They should be investing in technology to pollute less. Do not allow the Rio Tinto expansion.

Stay in integrity, please. Please do the right thing.

03-01-2011 Gary Kunkel

Hello! As a physician I find it incredible that we are even considering modifying our SIP to allow Rio Tinto to expand it's mining operations at Kennecott. We ought to be doing the easy things to improve our air quality, and allowing this expansion seems like an easy way to worsen our air quality. Please look out for our health, not Rio Tinto's.

03-02-2011 Richard Spotts

Please require or strongly encourage KUC to withdraw the request to modify the SIP and withdraw their NOI for the KUC Cornerstone expansion until:

The Current SIP is approved (decision by the Region 8 EPA by December 1, 2011);
A validated, peer reviewed study based on real-time field data is conducted by an independent party(s) to determine the amount, if any, of PM10 and PM2.5 remains in the open-pit. The student thesis (Tandon, 1996 "Airflow Patterns...") is unacceptable;

The real emissions of Cornerstone (without offsets on non-required reductions volunteered by KUC) are stated and stated to the public, and the emissions of all permits not currently filed with the UT DAQ but related to this project are stated in totality;

The UT DAQ provides a list of changes between revisions (commonly provided) so that commenter can evaluate changes in comparison to the NOI, which has remained as yet, unchanged from its original submission. (The TSD has been revised twice since its original submittal in August of 2010. The NOI, however, was submitted in August of 2010, but has not been revised in parallel. The nature of the revisions between versions of the TSD involves emission changes, but have not been documented by UT DAQ in a way that these can be evaluated by the public);

The UT DAQ provides access to all its analyses of both KUC requests;

The UT DAQ publishes a statement of the current inventory of criteria pollutants, adds the actual KUC increases, and then states the additional pollutants expected by growth using the Governor's projections – 3 year, 5 year, and 5 year increments until 2050.

I believe that the preceding six requests or conditions should be met before the UT DAQ and public will have sufficient information to proceed to adequately consider the merits of the proposals. Stated another way, I believe that the absence of one or more of these six components would undermine the integrity and ripeness of the review process.

In addition, I believe that all comments regarding alleged or potential economic benefits of the proposals be stricken from the record unless there is a specifically defined, legal basis for including them, along with a detailed explanation for how any such comments were used in any UT DAQ decisionmaking. I believe that the UT DAQ's mission is to protect air quality and public health, and that much of its authority is delegated to it by EPA under the federal Clean Air Act so long as that authority is properly exercised.

I am a frequent visitor to the Wasatch Front, and my daughter is a student at U of U. I am well-aware of the already unhealthy air quality along the Wasatch Front much of the year, and I fear

for the long-term health of my daughter, myself, and others living in this region. I also attended the Washington County "Clean Air Summit" in St. George several months ago, and learned about the serious dangers of small particulate pollution (PM10 and PM2.5), and how those particles may become lodged in the lungs and remain as persistent irritants.

I attribute much of the chronic and perhaps worsening air pollution problems along the Wasatch Front and elsewhere in our state to the UT Governor, UT Legislature, and UT DAQ's past and continuing collective inability to adequately reduce various sources of air pollution. I realize the practical political context whereby most Utah elected officials place industrial and fossil fuel development well above any concerns about deleterious effects on public health or environmental quality, and that adverse health and environmental costs tend to be ignored or undervalued in their decisionmaking processes. As such, I suspect that UT DAQ officials may risk their jobs by doing their jobs, especially if that upsets any powerful business interest and/or generous campaign contributors. Nevertheless, the bottom line is that: air quality along the Wasatch Front remains demonstrably unhealthy; the UT DAQ has front-line authority under delegated EPA and other air quality laws; the UT DAQ's track record does not instill confidence that this inadequate and arguably illegal status quo may change; and approval of the proposals referenced in these comments could make that status quo situation much worse. Indeed, instead of moving forward, such approvals could take us much further backward.

My comments are intended to be constructive in terms of helping the UT DAQ to do its job, follow the law and science, and serve the public interest.

In short, I think that the status quo is broken, and that the UT DAQ continuing past practices and decisionmaking processes in evaluating these referenced proposals likely won't change that. Therefore, please find the courage to do what's right, starting with the six above components.