STATE OF NEW MEXICO
BEFORE THE SECRETARY OF ENVIRONMENT

IN THE MATTER OF:	)	
THE APPLICATION OF	)	**Docket No. GWB-18-06 (P)**
NEW MEXICO COPPER CORPORATION	)	
FOR A GROUNDWATER DISCHARGE	)	
PERMIT FOR THE COPPER FLAT MINE	)	
(DP-1840)	)	

ELEPHANT BUTTE IRRIGATION DISTRICT'S
STATEMENT OF INTENT TO PRESENT TECHNICAL EVIDENCE

Pursuant to the Environment Department Permitting Procedures found at 20.1.4.300B NMAC, the Elephant Butte Irrigation District ("EBID") hereby submits its Statement of Intent to Present Technical Evidence at the public hearing in this matter, scheduled for September 24 through September 28, 2018, in Truth or Consequences, New Mexico. In accordance with 20.1.4.300B NMAC, EBID states as follows:

1. The name of the entity filing this Statement is the Elephant Butte Irrigation District.

2. EBID opposes the issuance of the proposed Discharge Permit subject to the conditions stated therein.

3. The name, address, affiliation, and educational and work backgrounds of each witness are as follows:

A. Dr. James Phillip King
Principal Engineer, King Engineering & Associates Inc.
Professor and Associate Department Head, Civil Engineering, New Mexico State University
c/o Barncastle Law Firm
PO Box 1556
Las Cruces, NM 88004

Dr. King is a Professor and Associate Department Head in the Civil Engineering Department at New Mexico State University (NMSU), where he has been on the faculty since 1990. Dr. King is active in teaching, research, outreach, and administration. He specializes in water resources, agriculture, and STEM education. Dr. King is also Principal Engineer for King Engineering & Associates, a small New Mexico–based consulting firm. Dr. King has worked with government agencies, irrigation districts, municipalities, Native American tribes, and environmental groups to develop new and innovative approaches to water management and education. In that capacity he has worked with Elephant Butte Irrigation District as a consultant since 1995. Finally, he served as a Peace Corps volunteer in Malawi, Africa, and as a Fellow of the American Association for the Advancement of Science at the National Science Foundation.

In his research at NMSU, Dr. King has carried out several projects relating to the surface water and groundwater of the Rio Grande Project (RGP) area in New Mexico, including the interaction between the two and natural and anthropogenic depletion of water along the Rio Grande. As a consultant for EBID, he has been and continues to be technical lead on several investigations and policy development efforts to address the interaction of surface water and groundwater in the Rincon and Mesilla valleys. Dr. King has a Ph.D. and MS in Agricultural Engineering from Colorado State University, a B.S. in Civil Engineering from Berkeley, and an M.B.A. from NMSU. He is a registered Professional Engineer in New Mexico.

Dr. King's recent work for EBID that are of particular relevance here are:

The 2008 Operating Agreement (OA) and Operating Manual (OM): This agreement was the foundation for settling legal disputes among EBID, the El Paso Water Improvement District No. 1 (EPCWID), and the United States over the allocation of RGP surface water, and the effect of groundwater pumping on the availability of that surface water.

Policy 2013-ENG14, Use of Project Water for Native Vegetation Habitat Restoration Sites in Elephant Butte Irrigation District: This policy created a means by which entities such as the US Section of the International Boundary and Water Commission (IBWC) can offset the hydrologic depletions resulting from habitat restoration efforts on the water supply of the Rio Grande Project, thereby keeping EBID, EPCWID, and Mexico whole.

Policy 2015-OP13, Depletion Reduction and Offset Program: This policy provides a means for Municipal and Industrial (M&I) users of groundwater that is hydrologically connected to the surface water supply can offset their impact on the surface water supply, of the Rio Grande Project, keeping EBID, EPCWID, and Mexico whole.

In each of these efforts, a clear understanding of RGP hydrology, management, and accounting is necessary to maintain Project functions, efficiency, and equity. Maintenance of RGP functions, efficiency, and equity are essential to the legal balance in place in the Lower Rio Grande. As discussed below, the proposed Copper Mine at issue here has placed that legal balance, and thus the welfare of Southern New Mexico, in jeopardy.

B. Mr. Erek H. Fuchs, M.S.
Ground Water Resource Manager
Elephant Butte Irrigation District
530 S. Melendres St.
Las Cruces, NM 88005

Mr. Erek H. Fuchs, M.S., is currently the Groundwater Resources Manager for the Elephant Butte Irrigation District (EBID) in Las Cruces. Mr. Fuchs received his B.S. in Range and Watershed Science and M.S. in Range Hydrology from NMSU in Las Cruces in 1997. He thereafter worked in northeastern Kansas at Kansas State University where he studied rangeland water quality issues before returning to his home state and pursuing consulting endeavors in water resources engineering, soil physics, irrigated agriculture, water rights and water policy.

Mr. Fuchs is also a Ph.D Candidate in NMSU's Water Science and Management program with a concentration in groundwater hydrology. He expects to complete his doctoral degree by December 2018.

Prior to joining EBID, he spent twelve consecutive years as a water resource and water rights manager for the New Mexico Office of the State Engineer in Las Cruces, concerned primarily with the Lower Rio Grande basin in Doña Ana and Sierra Counties and has dealt with many complex water rights issues involving irrigation, municipal and industrial providers, mutual domestic and private water suppliers, environmental interests, and state and federal agencies.

C. Mr. Zachary Libbin
District Engineer
Elephant Butte Irrigation District
530 S. Melendres St.
Las Cruces, NM 88005

Zachary Libbin is currently the District Engineer for the Elephant Butte Irrigation District (EBID) based in Las Cruces, NM. Mr. Libbin earned a B.S. and an M.S. in Civil Engineering from New Mexico State University. His education focused on water resources engineering. He is experienced in the operation and maintenance of flood control dams including compliance with Office of the State Engineer – Dam Safety Bureau (OSE-DSB) regulations and non-statutory guidance.

Mr. Libbin's current work as the District Engineer for the EBID involves managing the District's Engineering Department, design of irrigation system improvements and construction quality assurance, and managing surface water right land records and a wide variety of land issues. He prepares and supervises all of the District's in-house design of irrigation system improvements and hydraulic structures including measurement, delivery, automation, and

management. To assist with the District's responsibilities related to its 25 flood control dams that exist up and down both the east and west sides of the Rio Grande River Rincon and Mesilla Valleys, Mr. Libbin supervises annual inspections and prioritizes the dam maintenance to be accomplished by EBID each year. He has gained an understanding of the operations and maintenance of small to large flood control dams through training and experience since he was hired by EBID in 2010. He has been supervising the preparation of dam breach analysis for each of EBID's dams including watershed hydrology and two-dimensional flood routing hydraulics. Mr. Libbin is trained in watershed hydrology, hydraulic modeling, and has experience in erosion control projects and design of drainage improvements.

Mr. Libbin is a registered Professional Engineer in New Mexico. He is the chairman of the New Mexico Watershed and Dam Owners Coalition, co-chair of the Environmental Water Resources Institute of the New Mexico Chapter of American Society of Civil Engineers, and Chairman of the South-Central New Mexico Stormwater Management Coalition.

D. Dr. KC Carroll
Principal Engineer, Kenneth C. Carroll & Associates
Associate Professor, College of Agriculture, Consumer and Environmental Sciences, New Mexico State University
c/o Barncastle Law Firm
PO Box 1556
Las Cruces, NM 88004

Dr. KC Carroll is an Associate Professor at New Mexico State University, College of Agricultural, Consumer and Environmental Sciences. He is also Principal Scientist for Kenneth C. Carroll & Associates, a small New Mexico–based consulting firm. His background and research experience includes geochemical hydrogeology. He obtained a Ph.D. in Hydrology & Water Resources at the University of Arizona with a focus in contaminant transport and groundwater remediation, and he has a Master's in Environmental Geochemistry from Ohio

University focusing on acid rock drainage and metal transport and fate associated with coal mining. Dr. Carroll also received his undergraduate degree from Ohio University, in Geological Sciences. His experience prior to joining NMSU in 2013 included project hydrogeologist and geochemist, from 2003 – 2007 focusing on metal mine geochemistry and dewatering for consulting firms including Water Management Consultants and Hydro Geo Chem, Inc., from 2007 – 2010 he completed a postdoctoral appointment where he investigated subsurface heterogeneity impacts on groundwater contamination remediation performance (including Monument Valley uranium mine), and from 2010 – 2013 he was a staff research scientist at the Department of Energy's Pacific Northwest National Laboratory (including remediation of subsurface metals/radioactive/organic contaminants).

Dr. Carroll has experience in mine site hydrogeology, geochemistry, acid rock drainage (ARD) prediction, vadose zone hydrology, water supply, dewatering, solid and hazardous waste management, and remedial design. His prior metal mine consulting experience included implementation of groundwater flow, transport, and geochemical models for analysis and prediction of dewatering/depressurization, remediation of groundwater contamination, environmental impact evaluation, and evaluation of mine closure alternatives. Additional experience included design and execution of field activities including collection, management and interpretation of chemical and hydrogeologic data, and he completed characterization investigations of mining wastes and pit lakes. Most of the mines were located in Arizona, Nevada, and Utah, whereas, his international metal mining experience has included projects in Australia, Argentina, Chile, Indonesia, Iran, Mexico, and the United States.

In 2015, he received a patent for the "environmentally-friendly hydraulic fracturing for geothermal energy" research and he coauthored the hydrogeology textbook "Flow Through

Heterogeneous Geologic Media" with Cambridge University Press. He has had >10 grant proposals awarded as Principle Investigator (PI) for >$2 million while at NMSU (also ~$1 million PI & ~$1 million CoPI prior to NMSU position). Dr. Carroll's research group has published 4-7 peer-reviewed journal articles per year since joining NMSU, and in total he has authored >40 peer-reviewed journal papers, 7 conference proceedings papers, numerous abstracts and technical reports, and the above noted text book. He was awarded Outstanding Reviewer Status for Journal of Contaminant Hydrology, and he is also Associate Editor for the journal. Dr. Carroll was elected Chair for Groundwater Technical Committee of American Geophysical Union (AGU) Hydrology Section (2014-2017). He also recently won the Patricia Christmore Faculty Teaching Award (2016), and he was awarded Early Career Award for the 17th Annual University Research Council for Exceptional Achievements in Creative Scholarly Activity at NMSU (2017).

E. EBID also expects to call additional witnesses in rebuttal and to answer questions from the public.

4. The direct testimony of each witness is estimated to be for the following lengths of time:

Dr. Phil King: Three hours

Erek Fuchs: Two hours

Zack Libbin: One hour

Dr. KC Carroll: One half day (four hours)

5. A list of exhibits the EBID anticipates offering into evidence is as follows:

Exhibit 1. Curriculum Vitae of Dr. Phil King

Exhibit 2. Curriculum Vitae of Erek Fuchs

Exhibit 3. Resume of Zachary Libbin

Exhibit 4. Curriculum Vitae of Dr. KC Carroll
Exhibit 5. DP-1840: Reid, B., 2018. Draft Discharge Permit, DP-1840, Copper Flat Mine, Letter to Jeff Smith of New Mexico Copper Corp., from NMED Ground Water Quality Bureau. Feb. 2, 2018, as updated Aug. 10, 2018.

Exhibit 6. Rio Grande Project Operating Agreement, Feb. 14, 2008.

Exhibit 7. Water Supply Agreement Between the Jicarilla Apache Nation and New Mexico Copper Corporation, Inc., May 12, 2015.

Exhibit 8. Letter of Understanding Between the New Mexico Environment Department and the Office of the State Engineer (March 30, 1999).

Exhibit 9. Lower Rio Grande Water Rights Adjudication Subfile Orders; Third Judicial District Court, Doña Ana County, State of NM in *New Mexico ex rel. Office of the State Engineer v. Elephant Butte Irrigation District, et al.*, Case No.s 307-OA-9703126, 307-OA-9702236, and 307-OA-9702237 (February 28, 2018).

Exhibit 10. Mesilla Valley Administrative Area Guidelines for Review of Water Right Applications (January 5, 1999).

Exhibit 11. Rules and Regulations Governing Dam Design, Construction And Dam Safety, NMAC Title 19 Natural Resources And Wildlife, Chapter 25 Administration And Use Of Water - General Provisions, Part 12 Dam Design, Construction And Dam Safety

Exhibit 12. Appendix D Tailings Impoundment Conceptual Design Report (Golder, 2010) Copper Flat Project, Sierra County, New Mexico, Golder Associates Inc., Dated November 20105, Bates Index #: 01633-01661)

Exhibit 13. Appendix A Feasibility Level Design, 30,000 TPD Tailings Storage Facility And Tailings Distribution and Water Reclaim Systems, Copper Flat Project, Sierra County, New Mexico, Golder Associates Inc., Dated November 2015, Revised, June 2016, Revised, November 2016 (Bates Index #: 16058-16749)

Exhibit 14. Appendix B Impoundment Design Report, Copper Flat Project, M3 Engineering & Technology Corporation, Prepared For: THEMAC Resources Group Ltd. Dated December 2015, (Bates Index # 16750-16777)

Exhibit 15. Appendix D Site Diversion Analysis, Copper Flat Project, M3 Engineering & Technology Corporation, Prepared For: THEMAC Resources

Group Ltd. Dated December 2015, Revised, June 2016 (Bates Index # 16810-17048)

Exhibit 16. EPA, 2016. One Year After the Gold King Mine Incident A Retrospective of EPA's Efforts To Restore and Protect Impacted Communities, 23 pg.

Exhibit 17. NMRT, 2012. Final Groundwater Restoration Plan for the Chino, Cobre, and Tyrone Mine Facilities. New Mexico Office of Natural Resources Trustee, 90 pg. (https://onrt.env.nm.gov/wpcontent/uploads/Final.Groundwater.Restoration.Plan_.Chino_.Cobre_.Tyrone_1.4.2012.pdf)

Exhibit 18. JSAI, 2013. Status Report for Stage 1 Abatement at the Copper Flat Mine Site Near Hillsboro, New Mexico. By John Shomaker & Associates, Inc. for New Mexico Copper Corp. (Bates Index #: 07441-07581)

Exhibit 19. SRK, 2013. Geochemical Characterization Report for the Copper Flat Project, New Mexico, Volume 1 –Text. By SRK Consulting for THEMAC Resources Group Ltd. (Bates Index #: 05529-07439)

Exhibit 20. SRK, 2018. Predictive Geochemical Modeling of Pit Lake Water Quality at the Copper Flat Project, New Mexico. By SRK Consulting for THEMAC Resources Group Ltd. (Bates Index #: 18383-18496)

Exhibit 21. JSAI, 2018. Revision 1.0: Probable Hydrologic Consequences of the Copper Flat Project, Sierra County, New Mexico. By John Shomaker & Associates, Inc. for New Mexico Copper Corp. (Bates Index #: 18302-18382)

EBID may introduce additional exhibits as evidence in rebuttal. It may also use additional demonstrative exhibits at the hearing, such as maps, charts, graphs, and "power-point" slides without introducing them into evidence.

6. A summary of the anticipated direct testimony of each witness follows:

A. Dr. Phil King will be qualified as an expert in riparian and irrigation system hydrology, water resources management, Rio Grande Project organization, operations, and accounting.

Dr. King will testify generally on issues related to the RGP operations and how the proposed copper mine will adversely affect those operations. In doing so, Dr. King will first describe the project operations and allocation among project beneficiaries, then he will discuss the following:

The geology of the area where the proposed mining activity is to occur is quite complex and not well characterized. The fact that withdrawal of groundwater for mining and processing will affect the Rio Grande Project is clear. What is unclear is the timing and magnitude of those impacts. Another complicating factor is that depletion or RGP water from Caballo Reservoir will have a different effect on the Project beneficiaries (EBID, EPCWID, and Mexico) than depletion of Project water from the Rio Grande below Caballo Dam.

The New Mexico Copper Corporation's (NMCC) consultant, John Shomaker & Associates, Inc. (JSAI) produced an analysis based on available geohydrological data for the area quantifies the magnitude and timing of projected impacts on the Rio Grande, both above and below Caballo Dam. While one could quibble about the magnitude and timing, it is clear that the JSAI shows significant depletions of RGP water that will occur above Caballo Dam, primarily from Caballo Reservoir, and from the Rio Grande downstream of Caballo Dam. These impacts will begin affecting the river while the mine is in operation and continue for several decades after the mine has been closed.

The JSAI report also refers to a plan to offset the adverse impacts of the mining activity on the Rio Grande System using water leased by the Jicarilla Apache Nation. The proposed replacement scheme, as it stands, is completely inadequate, therefore, it is reasonable to assume that the impacts of the mining activity will not be offset.

The proposed mining activity will induce depletions upstream of Caballo Dam, primarily by intercepting groundwater flow that would have otherwise been tributary to the Rio Grande at Caballo reservoir. This process, termed "capture," is well-established in both hydrologic and legal circles. The captured water will not significantly affect New Mexico's delivery to Texas under the Rio Grande Compact, as that delivery point is upstream of Caballo at Elephant Butte Dam. The effect of the depletions on Caballo Reservoir will, through the allocation procedure, be borne by all three project beneficiaries.

In years when the allocation to Mexico will be reduced due to extraordinary drought, which happened in 2018, Mexico's allocation will be reduced by approximately 11 percent, depending on where on the D1 equation the allocation lies, which will be explained more fully at the merits hearing during a discussion of how the RGP operates. One of the key objectives in the development of the Rio Grande Project was to ensure delivery to Mexico pursuant to the 1906 Convention. Permitting groundwater withdrawals that will result in depletions to Mexico's supply flies in the face of both the RGP and the country of Mexico. While Mexico has not been closely involved in current litigation over the water supply of the Rio Grande Project, it is because in the planning and operation of the Rio Grande Project, Mexico's water always has the highest importance due to its foundation in an international treaty. Mexico is rightfully protective of its rights under the 1906 convention. There is a significant likelihood of an international complaint if the mining operation proceeds.

The two US districts will also share in the adverse effects of the mining operation hitting Caballo Reservoir. In the case of EPCWID, with less Caballo release (R in the D2 equation—all of which will be further explained at the merits hearing), there will be less estimated D2 diversion, and EPCWID's allocation of 43 percent of the US districts' share will be reduced

accordingly. EBID's allocation will be reduced because with less Caballo release available, there will be less Project diversion available, and EBID's share will likewise be reduced.

The 2008 Operating Agreement protects both Mexico and EPCWID from adverse effects of depletion of RGP surface water supply due to groundwater withdrawals in New Mexico, but only below Caballo Dam. Current US Supreme Court litigation initiated by Texas against New Mexico for past depletions of Project water, before the 2008 Operating Agreement, has focused of effects below Caballo Dam. Should the State of New Mexico permit a new depletion that will affect EPCWID by depleting Project water upstream of Caballo Reservoir, additional complaints in the Supreme Court litigation are likely.

The current understanding of the geohydrology of the site indicates that in addition to depleting the water supply of Caballo Reservoir, the proposed mining action will deplete the flow of water in the Rio Grande downstream of Caballo Dam by capturing flows that would otherwise be tributary to the river. This fact is reinforced by the JSAI report prepared for NMCC. While depletions of water from Caballo Reservoir affect all Project beneficiaries, Project Accounting under the 2008 Operating Agreement places the burden of increased hydrologic depletion affecting the river below Caballo Dam on EBID. Impacts on the river below Caballo Dam do not affect the water available for release from Caballo Reservoir (impacts upstream of the dam do that), and the release from Caballo Reservoir is the driver for allocation to EPCWID and Mexico. EBID, then takes the full hit in its allocation of Project surface water for the capture and depletion of flows that are tributary to the river below the dam.

The proposed mining activity will deplete the surface water of the Rio Grande system, primarily through capture of tributary groundwater flows. These depletions will affect the water stored in Caballo reservoir and the flow in the Rio Grande downstream of Caballo Dam. This

conclusion does not appear to be disputed. The hydrologic impacts of the mining operation will affect storage in Caballo Reservoir. The allocations of Project water to EBID, EPCWID, and Mexico will be reduced by such depletions. The hydrologic impacts of the mining operation will also affect the Rio Grande below Caballo Dam, which will primarily reduce the allocation of Project water to EBID. No scheme for offsetting these impacts or reconciling them with Rio Grande Project accounting has been contemplated.

In its successful motion to intervene in the US Supreme Court action on the side of plaintiff Texas against defendant New Mexico, the United States stated that: "New Mexico has allowed the diversion of surface water and pumping of groundwater that is hydrologically connected to the Rio Grande downstream of Elephant Butte Reservoir by water users who either do not have contracts with the Secretary of the Interior or are using water in excess of contractual amounts." Permitting the mining operation with no effective offset plan amounts to more of the exact behavior by the New Mexico agencies that led to the current Supreme Court complaint by Texas and the United States.

The JSAI report states that "NMCC has committed to offset the effects of reduced discharge to the Rio Grande system during and after the operation of the Copper Flat Mine to ensure no net reduction in flows of the Rio Grande, in a manner approved by the NMOSE." The report further states NMCC's intent to use water leased from the Jicarilla Apache Nation to offset its effects. While NMCC may hope to "check the box" on offsets, they have no accounting plan, offset schedule, or reliable mechanism for ensuring the offsets after the mine is closed and the mining company has moved on. The lease agreement, effective May 15, 2015, does not constitute anything like an offset plan for impacts on the RGP, and it does not demonstrate an

understanding of the hydrology and accounting of the Rio Grande Compact or the Rio Grande Project.

The Water Supply Agreement between the Jicarilla Apache Nation and New Mexico Copper Corporation, Inc. has as signatories representatives of NMCC, the Jicarilla Apache Nation, and the US Bureau of Reclamation. It specifies in general terms the agreement to allow NMCC to lease up to 3,000 acre-feet per year (AF/Y) of the Nation's 6,500 AF/Y of San Juan-Chama Project water in the Rio Grande Basin, which they received in their water rights settlement with the United States. The term of the lease is for 15 years from the commencement of mining. The initial price of water is $125/acre-foot, to be adjusted annually for inflation, with an annual payment of $50,000 preceding the actual use of the water by NMCC. The agreement also contains provisions for early termination by NMMC or the Nation, and contingencies on responsibilities if there is a shortage San Juan-Chama water. Should the Nation get a better offer for its water, NMMC has right of first refusal.

This is not an offset plan. The water in question is imported water that must be routed through Rio Chama, Rio Grande, and several reservoirs in compliance with the Rio Grande Compact, an interstate agreement that is "the Law of the River." No proposal for doing so has been presented to the Rio Grande Compact Commission, which oversees the administration of the Compact. Consensus among the three Compact states would be required, and the Texas commissioner has already expressed grave misgivings about the mining operation, for both public safety reasons and impacts on the Rio Grande Project. Furthermore, no plan for offsetting impacts from depletions to Project water upstream of Caballo Dam, which would affect all Project beneficiaries, or downstream of Elephant Butte Dam, which would affect primarily EBID, has been proposed.

No attempt has been made to provide a scheme for Rio Grande Compact accounting for the leased water from the Azotea Tunnel in northern New Mexico to the Rio Grande Project. Such a scheme will be complex, and requires the consensus of the Rio Grande Compact Commissioners from Colorado, New Mexico, and Texas. These three Compact parties are currently embroiled in interstate litigation in the US Supreme Court over the effects of depletion of Rio Grande Project water by groundwater pumping in New Mexico. The NMCC is proposing more depletions of Rio Grande Project Water by groundwater pumping in New Mexico.

Both the Rio Grande Compact and Rio Grande Project issues are very complex and need careful analysis, planning, and negotiation, yet nothing has been done to resolve these issues. The need for an offset plan that affects three states and two countries has been completely trivialized, and a time of reckoning will come at great cost to the State of New Mexico if this action proceeds.

The reliability of the leased water is quite low. Shortage and other obligations can, and likely will cause reduction in the amount of water available through the San Juan-Chama Project, and such shortages will reduce the water available to the Jicarilla Apache Nation. The agreement provides many opportunities for termination before the term is up. Jicarilla Apache Nation or NMCC can, with notice, terminate the agreement early.

The starting price of $125/AF is extremely low, particularly considering the chronic drought and declining supplies in the New Mexico. Should the Jicarilla Apache Nation get a better offer, which is extremely likely, they could terminate NMCC's lease with notice, subject to right of first refusal by NMCC. Faced with a water bill that could increase by a factor of five or ten, NMMC would be unlikely to exercise its right.

Even if the Rio Grande Compact and Rio Grande Project accounting issues could be addressed (and there is no move to do so), San Juan-Chama water shortage due to either drought or a termination of the lease with Jicarilla Apache Nation would prevent NMCC from fulfilling their offset obligations. There is no contingency plan, no "Plan B."

Perhaps the clearest indication of the lack of good faith in terms of offsets by any of the parties involved is the term of the lease with the Jicarilla Apache Nation. It is 15 years. After 15 years, the mining activity will have ceased, the mining company will have moved on, and the depletions to the Rio Grande Project will continue for decades, peaking after 40 years (according to the JSAI report), 25 years after the lease expires and everyone responsible is long gone.

Dr. King will conclude that the New Mexico Copper Corporation has entered into a lease agreement with the Jicarilla Apache Nation with the stated purpose of providing water to offset impacts of the proposed mining activity, however, the lease agreement is entirely inadequate to offset the impacts of the proposed mining on the Rio Grande System, particularly the Rio Grande Project. The NMCC plan offers no specifics on how the need for offsets will be determined, either in terms of timing or quantity. The lease agreement with the Jicarilla Apache Nation is entirely inadequate to provide offsets for mining-induced depletions to the Rio Grande Project. In addition to lacking any semblance of accounting or management procedures for the Rio Grande Compact or Project, the lease provides easy terms of termination for the Nation and for NMCC. Furthermore, the term of the lease is 15 years, whereas the effects of the groundwater depletions will affect the Rio Grande for decades. There is no alternative source or method for offsetting impacts on the Rio Grande Project in the nearly certain scenario that Jicarilla Apache Nation water becomes unavailable for the purpose. In summary, there are complex and highly controversial effects to the Rio Grande system that are ignored in NMCC's application material,

the hydrologic and legal consequences are profound, and the draft permit creates a hazard to public health and undue risk to property in violation of NMAC 20.6.7.10(J).

Dr. King will also testify within his areas of expertise about matters raised in EBID's comments provided to NMED on May 3, 2018. After the conclusion of the EBID direct testimony, Dr. King will be available to answer questions.

B. Mr. Erek Fuchs will be qualified as an expert in water rights administration in New Mexico, particularly as it applies to hydrologic considerations and related surface-groundwater interactions in the Lower Rio Grande stream system.

His testimony will begin with an overview of NM Office of the State Engineer (OSE) regulations and administrative guidelines as they apply to ground and surface water with attention to the fully appropriated condition of the Lower Rio Grande stream system.

Mr. Fuchs will describe the present status of the proposed Copper Flat Mine's water rights, the necessity of valid water rights in sufficient quantities to meet the total proposed demand for water by the proposed Copper Flat Mine, and the need for the proposed NMED discharge permit DP-1840 to be conditioned to require documentation of compliance with the Water Rights Division of the OSE to reflect a permit in an amount of water sufficient to serve the total demand for water for the proposed Copper Flat Mine prior to construction of any portion of the mine. Mr. Fuchs will go on to describe the need for the proposed Copper Flat Mine to offset, with valid rights to water, all hydrologic impacts of proposed groundwater pumping on neighboring surface water sources and all other existing rights to water in the area tantamount to initiating the proposed groundwater pumping, and the need to maintain such water rights and associated satisfaction of all offsets of hydrologic impacts of the proposed groundwater pumping for as long as necessary after mine closure to prevent any impairment of existing, senior rights to

water. He will explain how modeling of anticipated hydrologic impacts of the proposed groundwater pumping must be made to be appropriately conservative, given uncertainties of the area hydrogeology and the potential for impacts to be greater than anticipated. Finally, Mr. Fuchs will provide a summary of the need for the NMED to coordinate discharge permitting activities with the water appropriation, water rights and associated permitting authorities of the OSE Water Rights Division, as well as the Dam Safety Bureau of the OSE.

Mr. Fuchs's testimony will support his conclusion that the proposed Copper Flat Mine does not own or have access to water rights in amounts anywhere close to the volumes proposed by the New Mexico Copper Corporation (NMCC) to service the mine, and that it is questionable that the amounts of water that NMCC has proposed in the context of water rights is sufficient to begin with. Considerably more water on an annual basis, particularly at peak demand times, may be required than is proposed because the volume of dewatering ultimately found necessary to contain contaminants from the proposed tailings storage facility (notwithstanding the proposed storage facility liner) and pit lake, etc., to be evaporated and replaced with production freshwater may be greater than expected. All water evaporated for the duration of the proposed mine is water appropriated and therefore must be accounted for in the context of valid rights to water, which NMCC is grossly lacking. Mr. Fuchs will further conclude that it is uncertain when, if ever, NMCC may secure rights to water to operate the mine as proposed. Even when/if valid rights to water can be secured, the exercise of such rights must be without impairment to other, existing rights, and therefore fully offset in terms of all hydrologic effects. This is because the Lower Rio Grande stream system, which the Central Palomas sub-basin is directly tributary to and inclusive of, is fully-appropriated.

Valid rights to water in sufficient quantities, and that can be exercised without impairment to other, existing rights to water in this instance is a critical consideration for at least three reasons. First, sufficient rights to water are absolutely essential in order for the proposed discharge permit to have any utility whatsoever (production of process wastewater to begin with), yet the proposed discharge permit does not acknowledge, let alone discuss this consideration anywhere. As such, the draft permit creates a hazard to public health and undue risk to property in violation of NMAC 20.6.7.10(J). This oversight might be less egregious if this were a renewal of an existing discharge permit (sufficient, valid rights to water might be presupposed to exist), but proposed DP-1840 is altogether new. More recent recognition by NMED of OSE Dam Safety Bureau permitting as a condition to the proposed discharge permit is an appropriate and a good start but permitting by and through the OSE Water Rights Division and associated due process is also required. Second, the NMED and OSE are expected to coordinate permitting activities where and when necessary, recognizing the inherent relationship between water quantity and water quality as memorialized by Letter of Understanding between the NMED and OSE as of late 1999. In this case, potential water quality considerations are necessarily dependent on water quantity (sufficient, valid rights to appropriate water to begin with), therefore OSE Water Rights Division permitting logically should be pursued with due process and to finality before NMED oversight of wastewater discharge commences. Third, the predicted surface water depletion rates used in the groundwater model developed by John Shomaker and Associates as part of the underlying effort to support proposed NMED DP-1840 prove that the NMED is aware that impairment to the Rio Grande Project and associated, existing, senior rights to water is expected as a result of NMCC's proposed activities, yet NMED remains silent on this

critical issue, either unaware or in spite of the 1999 Letter of Understanding with the OSE.

Mr. Fuchs will also testify within his areas of expertise about matters raised in EBID's comments provided to NMED on May 3, 2018. After the conclusion of the EBID direct testimony, Mr. Fuchs will be available to answer questions.

C. Mr. Zack Libbin will be qualified as an expert in compliance with Office of the State Engineer regulations pertaining to dam safety from the perspective of a dam owner.

Mr. Libbin will testify regarding Office of the State Engineer dam construction regulations and the need for Office of the State Engineer review prior to approval of NMED Discharge Permitting. He will also discuss the need for a final design and dam breach analysis to be able to fully consider the hazard potential classification and potential discharges of the tailings storage facility/dam.

It is difficult to fully comment on the design of the proposed because the Groundwater Discharge Permit application to New Mexico Environment Department (NMED) does not include a permit issued by the OSE-DSB approving the design of the Copper Flat Tailing Storage Facility Dam (TSF/Dam). The Feasibility Level Design, 30,000 TPD Tailings Storage Facility Copper Flat Project, Sierra County, New Mexico by Golder Associates dated November 2015 and noted Revised November 2016 (Bates Index # 16058 – 16749) indicates that the initial height of the starter dam will be approximately 50 ft and the proposed ultimate top of dam elevation of 5,460 ft-msl. Due to its height and impounded volume this dam will fall under the jurisdiction of the OSE per 19.25.12.7 D. NMAC and categorized as a large dam per 19.25.12.9 NMAC.

An Office of the State Engineer approved design, further analysis, and construction permit should be required by NMED to be able to properly evaluate the safety and potential discharges of the Copper Flat Mine dam. In my opinion it is not sufficient for the NMED to require that a design be approved by OSE after the Groundwater Discharge Permit is approved, the complete and approved design of the TSF/dam should be considered as part of discharge permitting. Review and requirements of the OSE-DSB could end with a design that is different than what has been proposed preliminarily and considered during the consideration of the NMED Discharge Permit. Such changes could impact the potential for discharge.

Construction of the Copper Flat tailings dam relies on ongoing monitoring and evaluation. Monthly submittals will be required by the Office of the State Engineer, as described by the Feasibility Level Design by Golder Associates dated November 2015. Conditions of the OSE-DSB permitting of the structure should be considered prior to the approval of discharge permitting so that the potential discharges can be properly evaluated.

The geomembrane liner proposed by the Feasibility Level Design by Golder Associates dated November 2015 should also be presented as a final design for NMED to be able to consider the potential discharges of the TSF. I also recommend that analyses be required as if the liner is not in place, or if the liner were to be breached, because it will not be inspectable once operation of the dam begins. This would allow for consideration of potential discharge in the event the liner were breached.

Diversion of run-on stormwater and the channels (aka ditches) also play a significant role in analyzing the potential discharges of the Copper Flat Mine TSF/dam. As explained within the The Feasibility Level Design, 30,000 TPD Tailings Storage Facility Copper Flat Project, Sierra County, New Mexico by Golder Associates dated November 2015 and noted Revised November

2016 (Bates Index # 16058 – 16749), the dam capacity will be maintained for storage of direct precipitation and tailings supernatant. If the OSE-DSB agrees to allow the dam to be classified as "significant" hazard potential as proposed and repeated within the Bureau of Land Management (BLM) Environmental Impact Statement (EIS), the spillway design storm event for the spillway of a large, significant hazard dam is 75% of the Probable Maximum Precipitation (PMP). 19.25.11.12C NMAC. The diversion channels and the Grayback Arroyo need to be analyzed for the PMP design storm to ensure that these channels cannot overtop if a PMP event occurred within the contributing areas of the diversion ditches. If a storm exceeding the capacity of diversion channels or the Grayback Arroyo, run-on could contribute to the TSF/dam in addition to a direct PMP event and tailings supernatant and the capacity of the dam could be exceeded. If the capacity of the dam exceeded the dam could overflow or breach, sending tailings downstream.

It is also noteworthy that the Discharge Application is lacking dam breach analysis and emergency response planning specific to the TSF/dam. The evaluation of the breach of any tailings dam is highly complicated and the risks associated with such a breach should be considered within the discharge permitting. 19.25.11.12 C of the New Mexico Administrative Code requires that hazard potential classification be based on the dam failure condition that results in the greatest potential for loss of life and property damage. If the state engineer concurs, the classification may be based on the judgment and recommendation of the professional engineer. For all other cases, a low or significant hazard potential classification will be required to be supported by a dam breach and flood routing analysis, which includes calculations and data that supports the predicted dam failure flood. Inspection of Google Earth aerial photographs, as explained by the Conceptual Design Report by Golder Associates (Bates pages 01633 through

01661), will not suffice to document the hazard classification of the dam. The unique risk to the downstream water supply, specifically Caballo Reservoir and the Rio Grande Project, makes the hazard of a breach of this dam as high of a hazard as a dam which threatens inhabited structures. As such, the draft permit creates a hazard to public health and undue risk to property in violation of NMAC 20.6.7.10(J). Thus, to be able to determine the discharge potential of the TSF/dam, the OSE-DSB approved design of the dam, including approved analysis leading to a hazard classification needs to be considered. NMED should require that permitting for the construction and operation of the Copper Flat Mine dam be completed before consideration or approval of a discharge permit.

Mr. Libbin will also testify within his areas of expertise about matters raised in EBID's comments provided to NMED on May 3, 2018. After the conclusion of the EBID direct testimony, Mr. Libbin will be available to answer questions.

D. Dr. KC Carroll will be qualified as an expert in environmental geochemistry, hydrogeology, mine closure, and environmental impacts of mining related to groundwater. His testimony will provide an overview of the proposed mine operation's potential water quality impacts to surface and groundwater. Dr. Carroll will begin his testimony with a brief discussion of Acid Rock Drainage (ARD) associated with various types of mining, observations of groundwater contamination associated with mining, and potential considerations for predicting and minimizing environmental impacts of mining. ARD occurs when sulfide minerals are exposed to water and air, which can occur as an environmental impact associated with many types of mining (e.g., copper, gold, coal). Acid can be neutralized through additional water-rock reactions, but sulfate generated from sulfide oxidation is stable under most environmental conditions. Groundwater plumes of sulfate associated with mine sites are

indicators of ARD and discharge of impacted water from mine sites (e.g., Chino, Tyrone, Cobre; NMRT, 2012). There is a long history of inadequate and incomplete closures of mines. Some mine impacts have had significant impacts over multiple states. On August 5, 2015, an EPA team investigating the Gold King Mine as a source of metals inadvertently triggered a release of 3 million gallons of acidic, mine-influenced waters into the Animas River (EPA, 2016), and the mine waste discharged with the River throughout southwestern Colorado and northwestern New Mexico. Both the NMRT (2012) and EPA (2016) reports illustrate the potential scope and cost of environmental impacts (for NM examples), and there is always a concern that appropriate financial assurance is available to address these environmental impacts, which could become interstate or even international in the case of the Copper Flat area. It is concluded that appropriate financial assurance for remediation of environmental impacts is required before the start of operations.

Dr. Carroll will also discuss the discharge permit DP-1840, and several sections that would likely result in environmental impacts. "The discharge may move directly or indirectly into ground water of the State of New Mexico which has an existing concentration of 10,000 milligrams per liter (mg/L) or less of total dissolved solids (TDS) within the meaning of Section 20.6.2.3104 and Subsection A of 20.6.2.3101 NMAC. The discharge may contain water contaminants or toxic pollutants elevated above the standards of Section 20.6.2.3103 NMAC" is stated within paragraph B of Introduction. This statement is in contradiction with 20.6.2.3103 NMAC, which prohibits contaminants or toxic pollutant concentrations from being above the standards contained therein. Paragraph C of Applicable Regulations confirms that water quality standards contained in Sections 20.6.2.3101 and 20.6.2.3103 NMAC are applicable to groundwater impacted by this Site. In B102 (Ground Water and Process Characteristics), the

statement "pre-discharge TDS concentration ranging from approximately 317 to 868 milligrams per liter" seems to refer to the currently existing water quality data, but should reference the pre-mining conditions. Also in this section, "[t]hese acidic solutions react with in situ minerals to produce acid rock drainage (ARD) that typically contains TDS, sulfate, and certain metals in concentrations that exceed the water quality standards of Section 20.6.2.3103 NMAC." And "[p]rocess water and impacted stormwater discharges regulated pursuant to DP-1840, including ARD, are typically outside the acceptable range for pH and contain TDS, sulfate, and certain metals in concentrations that exceed the water quality standards of Section 20.6.2.3103 NMAC" are groundwater impacts that violate Section 20.6.2.3103 NMAC. In B103 (Authorized Mine Units: Waste Rock Stockpiles), any waste rock (WRSP-2, WRSP-3, EWRSP-2A, and EWRSP-3) outside of the groundwater hydraulic sink need to be managed during operations and post closure to inhibit off-site discharges of contaminated or impacted water, which includes both underlying and overlying covers and discharge collection and treatment systems. "Berms and drain ditches will be constructed around the waste rock stockpile to prevent run-on and to control run-off. An open channel stormwater conveyance structure will be cut into the underlying bedrock at the toe of the stockpile to collect seepage and impacted stormwater generated from WRSP-3", is noted in the Permit, but the under/overlying covers are not specified and it is unclear what will be done with the collected and impacted water. It is important to consider that under the Non-Coal Mining Rule for New Mine Operations (NMAC 19.10.6) there are requirements for Contemporaneous Reclamation and Hydrologic Balance. The Contemporaneous Reclamation standard indicates that to the extent practicable reclamation is required at the time of operational mining. However, the existing groundwater contamination has not been reclaimed and the existing WRSFs have not been covered. The Hydrologic Balance standard indicates that

reclamation shall result in hydrologic conditions to be consistent with pre-mining conditions, which includes both water supply and water quality impacts.

It is clear that the current open pit lake has been and will continue to receive acid and metal contaminants from the open pit walls (e.g., JSAI, 2013, Bates # 07442; SRK, 2013, Bates # 05529), and the open pit hydraulic sink is considered as a control to mitigate off-site migration of contaminants. However, under DP-1840 - B104 Authorized Discharges the statement "[t]he permittee is authorized to dewater the Copper Flat Open Pit to accommodate mining of the Pit and to manage process water and impacted stormwater from the Copper Flat Open Pit" suggests that open pit impacted water will be discharged from the pit, which may cause releases outside of the open pit area hydraulic sink. It is concluded that controls should be implemented to eliminate any impacted water discharge from the site.

Dr. Carroll will discuss the need for all store and release covers to be fully vegetated and multilayer, capillary barrier cover systems. In fact, the difficulties and additional irrigation needs for vegetative maintenance suggest that capillary, or multilayer, design may be more critical than the vegetation requirement for minimizing water infiltration into the WRSF and TSFs. He will then discuss the need for all store and release covers to be fully vegetated and multilayer, capillary barrier cover systems. The vertical and lateral discharge from these waste facilities, and all other impacted water discharge, will require collection and treatment. It is concluded that current closure plans are not sufficient and capillary barrier covers are needed for all waste piles outside of the hydraulic sink.

Natural rock underlying the waste rock stockpiles is not likely suitable as a liner to inhibit discharge to groundwater. DP-1840 notes need for high-density polyethylene (HPDE) liner below the impoundments (Process Water Reservoir, Surge Pond, Impacted Stormwater Impoundments,

and TSF Underdrain Collection Pond) and the TSF, but there is also a need for a liner below any WRSPs outside of the hydraulic sink. It is concluded that underlying liners should be considered for the WRSPs outside the hydraulic sink within the Copper Rule (NMAC 20.6.7) as most of the waste rock is acid generating, and water discharging the WRSPs will be impacted water.

Hydrologic reports have suggested a natural limitation that could inhibit contaminated groundwater discharge from the mine area (JSAI, 2013, Bates # 07442). Figure 2 of DP-1840 (and JSAI, 2013; Bates # 07469) presents groundwater elevation contours west and east of the "East Animas Fault". The JSAU (2013, Bates # 07442) report suggests that this fault "is a barrier boundary to groundwater flow" based on groundwater elevation monitoring ("hydraulic loading behind the dam" Bates # 07456). The rationale for these statements is that the groundwater elevation and/or hydraulic head contours to the west of the fault have a lower hydraulic gradient and the groundwater elevation contours to the east of the fault have a larger hydraulic gradient (due to the decreased spacing between the contours). It is correct that the hydraulic gradient is higher (decreased distance between contours) to the east of the fault. However, it is incorrect to say that increased gradient is a "barrier boundary" to groundwater flow. Groundwater flow is always perpendicular to groundwater elevation contours, and that fault is parallel to the groundwater elevation contours. That confirms that groundwater flow is from west to east, and groundwater flow occurs across the East Animas Fault zone. If the fault was a barrier boundary to groundwater flow, the groundwater elevation contours would terminate perpendicular to the fault, and the resulting flow (i.e., perpendicular to groundwater elevation contours) would be parallel to the length of the fault. The increased hydraulic gradient to the east represents an increased potential for groundwater flow toward the east on the eastern side of the East Animas

Fault. It is concluded that groundwater contaminants, including sulfate, would likely discharge from the site toward the alluvial groundwater to the east of the site.

Then Dr. Carroll will discuss groundwater contamination issues associated with the prior mining activities (JSAI, 2013, Bates # 07442). Table 5 (Bates # 07458) shows that in the pit area in addition to pH, sulfate, and TDS there are 9 contaminants that exceed water quality standards of Section 20.6.2.3103 NMAC. Table 6 (Bates # 07460) also shows that sulfate and TDS exceed water quality standards in the waste rock and TSF areas. The data presented in this report do confirm that groundwater has been contaminated as a result of the previous mining operations that occurred for only 3 months (early 1980s), and these results suggest a high likelihood of continued and more extensive groundwater quality impacts as a result of the proposed 11 years of mining activities. It is concluded that, if prior mine activities generated contamination with a limited 3 months of mining, larger-scale and longer-term operation at this site has a very high likelihood of also generating contamination.

Dr. Carroll will then discuss the geochemical characterization of the Copper Flat Project as it relates to potential surface and groundwater quality impacts (SRK, 2013, Bates # 05529). This report notes that sulfide minerals are inversely correlated with acid neutralization and/or positively correlated with net acid generation (Figure 5-1 through 5-4, Bates #05578-05579). Figure 5-1 shows that most of the waste rock (especially the Transitional Waste) has elevated sulfide mineral content, and Figure 5-2 shows that the vast majority of samples were Potentially Acid Forming (or had some uncertainty) with very few Non Acid Forming samples, which suggests that the vast majority of the waste rock produced will likely become acidic over time if the sulfide minerals become exposed to water and air (also shown in Table 6-2, Bates # 05612). Table 5-5 (Bates # 05582) also confirms that the majority of waste types are potentially acid

forming (especially the Transitional Waste). Figure 5-8 (Bates # 05583) contains waste rock net acid generation versus net neutralization, and it also confirms that the majority of waste types are potentially acid forming (especially the Transitional Waste) with acid neutralizing potential decreasing with acid generation potential. It is concluded that the WRSFs will most likely generate acid, and water infiltrating through the WRSFs will become impacted with acid and contaminants.

This SRK (2013, Bates # 05529) report also suggests that these sulfide minerals are also found to be frequently encapsulated in a matrix of quartz and/or potassium feldspar, and that this may be able to provide limited buffering capacity. Acid generation was found in static tests, but it was not found to be ubiquitous in kinetic Humidity Cell Test (HCT) data. A few of the HCT samples discharged water that had acidic range pH, but not all. Figure 6-10 (Bates # 05606) shows that the waste rock sample neutralization potential decreased throughout HCT experiments, but only a few had neutralization potential removed completely (mainly the acid generating samples). This suggests that weathering kinetics and acid neutralization consumption likely would take a longer time, than what was considered in the HCT experiments, before acid generation observation for some of the samples (especially those with sulfide minerals encapsulated in a matrix of quartz and/or potassium feldspar). The report concluded that static tests overestimated acid generation, and that the HCT results provide a more reasonable long-term prediction. However, an alternative consideration is that HCT data observe rock reactivity over <40-120 weeks, which is not long-term relative to the 11 year mine life and the longer-term closure. It is possible that weathering of any encapsulated in a matrix of quartz and/or potassium feldspar and associated buffering capacity may take longer to observe than was available for the HCT data, which would suggest that the HCT data underestimated acid generation. Thus, the

HCT data may not be as appropriate as the static test data for characterizing long-term environmental impacts relative to the 11-year mine life and the longer-term closure. It is concluded that, although short-term water quality impacts may be buffered or delayed, the WRSFs are likely to generate acidity, and predictions of environmental impacts should consider using the static testing results as input for evaluation of off-site discharge water quality.

Dr. Carroll will then discuss the geochemical modeling predictions (SRK, 2018). This report claims that mine pit reclamation proposed for the Copper Flat mine will meet the water quality similarity requirements of 19.10.6.603, but this report assumes that the water quality similarity requirement that is required is the current groundwater contamination conditions and not the pre-mining conditions before 1980. The existing pit lake is or has been in exceedance of water quality standards of Section 20.6.2.3103 NMAC including pH, TDS, sulfate, and 10 contaminants (Table 1-2, Bates 18410). Although the pit lake is within the hydraulic sink area, the observed acid wall seep discharge from the pit wall is another indicator that the ore and waste rock material has a strong potential to generate acidity and release metal contaminants (as noted above). The use of a "mixed" input data approach was developed by using different types of HCT data for major (average of each week from beginning to end) and minor elements (average steady-state or late-time data) as input to geochemical modeling, but is unjustified and inputs should be consistent. It is concluded that geochemical modeling inputs should have also considered using static geochemical test results to predict the range of long-term water quality impacts (see geochemical data discussion above).

Dr. Carroll will then discuss the predictions of probable hydrologic consequences of the Copper Flat Project (JSAI, 2018, Bates # 18302). The Non-Coal Mining Rule for New Mine Operations (NMAC 19.10.6) requirements for Hydrologic Balance are not met with the proposed

hydrologic impacts. Changes to the hydrologic system outlined in the probable hydrologic consequences to the alluvial aquifer, Rio Grande River, Caballo Reservoir, Animas and Percha Creek, and springs are significant impacts that alter the hydrologic balance. There will be additional discharge to the open pit from groundwater, and increases in pit lake surface area will create increased evaporation from the pit lake. This report (and others including SRK, 2018, Bates # 18383) suggests that groundwater flowing through the andesite bedrock discharges to the open pit (e.g., Figure 3.15, Bates 18339), and yet this report (Bates # 18348, and SRK, 2018, Bates # 18383) also states that "Because the WRSP sits on sloping low-permeability andesite (<1.0x10-6 cm/s), net percolation to groundwater is not expected." It is difficult to understand how the andesite can be low permeability in support of WRSF closure and also have high enough permeability to allow groundwater flow into the pit to create a hydraulic sink large enough to capture contaminants that might otherwise migrate off-site. The currently observed discharge to the open pit confirms that the andesite has sufficient permeability to allow groundwater flow to occur, which makes it infeasible for use as an underlying liner for the waste rock stock piles. It is concluded that the proposed DP-1840 and proposed plan for mining operations will likely result in long-term impacts to both water supply and water quality.

Dr. Carroll will also testify within his areas of expertise about matters raised in EBID's comments provided to NMED on May 3, 2018. After the conclusion of the EBID direct testimony, Dr. Carroll will be available to answer questions.

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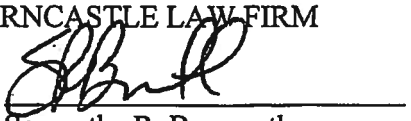
Respectfully submitted,

BARNCASTLE LAW FIRM

By 

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CERTIFICATE OF SERVICE

I hereby certify that, on the 24th day of August, 2018, the foregoing Statement of Intent was sent to the following:

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