AFFIDAVIT OF LEE WILSON, PH.D.

STATE OF NEW MEXICO)

County of

Lee Wilson, PhD., being first duly sworn, states as follows:

) ss.

1. I make this Affidavit of my own personal knowledge and based on my education as a geologist and environmental scientist, my 45 years of professional experience subsequent to receiving my Ph.D., my considerable knowledge of the Florence Copper Project including reviewing thousands of pages of documents and providing ten days of expert testimony relating to the project's state permit, and my familiarity with EPA's regulatory programs gained during the 27 years I served as a consultant and mission contractor for the agency. My work relating to the UIC program led to publication of an article in the journal *Ground Water* in 1984, "Aquifer classification for the UIC program: prototype studies in New Mexico." A copy of my resume is attached as Exhibit A. A summary of my experience as an expert witness is provided as Exhibit B.

2. On December 20, 2016, EPA provided notice that a Class III UIC permit has been issued to Florence Copper Inc. (FCI) for its In-Situ Copper Production Test Facility (PTF). This permit greatly improves upon prior draft permits, and includes many appropriate monitoring, reporting, and compliance terms. However, while the agency has revoked the previous 1997 permit, it retained the 1997 aquifer exemption. That exemption was for a substantially larger project that included a significantly larger area than is appropriate for the current project. The 1997 exemption also provides an inappropriate extension into the regional drinking water aquifer.

3. In its December 2013 application to EPA, FCI proposed an aquifer exemption
scaled to the currently-proposed mine that specifically coincides with the horizontal limits
of the 500-foot circular Area of Review surrounding the PTF. In a March 13, 2014, letter to
FCI, EPA required FCI to retain the original exemption; but EPA provided no reason for
that inexplicable mandate.

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4. FCI's request (and EPA's approval) included an exemption of a portion of the overlying Lower Basin Fill Unit (LBFU) aquifer because, supposedly, the LBFU is part of the ore body. FCI did not explain why it wanted to characterize some portion of the LBFU as part of the ore body and some as outside the ore body.

5. I have edited the FCI map in Figure 1 (provided in Exhibit C) to show that the size of the PTF is only approximately 1% of the aquifer exemption's total area.

6. In Figure 2 (provided in Exhibit D), I have edited a FCI diagram to show the
comparative volume of a portion of the exempted aquifer, and its extension into the LBFU. I
must emphasize that this graphic only shows the northern half of the exemption. The
source diagram was used by FCI to illustrate its proposal to limit the exemption to the area
near the PTF.

7. Maintaining the 1997 aquifer exemption is inappropriate both as to the size of
the area in relation to the PTF and because it extends into a non-mineral bearing portion of
the aquifer.

15 8. I have provided technical guidance to counsel regarding this appeal. I am the 16 source for much of their discussions that support the argument that the LBFU is not 17 mineral bearing (which should be evident to anyone who has any knowledge of the matter) 18 and that EPA's justifications for the exemption (*e.g.*, travel times; assessment of porosity) 19 are technically flawed. Based on my professional judgment, I agree with the statements and 20 positions in the petition for review.

DATED this 18th day of January, 2017.

- while

Lee Wilson, Ph.D.

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SUBSCRIBED AND SWORN to before me this 13^{+h} day of January, 2017, by Lee Wilson, PhD. Joepe M. aragm Notary Public 4/17/17 My Commission Expires:

EXHIBIT A RESUME OF LEE WILSON

EDUCATION AND CERTIFICATION

Ph.D., Geology, Columbia University (1971). Specializations in geomorphology, hydrology, ecology (collectively what is today referred to as "environmental science").

B.A., Geology, Yale University (1964); minor in ecology.

Certified Professional Hydrogeologist #220 (American Institute of Hydrology).

EXPERIENCE AT LEE WILSON AND ASSOCIATES

Since 1973, Dr. Wilson has been President of Lee Wilson and Associates (LWA), a water resource and environmental consulting firm based in Santa Fe, New Mexico. His work generally falls into three categories, each of which is discussed more fully below:

- Technical analysis of water resources for more than 500 projects;
- Author and project director for several dozen <u>environmental management and impact</u> evaluations, including 17 years as an EPA mission contractor;
- <u>Expert testimony</u> on a broad array of water resource and environmental issues in dozens of court and regulatory cases.

Also provided below is information on Dr. Wilsons experience in other areas of resource management while at LWA; and his work as administrator of a successful small business.

WATER RESOURCES

The water resources projects that Lee Wilson has worked on have dealt with issues as follows.

- <u>Water-supply</u> master planning for municipalities and water authorities. Responsible for projecting water demands, design of conservation programs, assessing streamflow supplies on a probabilistic basis, evaluating well field performance, modeling oversight of well field impacts and reservoir operations, developing strategies for water rights acquisition, investigating water quality problems, designing wellhead protection programs, assessing water-resource regulations, and performing tradeoff analyses of water-supply alternatives based on engineering, economic, environmental and legal considerations.
- Evaluation of <u>water quality</u> impacts and/or clean-up programs for hazardous waste disposal, hydrocarbon leaks and spills, brine pits, coal mining and transport, power plant operations, pipeline construction, salt mining, geothermal development, septic tanks, sewage lagoons, sludge disposal, land application of wastewater, feedlots, dairies, swine breeding facilities, aquaculture, natural saline seeps, watershed development, petrochemical manufacturing, other manufacturing, offshore oil and gas activities, disposal of dredged materials. Note that impacts to soils have been considered in many of these evaluations.

- Assessment of <u>wastewater</u> management alternatives, ranging from conventional treatment and discharge, to recycling alternatives including potable reuse; and evaluation of service area alternatives, especially extension of sewer lines to environmentally sensitive areas.
- Geotechnical/hydrologic components of four dozen dam safety inspections and seismic evaluations (for the Corps of Engineers and state agencies), and numerous other projects involving evaluation of <u>flood hazards</u>, Section 404 permits and/or stormwater management.

There are many <u>specific LWA projects</u> that display Dr. Wilson's ability to tackle complex and or unique issues. These include the following.

- Development of 70,000 acre-feet per year well field and acquisition of more than \$200 million in water rights in Canadian River Basin of Texas, through program of test drilling, data interpretation, and production well design. Other work for this client -- the Canadian River Municipal Water Authority -- has involved hydrogeology investigations and conceptual design of a successful brine control system; reservoir firm yield and salinity evaluations; and assessment of hydrologic impacts of watershed brush control.
- Project manager and senior hydrologist for the Central Platte River groundwater and surface water modeling program (COHYST).
- Design of New Mexico's statewide program for groundwater quality monitoring, the first such program in the United States.
- Evaluation of numerous groundwater contamination events involving hydrocarbons, solvents, heavy metals, nitrates and other contaminants, for energy companies, major industrial companies, landowners and governments.
- Development of the nation's first set of criteria for use in evaluating full-scale potable recycling of wastewater (for the Hueco Bolson Recharge Project, El Paso Texas, now operational for 30+ years).
- Design of EPA's prototype Wellhead Protection Program for Indian Lands.
- Development of the nation's first aquifer identification procedures and maps for EPA's Underground Injection Control Program.
- Writing of stream standards for seven Indian tribes in New Mexico.
- Assessment of runoff and contamination risks from Los Alamos National Laboratory, New Mexico, resulting from Cerro Grande wildfire.
- Support to State of Florida with respect to determining minimum stream flow requirements for the endangered Manatee population at Volusia Blue Spring; subsequent work for the past several years has involved peer review of dozens of minimum flow designations for rivers, lakes and springs throughout the St. Johns River Basin; also peer review of hydrologic models.
- Preparation of 33 county-level maps of aquifer vulnerability for the New Mexico Underground Storage Tank program (republished on New Mexico Environmental Department web site at http://www.nmenv.state.nm.us/fod/LiquidWaste/aoc.html).
- Performance of hydrologic and regulatory assessments of aquifer management rules for the Edwards Aquifer Authority, Texas; and quantified water-rights values for the Authority.

- Oversight of design and implementation of multi-year study to assess impacts of water appropriations on Guadalupe River, Texas, including effects on the endangered whooping crane.
- Consultant to Alcoa mining regarding permitting of industrial wells and securing of bond release at Sandow Mine, Texas.
- Active water rights consultant for numerous New Mexico communities, responsible for oversight of
 water-rights transfers and compliance with state permit conditions; one example is our oversight of
 acquisition and transfer of more than \$30 million worth of water rights to the Village of Los Lunas;
 another is preparation of numerous community water conservation plans.

ENVIRONMENTAL MANAGEMENT AND IMPACT ASSESSMENT

Dr. Wilson's projects in environmental management and impact assessment include the following, which typically involve evaluations related to all aspects of the environment, including air, water, soils, biota, and human resources.

- LWA was selected in 1984 as level-of-effort NEPA contractor for EPA Region 6; this contract was re-awarded or extended annually for 17 years until our retirement in 2001. Dr. Wilson led more than 60 work assignments that included: preparation of state-of-the-art reports on cumulative impacts, EIS post-audits, and NEPA risk assessments; author of a unique Record of Decision that effectively served as a biological opinion under the Endangered Species Act; team leader for EISs on a major lignite mine and power plant, a very large petrochemical plant, oil and gas activities in the Territorial Seas, and dredged materials disposal in the Atchafalaya Delta; team leader for EAs on surface coal mining and confined animal feedlot operations; responsible for analysis of a Clean Lakes Program project, for a generic programmatic agreement for Section 106 of the National Historic Preservation Act, and for an investigation of alternatives for beneficial use of dredge spoil in the Laguna Madre, Texas, and statewide in Louisiana and Texas. Our work on coastal restoration for EPA is discussed elsewhere in this resume.
- Prior to the EPA contract LWA prepared numerous <u>impact statements</u>, many of which were of special interest: the first third-party EIS performed in the U.S. (for EPA, on the City of Albuquerque wastewater treatment facilities); the first BLM grazing EIS that was completed without a court challenge (McGregor Range); a 1980 EIS that developed EPA's criteria for potable reuse of wastewater (City of El Paso); and a 1982 wastewater EIS (for EPA on Taos Ski Valley) which has been described as "exactly what CEQ wanted to accomplish when they reformed the EIS process".
- Lee Wilson served Alcoa Corp. as advisor for a controversial EIS prepared by a Third-Party consultant regarding a <u>major coal mine</u> project in Texas. Key issues included groundwater development, effects on endangered species, and the secondary effects of mine-supported energy generation and smelting. The EIS was not challenged. LWA continues to advise Alcoa on a variety of environmental permitting matters.
- <u>Current</u> LWA work on impact issues includes support to Louisville Gas and Electric regarding Section 404 permitting issues in Kentucky; preparation of assessments of arsenic treatment projects for the City of Albuquerque; evaluation of water resource impacts for a Forest Service EIS being prepared on a major uranium mine, where large quantities of groundwater will be withdrawn for mine depressurization; and a BLM EIS on a copper mine where water issues are paramount.

- Our impact assessments of <u>diverse project types</u> have included: municipal flood control; in-situ copper mining; in-situ potash mining; the eutrophication effects of urban runoff; construction of a natural gas pipeline; the agricultural impacts of wastewater service extensions; the groundwater impacts (quantity/quality) at a large cooling reservoir constructed in karst terrain; construction/use of a limited access freeway; chemical manufacturing; a pulp and rayon mill; tribal wastewater disposal; trans-national air pollution; and arsenic treatment systems.
- Dr. Wilson also has taught <u>courses</u> on impact analysis. Course sponsors/venues include the Autonomous University of Mexico (Mexico City, 2 courses), FLACAM in Lima, Peru (students from 5 countries), VUB in Brussels, Belgium (students from 20 countries), and the Inter-American Development Bank in Jamaica (students from 10 Caribbean countries).

EXPERT TESTIMONY

Dr. Wilson's experience as an expert witness includes the following.

- <u>Current or recent expert designations and assignments</u> in federal or state courts include: for Datacard and General Electric in a contamination case in California; for a river authority in Texas regarding a water diversion permit application; for El Paso Corporation as a hydrogeology expert in several cases involving ground-water contamination in New York, Florida, New Jersey and New Hampshire; for Taos Pueblo as a water-rights expert in an adjudication case; for several New Mexico municipalities in cases involving protested water rights transfers; for acequia associations in the Rio San José Adjudication (New Mexico); for the City of Las Cruces in the Lower Rio Grande adjudication; and more. In the last few years he has testified before a Federal Court in Dallas regarding groundwater contamination in Winkler County TX; an arbitration panel in Houston regarding soil and groundwater contamination in McAllen County, TX; a New Mexico Hearing Officer in Santa Fe, regarding a water rights matter in Dona Ana County, NM; and an Arizona Hearing Officer regarding an in-situ mining water quality permit.
- An example of testimony regarding groundwater contamination was for Fina and Dominion in a 7year case involving hydrocarbon releases in McAllen, Texas. We researched local soil characteristics, groundwater hydrology and contamination, examined potential sources including pipelines and old gas stations, and evaluated diverse issues including mobility of phase-separated gasoline and fingerprinting of natural gas condensate.
- For the State of Florida, Dr. Wilson provided expert testimony in federal court cases regarding <u>interstate water issues</u>, especially relating to competition for streamflows between urban Atlanta, major recreational reservoirs, large-scale irrigation, and the environmental resources of the Apalachicola River floodplain and estuary in Florida.
- Dr. Wilson's past expert work for the State of Nebraska involved two <u>U.S. Supreme Court</u> cases. The more recent dealt with the Republican River Compact, where issues related to streamflow hydrology, groundwater modeling, Compact accounting, reservoir operations and water-rights administration. Dr. Wilson previously was a lead expert for Nebraska in its interstate litigation on the North Platte Decree; the issues there included protection of environmental flows for the critical habitat of the Whooping Crane; and municipal needs in Wyoming.
- Of past cases, the largest by far was Dr. Wilson's role as chief expert regarding water resource and environmental issues raised in federal litigation brought by a <u>coal slurry pipeline</u> against six railroads ("ETSI case"). This involved extensive research and focused testimony regarding the

environmental impacts of coal slurry pipelines, including comparison of impacts to coal transport by unit trains; and regarding the genuineness of railroad protests to permits under the Clean Water Act, Clean Air Act, Resource Conservation and Recovery Act, Endangered Species Act and other statutes and regulations in South Dakota, Wyoming, Oklahoma, Arkansas, Texas and Louisiana.

- Another well publicized expert appearance was as chief technical witness for the City of El Paso in its landmark challenge of a statute barring the <u>interstate transport of groundwater</u>. There, testimony dealt with long-term municipal water supply needs; alternatives ranging from desalting to recycling; surface and groundwater impacts of a 296,000 acre-feet per year diversion; and diverse socio-economic issues related to water use and interstate commerce.
- Other past testimony and/or litigation advice has been provided in hazardous waste disposal, water rights, water rates and water quality cases for clients ranging from major corporations (Johnson and Johnson, Waste Management Inc., Phillips Petroleum, Marathon Oil, OXY Petroleum, Budget Rent-a-Car, ELF-Atochem) to environmental and citizen groups (Sierra Club, La Raza Unida). Dr. Wilson is currently involved in two remediation projects under jurisdiction of the Railroad Commission of Texas, one on behalf of a landowner, one on behalf of an oil and gas producer.

RESOURCE MANAGEMENT

These projects involve specialized aspects of environmental and water resource management.

- LWA's EPA contract included extensive work in restoration of Louisiana's <u>coastal wetlands</u>. Dr. Wilson oversaw preparation of a handbook for managing wetlands impacts of oil and gas development; prepared ecosystem restoration plans and studies (such as a project to divert Mississippi River water to restore Lake Maurapas swamps -- the largest such project so far conceived); evaluated specific projects involving land management, mariculture and barrier islands; and was a primary author of "Coast 2050", the master plan for achieving no net loss of wetlands.
- LWA has undertaken a number of specialized studies aimed at the innovative management of <u>environmental resources</u>. Lee Wilson invented a method by which water supply is quantified and used as the basis of land use density zoning (for Santa Fe County, NM); created a standardized list of subdivision covenants for water conservation; performed the nation's first size-partitioned inventory of fugitive dust, which involved all natural as well as man-related particulate sources in a desert area with numerous tailings piles, copper mines, mills and unpaved roads; prepared the conceptual scope for City of Albuquerque's hazardous waste management master plan; drafted an environmental code for City of Santa Fe, dealing with issues which range from toxic air pollutants to electromagnetic radiation from power lines; and input to design of a project to restore the hydrology of a sacred wetland on Taos Pueblo.
- LWA is currently active in Natural Resource Damage Assessments at multiple sites in New Mexico. As a subcontractor to Industrial Economics Inc., LWA is responsible for assessment of contamination to groundwater, surface water, soils, and geologic resources.

PRIOR EXPERIENCE, ACCOMPLISHMENTS, HONORS AND PUBLICATIONS

• Scholarships and Fellowships: Food Fair National Scholar, Yale University, 1960-64; Teaching Fellowship and Preceptor Fellowship, Columbia University 1964-71 except 1969-70; NSF Summer

Institute Fellowship in hydrology/hydraulics, Colorado State University (1968); Columbia University Fellowship for advanced study in remote sensing at International Training Center, Delft, Netherlands (1969-70).

- 1972-1973. Senior Staff Scientist with an environmental consulting firm based in New York City and Dallas, responsible for preparing more than a dozen major EISs and assessments in California, Indiana, New York, North Carolina, Pennsylvania and Texas; projects included large water supply and flood control reservoirs, landfills, coal-fired power plants and land development.
- 1965-1971. miscellaneous short-term assignments, including observer-member of an Australian government team performing an inventory of soil, water and biological resources in the Northern Territory; and lecturer in geology, geomorphology, Pleistocene geology and geophysics at Columbia University, Briarcliff College and Brock University.
- LWA was selected by EPA in its 1994 National Award for Outstanding Achievements as a Small Business Contractor.
- Member of more than one dozen professional and environmental organizations, including Geological Society of America (Elected Fellow) and National Wildlife Society (Life Member). Member of the International Association for Impact Assessment; Chairman of Training and Professional Development Committee (2003-2007); in 2004 received IAIA's award for Outstanding Service.
- For LWA, Lee Wilson has authored more than 500 technical reports, many distributed widely by government agencies.
- Ten contributions to the Encyclopedia of Earth Sciences series. Scientific articles published in: Groundwater; Water Resources Research; Water Resources Bulletin; American Journal of Science; Bulletin of the International Association of Hydrology; Bulletin of the Geological Society of America; Rev. Geographique Physique et de Geologie Dynamique; EIS Annual Review; Environmental Impact Assessment Review; Journal of Soil and Water Conservation; American Water Works Association Proceedings; Physical Geography.
- Keynote speaker at UNESCO symposium on erosion and sedimentation, Paris, 1977; member of AWRA scientific exchange program with the Peoples Republic of China (1985); member of City of San Antonio delegation to Kumamoto, Japan, water conference (1990); member of EPA/DOE international workshop on EIS methodology (1991); keynote speaker New Mexico Legislature water retreat (2000); member of Advisory Council for the Caroline and William N. Lehrer Distinguished Chair in Water Engineering at Texas A&M University's Biological and Agricultural Engineering Department (2005).

For more information, call Lee Wilson at 505-988-9811, or e-mail: lwa@lwasf.com.

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COMPLETED TESTIMONY: JUDICIAL AND ADMINISTRATIVE PROCEEDINGS

U.S. SUPREME COURT

| Case No. 113 S.Ct. | 2000 | Expert reports Depositions (4 days) | On behalf of the State of Nebraska in the matter of <i>Nebraska v. Wyoming</i> concerning the North Platte Decree. Expert report on environmental injury to endangered species in Central Platte Valley (effects of environmental mandate). Expert report on Deer Creek Project (assessment of municipal water demands and water rights, and appropriate water supply alternatives for Casper and other Wyoming communities). Interpretation of Paragraphs IV and V of the Decree. |
|-------------------------|------|---|--|
| Case No. 126 S.Ct. 1689 | 2003 | Settlement report Deposition | On behalf of the State of Nebraska in the matter of <i>Kansas v. Nebraska and Colorado</i> concerning the Republican River Compact. Developed draft expert reports for the State, and then wasa leading member of Nebraska's technical team that was intensively involved with a three-state negotiation process in achieving a settlement of the case. Key aspects of this work included all aspects of a complex ground water model, especially estimates of historic pumping, calibration targets and aquifer properties. The settlement was reached in December 2002; the final element of the settlement was completion and documentation of the model in 2003. Lee Wilson also was identified as a possible fact witness for Nebraska with respect to a subsequent claim filed by Kansas, and was deposed in February, 2012. |

FEDERAL DISTRICT COURT

| Case No. 80-730-HB (Civil), U.S. District Court, Las Cruces and Albuquerque, New Mexico | 1982 | Trial testimony (2 days) Deposition (3 days) Affidavit Exhibits | On behalf of the City of El Paso in the matter of the <i>City of El Paso, et al. v. S.E. Reynolds, et al</i> , regarding New Mexico's water embargo statute. Testified as to water supply conditions and needs for City of El Paso; supply alternatives - hydrology, costs, and impacts; water supply conditions in New Mexico. Lee Wilson was the only technical expert to testify for the plaintiff. |
|--|------|---|--|
| Case No. CIV-82-0734HB, U.S. District Court, New Mexico | 1984 | Affidavit | Summarizing work done by Dr. Lee Wilson in preparation of environmental impact statement, Taos Ski Valley. |
| Case No. 86-1472JP, U.S. District Court, New Mexico | 1989 | Affidavit | On behalf of the City of El Paso, regarding boundaries of LRG Underground Water Basin, Elephant Butte Irrigation District v. United States, et al. |

| CASE | END DATE | WORK PRODUCT | DESCRIPTION AND ISSUES |
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| Case No. B-84-979-CA (Civil), U.S. District Court, Texas | 1989 | Trial testimony (jury) Deposition (6 days) Affidavit | On behalf of Energy Transportation Systems, Inc. in the matter of <i>ETSI Pipeline, et al., v. Burlington Northern, Inc., et al.</i> Testified as to environmental impacts of coal slurry pipelines; comparative environmental effects of alternative modes of coal transport; merits and genuineness of railroad challenges to ETSI environmental permits under the Clean Water Act, Clean Air Act, Endangered Species Act, National Environmental Policy Act and others. Lee Wilson was the only technical expert (excluding damage experts) to testify for the plaintiff; he supervised an expert team of 40+ individuals to prepare his testimony. |
| Case No. 9780C (Civil), U.S. District Court, New Mexico | 1990 | Trialtestimony Exhibits | On behalf of land and water rights owners in the matter of <i>State of New Mexico, ex rel., Reynolds v. Molybdenum Corporation of America, et al.</i> Water rights adjudication, Red River and related streams. Testimony assessed: 1) the appropriate duty of water for irrigation in an area of northern New Mexico; 2) hydrologic evaluation of surface water shortages and their impacts on irrigated acreage. |
| Case No. 92-1064-M, (Civil), U.S. District Court, New Mexico | 1993 | Trial testimony Exhibits | On behalf of Budget Rent-a-Car regarding the origin, characteristics and extent of hydrocarbon contamination associated with a leaking underground storage tank in Albuquerque, NM. |
| Case No. CA-2-91-0229, U.S. District Court, Northern District of Texas, Amarillo Division | 1998 | Trial testimony (jury) Affidavit Opinion letters Deposition | On behalf of landowner in the matter of <i>B.K. Paris, Inc. v. Phillips 66 Company, et al.,</i> Responsible for evaluating assessment and remediation of a pipeline spill. |
| Case No. CV-99-0985, U.S. District Court, District of New Mexico | 2000 | Affidavit | In City of Albuquerque v. United States, on behalf of City of Albuquerque which sought judgment a ffirming its ownership of its San Juan Chama Water; a ffidavit dealt with role of this supply in meeting water resource needs of City. |
| Civil Action No. H-01-0233 Southern District of Texas, Hous ton Division | 2004 | Trial testimony Affidavit Expert Reports Deposition | On behalf of El Paso Natural Gas and Coastal Refining and Marketing, Inc., regarding hydrocarbon contamination found on the property of Elementis Chromium and Amerada Hess Corporations, near the Corpus Christi Inner Harbor, Corpus Christi, Texas. |
| Case No. CIV 99- 1320/JP/KBM-ACE, U.S. District Court, District of New Mexico | 2005 | Affidavit | In <i>Rio Grande Silvery Minnow v. Martinez</i> , on behalf of City of Albuquerque, regarding hydrological and environmental issues associated with habitat requirements for endangered species, Rio Grande Silver Minnow, and related matters. |

| CASE | END DATE | WORK PRODUCT | DESCRIPTION AND ISSUES |
|---|-------------|------------------------|---|
| Case No. 6639-M (Civil), U.S. District Court, Albuquerque, New Mexico | 2006 | Exhibits Deposition | Regarding water rights adjudication in the area of Tesuque-Pojoaque, New Mexico (" <i>Aamodt</i> " case). Designated as an expert by U.S. Attorney. Issues included surface and ground water hydrology, quantification of Indian claims, development of regional water management strategies. |
| Case No. 04 Civ. 2389, MDL No. 1358, Master File C.A. No. 1:00-1898 (SAS), U.S. District Court, Southern District of New York | 2007 | Expert Report | On behalf of the Defendants Coastal Eagle Point Oil Company and Coastal Refining & Marketing Inc., in the matter of the <i>United Water New York, Inc. v. Amerada Hess et al.</i> The litigation concerned alleged contamination of ground water by Methyl tertiary-butyl Ether (MTBE) in Rockland County, New York. The expert report of Lee Wilson related to determining whether any Coastal branded service stations were possible sources of contamination in respect to wells that allegedly were threatened with being impacted by MTBE. |
| Case No. 1:00CV02975, U.S. District Court, District of Columbia | 2008 | Affidavits | On behalf of the State of Florida, regarding the water and environmental water resources of the Apalachicola-Chattahoochee-Flint River Basin, the operations of Lake Lanier, Georgia, and the nature of water supply contracts in the Atlanta Metro area as they have been identified in three different litigation settings. |
| Case No. CV-90-BE-1331-E, U.S. District Court, Northern District of Alabama, Eastern Division | 2008 | Affidavits | On behalf of the State of Florida, regarding : 1) important characteristics of the ACF Basin in general, and of the Apalachicola ecosystem in particular; 2) actual and proposed uses of water from Lake Lanier; 3) the nature of the adverse effects to an authorized purpose of Lake Lanier if conservation storage is reallocated to municipal uses; 4) attributes of the contracts that relate to their temporary or permanent nature; 5) the extent to which a Settlement Agreement proposes contracts that are similar to those that were proposed in 1989; 6) compliance with environmental statutes; and 7) the harms to Florida if it does not secure the relief it seeks. |
| Case No. 04 Civ. 3417, MDL No. 1358, Master File C.A. No. 1:00-1898 (SAS) U.S. District Court, Southern District of New York | 2009 | Expert Report | On behalf of Defendants El Paso Corporation in the matter of the Methyl tertiary butyl ether ("MTBE") products liability litigation, <i>City of New York v. Amerada Hess Corp., et al.</i> |
| Case Nos. 7896C and 7939C consolidated (Civil), U.S. District Court, Albuquerque, New Mexico | 2012 | Exhibits | Regarding water rights adjudication in the area of Taos, New Mexico ("Abeyta" case). Designated as an expert by U.S. Attorney and by Taos Pueblo. Issues included surface and ground water hydrology, protection of sacred wetlands, quantification of Indian claims, and development of regional water management strategies. |

| CASE | END DATE | WORK PRODUCT | DESCRIPTION AND ISSUES |
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| OTHER FEDERAL C | COURTS | | |
| Docket No. 354, Court of Federal Claims, Washington, D.C. | 1996 | Exhibits | On behalf of <i>San Ildefonso Pueblo v. United States of America</i> regarding the value of recognized original pueblo water rights in the Pojoaque and Rio Grande Basins. |
| Case No. 10-36484-hdh-11 U.S. Bankruptcy Court Northern District of Texas, Dallas Division | 2011 | Trial Testimony Expert Report Deposition | On behalf of Heritage Standard with respect to delineation and remediation of contamination caused by leaks from salt water disposal infrastructure in Winkler County, Texas. Issues included interpretation of flow gradients and forensic geochemical fingerprints to determine level of impacts to a municipal water rights area. |
| STATE DISTRICT C | OURT | | |
| Case No. 50245, New Mexico District Court, Santa Fe County, First Judicial District | 1976 | Affidavit | On behalf of the State of New Mexico in the matter of <i>Arizona Public Service Company, et al. vs. Fred</i> O'Chesky. Filed report in affidavit form, characterizing indirect environmental and economic costs of electricity generation in Four Corners area of New Mexico. |
| Case No. 77-100 (De Novo Appeal), New Mexico District Court, Mora County, Fourth Judicial District | 1978 | Trial testimony | On behalf of Louis Abeyta, et al. in the matter of <i>Louis Abeyta, et al. v. Mora Research Center, NMSU, and Steve Reynolds.</i> Evaluation of impacts of proposed well on existing water rights; surface-water supply and hydrologic conditions of the Mora River Valley. |
| Case No. CV-88-201 (De Novo Appeal), New Mexico District Court, Dona Ana County, Third Judicial District | 1989 | Deposition | In the matter of the <i>City of El Paso v. S.E. Reynolds, and State Engineer, v. Elephant Butte Irrigation District, et al.</i> Factual testimony regarding work done in perfecting appeal. |
| Case No. 85-17120-C (Civil), Texas District Court, Harris County, Texas, 151st Judicial District | 1990 | Tri al testimony (3 days, jury) Depositions Affidavit | On behalf of Crum and Forster Insurance Co. in the matter of <i>James A. Slaughter, et al. v. Farm and Home Savings Association, et al.</i> Ground water contamination by solvents, and contaminant migration, at Brio/DOP Superfund site near Houston, Texas. Note: Roger Miller of LWA also gave a deposition in this case. |
| Case Nos. 36,964 and 36,836, Texas District Court, Midland, Texas | 1990 | Trial testimony (jury) | On behalf of the City of Odessa, Texas, in the matter of <i>George V. Anderson, et al. v. City of Odessa, and Louise Gay v. City of Odessa</i> . Hydrologic analysis of flooding in Monahan's Draw, and effect of municipal wastewater discharge on infiltration, ground water levels, flood damage and related matters. |

CASE END WORK PRODUCT DESCRIPTION AND ISSUES DATE Case No. CV-89-0128. New 1990 Exhibits On behalf of the New Mexico Highway and Transportation Department conducted hydrologic studies Mexico District Court, Quay Deposition regarding drainage, erosion and sedimentation impact of construction of an Interstate Highway. Filed exhibits and gave deposition; case settled prior to completion of trial. County, Tenth Judicial Dist. Case No. 90-526(c), New 1991 Trial testimony On behalf of landowner, in the matter of Voorhess, Burden and Burden v. Chavez, Rodriguez, Grill, the Board Mexico District Court, County Deposition of Santa Fe County Commissioners, and Peixoto da Silveira. Interpretation of water supply conditions at of Santa Fe, New Mexico, First subdivision with respect to County Development Code authored by Lee Wilson. Judicial District Case No. SF93-1231(C). First 1994 Hearing testimony On behalf of mine owner, in the matter of State of New Mexico vs. Piedra Inc. Identification of "waters of the Judicial District, County of United States", subject to Section 404 of Clean Water Act; development of a mine plan for site reclamation Santa Fe at a sand and gravel operation. Case No. SD 94-360. 1995 Trial testimony On behalf of City of Rio Rancho, in the matter of City of Rio Rancho, New Mexico vs. Rio Rancho Utilities Thirteenth Judicial District Deposition Corporation, et al., regarding condemnation of a private water and wastewater utility. Research on Rio Court, County of Sandoval Rancho water rights, water use, utility system, population and demand forecasts and issues related to city State of New Mexico control of the utility system. Case No. 924128, Superior 1995 Declarations On behalf of Upper San Gabriel Valley Municipal Water District, regarding Petition by Miller Brewing Court of the State of Company. Issues included the validity of a computer model of the San Gabriel Basin aquifer and the accuracy of its predictions of flow paths and travel times of recharged sewage effluent. California, County of Los Angeles Case No. SF97-1816(C) First 1997 Affidavit On behalf of the City of Santa Fe, in the matter of the City of Santa Fe vs. Board of County Commissioners of Judicial District, County of Santa Fe County and Santa Fe Ski Company, regarding the water rights situation at Santa Fe Ski Basin. Santa Fe, State of New Mexico Third Judicial District Court. 1998 Affidavit On behalf of City of Sunland Park, in the matter of City of Sunland Park vs. Santa Teresa Services Company, vs. Catalina Development, Inc., Paseo Del Norte Limited partnership, et al., regarding condemnation of a County of Dona Ana, State of New Mexico water supply system. Cause No. C-4568-95-D. 93rd 2000 Expert report On behalf of Fina, Inc, in the matter of Timely Adventures, Inc, et. al., v. Difco, Inc., Texas Star Investments, Judicial District Court, Hidalgo Inc., et al., serving as an expert witness regarding contamination of ground water. Following submittal of County, Texas report, there was a settlement that a llowed Fina to be removed from the case as it then stood. Subsequent work in the same case was primarily on behalf of Louis Dreyfus Natural Gas Corp.

| CASE | END DATE | WORK PRODUCT | DESCRIPTION AND ISSUES |
|---|-------------|---|---|
| Petition for Partition of Real Property In the District Court, Lee County, Texas, 335th Judicial District, Cause No. 12,217 | 2005 | Expert report | On behalf of Alcoa Inc., Evaluation of impact of mining on drainage that passes through un-mined property. Case was settled. |
| Fifth Judicial District Court, County of Chaves, State of New Mexico, Nos. 20294 and 22600 Consolidated | 2005 | Affidavit | On behalf of the Hope Community Ditch Association and the Tracy/Eddy Trust (<i>State of New Mexico v. Lewis et. al.</i>) regarding a partial settlement of Pecos Basin water right adjudication. Issues included technical and policy evaluation of settlement. |
| Ninety-third Judicial District Court, Hidalgo County, Texas, Cause No. C-4568-95-D. | 2007 | Expert reports Affidavit Deposition | On behalf of Louis B. Dreyfus Co./Dominion Exploration and Production, Inc., regarding hydrocarbon contamination of ground water in the area of McAllen, Texas. |
| Cause No. 32,540, District Court of Milam County, Texas | 2010 | Expert report | On behalf of Alcoa, Inc. in <i>Alcoa Inc. v. Luminant Energy Co., et. al.</i> , regarding Luminant's application to obtain a Permit by Rule for Lignite Screen No. 1. The primary issue was the calculation of fugitive dust emissions. |

ARBITRATION PANELS

| Arbitration hearing SF-GRO-7513 (201); New Mexico State Highway and Transportation Department | 1990 | Hearing Testimony | On behalf of contractor, in the matter of <i>Borsberry Construction Co., Inc. v. New Mexico State Highway and Transportation Department</i> regarding a payment claim. Testified before the New Mexico State Highway and Transportation Department as an expert in water-rights administrative practices of the New Mexico State Engineer. Also, quantified expected well yield in Dona Ana County, New Mexico. |
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| Case No. 12 124/JNK before the International Court of Arbitration of the International Chamber of Commerce | 2005 | Expert reports Hearing testimony Affidavit | On behalf of Waste Management Inc. in a dispute over sale of a hazardous waste disposal facility in Mexico, with respect to the extent and potential effects of alleged contamination of soil and ground water. |
| El Rucio Land and Cattle et.al. vs . Forest Oil Corporation | 2012 | Expert reports (3 reports) Depositions (3 days) Hearing testimony | On behalf of the McAllen family and others regarding contamination of soil and ground water from oil and gas activities on the McAllen Ranch, Hidalgo County, Texas. |

| CASE | | WORK PRODUCT | DESCRIPTION AND ISSUES |
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| | DATE | | |

ADMINISTRATIVE PROCEEDINGS

| Rate case 1300, New Mexico Public Service Commission | 1976 | Written and hearing Testimony | On behalf of Santa Fe County, with respect to water rate application of Public Service Company of New Mexico. Sources of supply and characteristics of demand in Santa Fe, New Mexico with emphasis on implications for rate design. |
|--|------|----------------------------------|---|
| Environmental analysis, U.S. Forest Service | 1980 | Affidavit | On behalf of the Sierra Club Legal Defense Fund, regarding use of the lower San Francisco River, Gila and Apache-Sitgreaves National Forests, New Mexico. Primary subject was impact of off-road vehicle use on the San Francisco River and possible acceleration of erosion of important riparian habitat. |
| Water rights permit, State Engineer of New Mexico | 1980 | Exhibits | On behalf of applicants, submitted exhibits in support of water-rights applications of the City of Roswell and Mountain States Pecan; various file numbers. Protest to applications was withdrawn prior to hearing. |
| Wastewater discharge permit, Texas Department of Water Resources | 1982 | Hearing testimony | On behalf of landowners, with respect to wastewater discharge application by City of Midland. Changes in site hydrology caused by pond seepage and land application; water balance; salinity changes; odors; alternatives. |
| Environmental impact statement, U.S. Forest Service | 1983 | Affidavit | On behalf of <i>Save the Jemez</i> regarding Santa Fe National Forest management plan. Economic and environmental impacts. |
| Rate case 1750, New Mexico Public Service Commission | 1983 | Written appraisal | On behalf of Public Service Commission regarding rate application by Angel Fire Resort, Dr. Wilson prepared a written appraisal (dollar value) of certain water rights owned by the Applicant. |
| Water rights permit, Files into RG-40738, State Engineer of New Mexico | 1983 | Hearing testimony Deposition | On behalf of Cerro Ditch As sociation and Northern New Mexico Legal Services, with respect to McGee Trust application to change point of diversion from surface to ground water. Area hydrogeology; error in model submitted by applicant. |
| Coal mine permit application, Coal Surface Mining Commission, State of New Mexico | 1984 | Affidavit | On behalf of Sierra Club Legal Defense Fund regarding De-na-zin amendment permit application. Hydrologic and other issues. |
| Ground-water discharge plan, New Mexico Environmental Improvement Division | 1984 | Hearing testimony | On behalf of City of Grants, in support of Discharge Plan 60, co-authored by Lee Wilson. Plan and testimony dealt with City's application for sludge disposal and management; hydrologic impacts of project; monitoring proposals. |

| CASE | END DATE | WORK PRODUCT | DESCRIPTION AND ISSUES |
|---|-------------|--|---|
| Rate case 1836, New Mexico Public Service Commission | 1984 | Hearing testimony | On behalf of City of Rio Rancho, regarding water rate filing of Albuquerque Utilities, Inc. Evaluation of utility costs, rate base, rate of return, tax payments and rate design, with emphasis on rate-making policies appropriate to developer-owned utilities. |
| Rate case 1994, New Mexico Public Service Commission | 1986 | Written testimony | On behalf of commercial customers regarding rate application by New Mexico Utilities, Inc. Cost of service; reasonable costs for source of supply. |
| Water rights applications LRG-92 through LRG-357 and HU-12 though HU-71, New Mexico State Engineer | 1987-1988 | Hearing testimony (13 days) Deposition (15 days) Affidavits Exhibits | On behalf of the City of El Paso regarding permit applications to appropriate ground water. Layout of well fields and assessment of production potential; evaluation of surface supplies; dollar costs of alternative supplies (wells, pipelines, treatment, pumping costs); development of short- and long-term demand forecasts for average and peak periods; evaluation of supply reliability, ability to meet peaking and long-term demands; hydrologic data collection; complex modeling; rights-of-way on federal land. |
| Case No. 2428 New Mexico Public Service Commission | 1992 | Written and hearing testimony | On behalf of City of Santa Fe in case involving request for extension of water service. Documentation that there is no emergency need for the extension; severe water rights problems may result from extension; because of land use impacts, the extension process needs to continue to utilize City/County approvals. |
| File No. 057, 0931, 0932 & 0933 into RG-40450 through RG-40450-S-2, New Mexico State Engineer | 1992 | Hearing testimony Deposition Exhibits | On behalf of local land owners, Taos County, New Mexico. Testimony regarding inadequacy of proposed water rights; historical supply; return flows; impairment; public welfare impacts to wetlands; public welfare consequences given history of bad faith. |
| Discharge Plan - 839; New Mexico Environment Department | 1992 | Hearing testimony (written, oral) | On behalf of City of Sunland Park, regarding DP-839, ground water discharge plan for Santa Teresa Services Company. Issues: violations of standards; pollution from existing discharge; inadequate submittals; water budget. |
| Tri e nnial re view of stream s ta ndards by NM Wa ter Quality Control Comm. | 1993 | Written and hearing testimony Exhibits | On behalf of Los Alamos National Laboratory, regarding appropriate implementation of aquatic toxicity standards to NPDES permits; standards appropriate for ephemeral streams; standards for protection of wildlife and wildlife habitat. |
| Tra ns fer of water rights, New Me xi co Sta te Engineer Office | 1994 | Hearing testimony Exhibits | On behalf of Ski Area Containment Coalition, with respect to applications by the Santa Fe National Forest and the Santa Fe Ski Co. to change point of diversion and place and/or purpose of use of surface waters in order to expand snowmaking and skier capacity at the Santa Fe Ski Area. Principal issues included the water budget, past non-compliance, and public welfare. |
| Order No. 152, New Mexico State Engineer Office | 1994 | Hearing testimony Exhibits | On behalf of City of Las Cruces, and other communities, testify for a proposed rule governing "dedications" of water rights; issues primarily related to principles of efficient water right administration as applied to municipality. |

| CASE | END DATE | WORK PRODUCT | DESCRIPTION AND ISSUES |
|---|-------------|--|--|
| Supplemental well applications LRG-430-S-29 and LRG-430-S-30, New Mexico State Engineer | 1997 | Hearing testimony Expert report | On behalf of the City of Las Cruces, recommendations for criteria to a dminister water rights in the Jornada Basin. |
| File No. LRG-4793-S-9 and LRG-4793-S-10, New Mexico State Engineer | 1997 | Hearing testimony Exhibits | On behalf of applicant, need for and impact of wells in Anthony, New Mexico. |
| Water Rights Permit, File LRG-3284-LRG-3296 State Engineer of New Mexico | 1997 | Affidavit | On behalf of City of Las Cruces, regarding water rights administration in the Lower Rio Grande Basin. Providing technical assistance in the development of motions before the New Mexico State Engineer. Preparation of affidavits related to the hydrology of the Basin. |
| Tri e nnial re view of stream s ta ndards by NM Water Quality Control Comm./Los Ala mos National La boratory | 1998 | Hearing testimony Exhibits | On behalf of Los Alamos National Laboratory, regarding best management practices, non-point sources, natural sources of pollution; standards for protection of wildlife and wildlife habitat. |
| Hearings Case No. 98-042, OSE File No. 01994 & 02488 into 4726-T and 01304 into 4726 | 1998 | Deposition Affidavit Expert report | On behalf of Espanola Transit Mix and Piedra, Inc. in the matter of their application for a permit to change point of diversion and place and purpose of use of surface waters of the Rio Vallecitos/Rio Ojo Caliente to surface/ground water in Rio Grande underground water basin in New Mexico. Primary issues were quantification of water use at move-to site (gravel pit) and at move-from site (farm). |
| Mora Fish Hatchery Water Right Application #CR-2158-S et al | 1999 | Hearing testimony Exhibits | On behalf of protestants, regarding duty of water, historic shortage, irrigated a creage, offset requirements, historical issue. |
| Hearing on Unsuitability Petition P-4, Railroad Commission of Texas | 2000 | Hearing testimony Report Exhibits | On behalf of Al coa Mining, regarding suitability of an area for surface coal mining, in light of issues that included: the general nature of environmental regulations and the unsuitability petitioning process; hydrologic effects of pumping water for mine purposes; effects of mining on the endangered Houston toad; consistency between mining and local land use plans; other environmental impacts from mining, in the context of experience at other mines and as a general matter. |
| Railroad Commission of Texas Docket No. C1-0004-SC-00-A, Application for Surface Mining and Redamation Permit, Proposed Three Oaks Mine | 2002 | Written testimony | On behalf of Al coa Mining, regarding the environmental impacts expected from the proposed Three Oaks Mine, the acceptability of those impacts, and the applicability of surface mining regulations in mitigating the impacts. |

| CASE | END DATE | WORK PRODUCT | DESCRIPTION AND ISSUES |
|--|-------------|--|---|
| Water Rights Permit, File LRG-4793, S-2 & S-8, State Engineer of New Mexico | 2003 | Hearing testimony Exhibits Deposition | On behalf of the Anthony Water and Sanitation District, regarding application to use supplemental wells. Primary issue is effect of granting application on area streamflows, water quality and water rights. |
| Proposed Industrial Wastewater Discharge Permit No. 04348, Texas Commission on Environmental Quality; SOAH Docket No. 582-02- 3008, TCEQ Docket No. 2002- 0484-IWD | 2003 | Written and hearing testimony | On behalf of Al coa Mining, regarding a pplication for discharge permit for the Three Oaks Mine. Discharges are predominantly storm water from areas disturbed by surface mining, but may include water from a quifer dewatering and mine pit dewatering, along with some treated domestic wastewater. Testimony focused on data from Al coa's adjoining Sandow Mine, and whether there is evidence that discharges there have not caused degradation of water quality, exceeded permit standards, demonstrated a change in toxic releases and/or demonstrated the occurrence of acid mine drainage. |
| City of Albuquerque Application No. 4830, State Engineer of New Mexico | 2004 | Hearing testimony Expert report Exhibits | On behalf of City of Albuquerque regarding precedent setting application to divert surface water from the Rio Grande in the Amount of 94,000 AFY, with the sources consisting of water imported through the San Juan-Chama Project that will be consumed in its entirety, and native water that will be returned to the river in its entirety. Testimony dealt with the nature of the application, its relationship to the City's existing ground water rights and San Juan Chama rights, the conjunctive management of surface and ground water, and issues of impairment, public welfare and conservation of water. |
| Application of Canyon Regional Water Authority to Amend Certificate of Adjudication NO. 18-3834, as Amended (Application No. 18- 3834B); TCEQ Docket No. 2003-1067- WR, SOAH Docket No. 582-04- 4678 | 2004 | Affida vit | On behalf of Guadalupe-Blanco River Authority with respect to an application for water rights in the Guadalupe Basin. |
| New Mexico Office of the State Engineer OSE Hearing, 07-053 | 2008 | Exhibits, rebuttal exhibits | In support of Application No. SD-07603 into RG-2478 et al. filed by the Town of Bernalillo for Permit to Change Point of Diversion and Place and purpose of Use from Surface to Ground Water in the Rio Grande Underground Water basin of the State of New Mexico. Protested by Isleta Pueblo on grounds that State's administrative system is severely flawed. Exhibits related to impacts if application is approved. Protest was withdrawn and the application was approved. |

| CASE | END DATE | WORK PRODUCT | DESCRIPTION AND ISSUES |
|--|-------------|------------------------------------|---|
| SOAH Docket No. 582-06-038; TCEQ Docket No. 2006-042- IWD, TX | 2009 | Hearing testimony Expert report | On behalf of Sandy Creek Energy Associates, Inc., regarding an application for a water quality TPDES industrial wastewater permit for a proposed power plant in south central Texas. The testimony dealt with all aspects of permit compliance. |
| Al coa mine permit renewal Texas Railroad Commission Docket C7-0018-SC-48-C | 2010 | Affidavit | In support of Alcoa's renewalapplication. Affidavit addressed concerns of landowners regarding impacts from a change in an end lake location, particularly effects on water quality and drainage. |
| Well Permits, Barton Springs Edwards Aquifer Conservancy District, TX | 2010 | Expert report | In support of an application by KBDJ, Inc. for Well Drilling Authorizations from the District for a proposed monitoring well and a non-exempt Industrial water supply well. The permits were granted after settlement of a contested case. Report addressed concerns raised by city's regarding well impacts. |
| Water Rights Permit, File RG-2478 et al. enlarged State Engineer of New Mexico | 2011 | Exhibits | On behalf of the Town of Bernalillo, regarding application to increase permitted diversion. Protested by three Pueblos. Primary issue is effect of granting application on area streamflows and water rights. Settlement negotiations are completed and case is being remanded to State Engineer Staff. |
| New Mexico Office of the State Engineer OSE Hearing, various | 2006-2012 | Exhibits | Nume rous water rights applications for the City of Santa Fe have been protested and have proceeded to the point where Lee Wilson was designated as an expert and his exhibits were filed. In each instance the hearing was vacated (e.g. due to withdrawal of protest, settlement agreements, summary judgment). |
| City of Sunland Park NM v. Santa Teresa Services Co. 3rd Judicial District NM No. CV-96-754 | 2012 | Affidavit | Relating to City's 40-year water plan, in support of City's effort to have Court reach findings relevant to a n aggrieval of a permit decision made by the New Mexico State Engineer. |
| City of Sunland Park NM Application No. LRG-03150-D & LRG-03150-POD35, State Engineer of New Mexico | 2012 | Hearing testimony | On behalf of the City of Sunland Park regarding aggrieval of OSE decision on permits to change locations of wells within the Lower Rio Grande Underground Basin. Issues related to vested v. inchoate water rights held by city. |
| Al buquerque Bernalillo County Water Utility Authority Application No. S- 4831, State Engineer of New Mexico | 2012 | Affidavit | On behalf of ABCWUA regarding availability of un appropriated water in Rio Grande Basin; aggrieval of OSE denial. |

| The Town of Florence v Arizona Department of Environmental Quality (ADEQ) Appeal before Water Quality Appeals Board, Case No. 12-005WQAB | 2015 | Hearing testimony (8 days) Exhibits | On behalf of Town and others, evaluated a discharge permit issued by ADEQ for an in-situ copper mine pilot project. Participated in 8-week hearing with focus on issues of compliance, monitoring, and sufficiency of information for commercial project. Included extensive review of geologic, hydrologic and geochemical data and assessment of ground water flow and fate and transport models. Decision was to reject the ADEQ permit and remand for major changes. Revised submittals now under review. |
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| In the matter of the Application of Intrepid Potash OSE File L-4247 and L-2724 | 2016 | Written testimony | On behalf of Lea County with reference to water right applications in the Lea County Underground Water Bas in. Testimony related to appropriateness of potential permits. Lea County eventually withdrew its protest. |

PENDING CASES: JUDICIAL AND ADMINISTRATIVE PROCEEDINGS

STATE DISTRICT COURT

| Thirte enth Judicial District Court, Cibola County, NM, Cause No. CB-83-190-CV & CB-83-220-CV (Consolidated) | Acti ve | Expert report Deposition (3 days) | Water rights adjudication of Rio San Jose watershed on behalf of the Association of Community Ditches of Rio San José (<i>Kerr McGee Corp. v. USA</i>). Evaluation of Pueblo claims in Rio San José water rights adjudication, New Mexico. The focus of this expert report was on quantification of actual water supply, duty of water, and acreage. Recent effort has focused on settlement. |
|---|-----------|--------------------------------------|--|
| Superior Court of the State of California, Case No. 30-2008-00078246-CU-TT-CXC | On appeal | Expert report Deposition | On behalf of SABIC Innovative Plastics US, LLC and General Electric Company. Evaluation of perchlorate contamination of shallow groundwater from the former LNP site in the South Basin Ground water Protection Program area of the Orange County Water District. Data Card was also a client, and settled out prior to submittal of expert report. Case was decided in favor of SABIC but is on appeal. |

ADMINISTRATIVE PROCEEDINGS

| City of Santa Fe Northwest Well No. RG-68302 s upplement to RG-1113 thru RG-1118 | Acti ve | Expert report Rebuttal report | Regarding permit application: availability of water; nature and extent of claimed water right; whether the granting of the application would result in impairment of existing water rights; whether granting the application would be detrimental to the public welfare of the state; whether granting the application would be detrimental to the public welfare of the state; whether granting the application would be detrimental to the public welfare of the state; whether granting the application would be detrimental to the public welfare of the state; whether granting the application would be detrimental to the public welfare of the state; whether granting the application would be detrimental to the public welfare of the state. |
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| City of Gallup Hearing No. 09-003, OSE File No. G-22 thru G-22-3-S-58; G-22 et alP.R.; & G-22 et al. a mended | Active | Deposition (2 days) Affidavit Export reports. Exhibits | On behalf of the City of Gallup regarding the pending application for permits to appropriate ground water within the Gallup underground water basin of New Mexico. Key issues are developing a conjunctive use strategy to determine need for new wells, given the existing stressed aquifer and potentially unreliable surface water from a proposed federal project. |
| Guadalupe-Blanco River | Acti ve | Expert report | On behalf of GBRA regarding the hydrological and ecological impacts of a proposal to appropriate surplus PAGE 13 of 19 |

Authority Permit Application 12378

Guadalupe River flows for direct use and/or for storage in an underground or surface reservoir.

EXPERT ADVICE

These entries represent closed cases that did not requires worn testimony (reports, deposition, trial or hearing) by Dr. Wilson and active cases where Dr. Wilson has been retained as an expert but has not produced expert materials.

U.S. SUPREME COURT

1990. Case No. 65, Original, U.S. Supreme Court. On behalf of the Attorney General of Texas, conducted hydrologic analysis of documents related to water shortfall and salinity damages, Pecos River Compact

FEDERAL DISTRICT COURT

1983. Case No. CA-2-81-52, U.S. District Court, Northern District of Texas, Amarillo Division. On behalf of Phillips Petroleum Company, examined sources of brine contamination in Ogallala aquifer, Wheeler County, Texas. Settled prior to trial.

1993. Civil Action No. MO-91-CA-069 United States District Court, Western District of Texas. Designated as an expert by City of San Antonio, in case involving claims that actions should be taken to restrict pumping of Edwards a quifer to avoid taking of endangered species. Provided advice on hydrology of Edwards a quifer; probability of spring flow levels under alternative pumping scenarios; potential for artificial recharge to maintain springflows; water supply costs and alternatives for San Antonio.

1993. Cause No. CIV-93-0027-M, U.S. District Court for District of New Mexico. Designated as expert in the matter of *Schwartzman, Inc. v. General Electric, et al.*, on behalf of pipeline company. Case involved South Valley Superfund Site south of Albuquerque. Issues relate to ground-water contamination at Superfund site; settled without trial.

1994. Cause No. 93-03-1354-A, U.S. District Court, Cameron County, Texas. In the matter of *Alvear, et al. vs. Leonard Electric Products, et al.* On behalf of plaintiffs, researched possible cause-effect relationship between water-borne contamination and a cluster of neural tube defects (including anencephaly) in fetuses and live births in the area of Brownsville, Texas. Work included review of activities in Matamoros, Mexico. Case settled.

1996. Case No. CIV 96-506 MV/RLP, U.S. District Court, Albuquerque, New Mexico. Supported plaintiff in mediation of dispute over channel design, maintenance and erosion associated with an irrigation ditch in Taos County, New Mexico. Issues included water velocity, bed protection and erosion control measures.

2005. Cases No. CIV 05-4569 and CIV 05-4161, U.S. District court Eastern District Louisiana. Retained by BP Corporation to assist in cases relating to Hurricane Katrina. Complaints were dismissed prior preparation of any evidentiary materials.

2010. Retained by Guadalupe Blanco River Authority to a dvise on in litigation which asserts water management practices have resulted in the "Take" of endangered whooping cranes.

2011. Case No. CIV-7488SC, (Civil), U.S. District Court, New Mexico. Represented Santa Clara Indian Pueblo regarding water rights adjudication in the Santa Cruz Basin ("Abbott" case).

Active. Case No. 08 Civ. 00312, U.S. District Court, New York. Consulting to Coastal Eagle Point Company and El Paso Corporation regarding miscellaneous cases involving MTBE in New Jersey; other cases in New Hampshire, New York and Florida have been settled.

STATE DISTRICT COURT

1984. Case Nos. 20294 and 22600 consolidated, New Mexico District Court, Chaves County. Advised local irrigation interests on history and hydrologic aspects of certain water rights in the Rio Hondo Basin, as part of the Pecos River Basin.

1989. Case No. 86-142 (Civil), New Mexico District Court, Grant County, Sixth Judicial District Court. Advised engineering firm with respect to sources of acid runoff damage to bridge.

1992. Case No. 89-1063, Texas District Court, Harrison County, Texas, 71st Judicial District. Similar to 85-17120, summarized on page 5; settled without trial.

1992. Cause No. 85-17210-F Texas District Court, Harris County, Texas, 151st Judicial District. On behalf of the plaintiffs, in case similar to 85-17120; settled before trial.

1992. Case No. SF92-1652(C), First Judicial District, County of Santa Fe. In the matter of *Patricia L. Meza v. Richard Cook and El Llano, Inc.* Provided geotechnical advice regarding causes of subsidence in a subdivision; the adequacy of prior studies; and how such problems could have been dealt with adequately.

1993. Case No. 90-017868, Texas District Court, Harrison County, Texas, 11th Judicial District. On behalf of OXY USA, Inc., in the matter of William H. "Buster" Cole vs. Phillips Petroleum Company, et al. Analysis of claims regarding pollution of ground water; impact valuation; settled without trial.

1994. Case No. CV-92-73, New Mexico Seventh Judicial District Court, County of Sierra. On behalf of the defendant, in the matter of *Freddie J. Torres v. Dwight Newton d/b/a/, Cielo Vista RV* Park. Site inspection and evaluation in regard to drainage.

1996. Case No. 96-62 CV, Eighth Judicial District, County of Colfax. On behalf of plaintiff, developed a method for monitoring settlement of a water-rights dispute. Issues related to quantification of runoff, seepage and evaporation; monitoring of fill and spill of small reservoirs.

1999. Case No. B-97-1510-C, 119th District Court, Tom Green County, Texas. On behalf of Johnson & Johnson, Inc., in the matter of the Southwest Plaza Shopping Center, Inc., et al. v. Johnson & Johnson, Inc., et al., serving as an expert consultant/witness. Issues related to contamination of ground water by volatile organics such as PCE.

2003. Representative of City of Las Cruces on the Lower Rio Grande Hydrology Committee, a body formed to resolve technical disputes in the matter of *Thomas C. Turney, State of New Mexico, ex rel. Office of the State Engineer v. Elephant Butte Irrigation District, et al., No. CV 96-888.* Committee still exists but has been inactive for many years.

2005. Case Nos. 20294 & 22600, First Judicial District Court, Consolidated, Carlsbad Irrigation District Section. On behalf of parties objecting to the proposed Final Decree, in the matter of State of New Mexico ex rel. State Engineer, et al. v. Lewis, et al.

2011. Case No. D-1-GN-09-002760, District Court of Travis County, 200th Judicial District. Retained by Lower Colorado River Authority, Texas, for possible testimony in a case involving a contract dispute with the San Antonio Water System.

Active. Representing City of Santa Fe regarding water rights adjudication in the Santa Fe Basin, New Mexico ("Anaya" case). Issues relate to quantification and priority of water rights, legal status of return flows, management of domestic well claims. Negotiation of a stipulated claim is underway.

ADMINISTRATIVE PROCEEDINGS (in many cases these have no formal docket number)

1988. Rate case 2154, New Mexico Public Service Commission. On behalf of Sandia Peak Homeowner's Association, with respect to water rate application of Sandia Peak Utility Company. Evaluation of operation and maintenance costs, rate base and rate of return, with emphasis on rate-making policies appropriate to developer-owned utilities.

1990. Rate case 2278, New Mexico Public Service Commission. On behalf of the City of Rio Rancho, with respect to sewer rate application of Albuquerque Utilities, Inc. Emphasis on issues related to developer-owned utility.

1990. Rate case 2294, New Mexico Public Service Commission. On behalf of the City of Rio Rancho, with respect to water rate application of Albuquerque Utilities, Inc. Emphasis on issues related to developer-owned utility.

1993. State certification of NPDES permit, Los Alamos National La boratory. On behalf of LANL, developed draft testimony regarding improper implementation procedures utilized by state, with emphasis on standards appropriate to ephemeral streams and wildlife. State subsequently agreed to certify the permit as it had been written by EPA, and LANL agreed to perform a use-attainability study.

1994. Appeal of NPDES permit certification, City of Albuquerque. Key issues included mixing zone calculations, aquatic toxicity standards, compliance schedule and overall deficiencies with respect to State's implementation plan.

1994. Transfer of surface water rights of 03499-A through 03503-A into ground water wells UP-1112, UP-1113, UP-1114, UP-1068 San Miguel County, New Mexico. Transfer of water rights, Pecos River Learning Center. Key issues were establishing the historical shortage of supply for the transfer-from water rights; and calculating drawdown and streamflow depletion impacts. Exhibits were prepared for formal submittal.

2000. Docket No. C8-0059-SC-01-C; Sandow Mine, Texas Railroad Commission. Regarding an application by Alcoa Inc. for a lignite mining permit in south-central Texas.

2006. SOAH Docket No. 582-05-4493, TCEQ Docket No. 2004-1774-AIR. Texas Commission on Environmental Quality. Regarding Motion to Overturn Commission's approval of Water Pollution Abatement Plan (WPAP) for KBDJ Ruby Ranch Site.

2006. Panhandle Underground Water Conservation District. Regarding well permit applications by Canadian River Municipal Water Authority. Applications were approved.

2007. Railroad Commission of Texas. On behalf of Canadian River Municipal Water Authority regarding protest of an application for injection wells associated with secondary recovery in an oil and gas field.

2007. Post Oak Savannah Ground water Conservation District, TX. On behalf of Alcoa Corporation, regarding their 60 applications for Historic Use well permits.

2011. City of Las Cruces, Application LRG-5818 before the New Mexico State Engineer.

2012. Post Oak Savannah Ground water Conservation District, TX. On behalf of Alcoa Corporation, regarding their applications for Operating permits.

2014. Texas Railroad Commission Sandow Mine, Permit No. 1F. Advise Alcoa Corporation regarding their proposed bond release at Sandow Mine; and the long-term ground water monitoring program. Also supporting Corps of Engineer permitting.

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Active. Operator Cleanup Number 08-4175, Heritage Standard Corporation, Railroad Commission of Texas. Advising insurer regarding cause, investigation, and recovery of elevated chlorides, Crittendon Field, Winkler County, Texas.

Active. Operator Cleanup Program 04-2613, Railroad Commission of Texas. Advising McAllen Ranch on clean-up of contamination caused by Forest Oil. Co.

Active. Designated as an expert witness for Lea County with respect to a protest of a well application filed by Intrepid Potash.

OTHER (advice conveyed through counsel, but the was not related to any proceeding)

1990. Client: Chevron USA, Inc. Regarding computer modeling of shallow ground water in the area of the Chevron Refinery, El Paso, Texas.

1991. Client: Western Investment Associates. Regarding gasoline spill remediation.

1992. Client: Marathon Oil Company. Regarding remediation of large spill of condensate and brine in shallow alluvium and deep fractured a quifers; also permit a pplications for remediation wells.

1995. Client: Elf Atochem North America, Inc. Regarding a potential criminal complaint with respect to methyl parathion contamination in Bryan, Texas.

2000. Client: Champion Technologies. Advising re: chromium contamination, Hobbs, New Mexico.

2001. Client: New Mexico Attorney General. Advice regarding environmental impacts of Cerro Grande fire, with emphasis on potential that hydrologic changes in burned waters heds will lead to increased erosion and off-site transport of soils contaminated at Los Alamos National Laboratory.

2006. Client: Wheeler Peak Condominiums, Taos, NM. Advice regarding possible sources of iron contamination in water lines.

2010. Client: Chimayo Canyon Bed and Breakfast LLC. Letter report regarding water-rights transfer which was subject to approval by the Commissioners of Acequia de la Cañada Ancha.

2010. Clients: Occidental Petroleum Corp, Devon Energy Production Co, Bass Enterprises Production Co., Plains Exploration & Production Co, Yates Petroleum Corp. Advising Counsel regarding water and environmental issues from a proposed potash solution mining project near Carlsbad, Eddy County, New Mexico.

2012. Client: Scharbauer Ranch. Over period of many years, advised re: investigation and clean-up of pipeline hydrocarbon spill near Midland, Texas. Litigation has been filed by other landowners in area.

2014. Client: Kirby Inland Marine, TX. Advice relating to environmental issues resulting from an oil spill in Galveston Bay.

Active. Advising the Lehrer Family interests, Colorado County, TX, regarding development of ground water resources subject to local permitting requirements; regarding water supply available for rice irrigation based on streamflow hydrology; on whether certain gravel pits are waters of the State of Texas; on potential contracts to supply industrial water; and on issues related to the Lower Colorado River Authority.

Active. Advising Louisville Gas and Electric with respect to a claim filed with the Kentucky Public Service Commission that a limestone mine is the most economic site for disposal of coal combustion wastes, even though such disposal would be contrary to rules for CCR disposal recently adopted by EPA.

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Active. Advising City of Las Cruces with respect to ongoing litigation brought by the State of Texas regarding a pportionment of the Lower Rio Grande water supply; and brought by the State of New Mexico against an Operating Agreement for the Rio Grande Project.

Note the entries in this table focus on work performed under direction of counsel, most of which involve formal court or regulatory proceedings, and which require Dr. Wilson to be qualified as an expert. Not listed are Dr. Wilson's appearances in numerous less formal proceedings such as public hearings or meetings, even where (as has often occurred) Dr. Wilson is a sworn witness for the hearing agency.

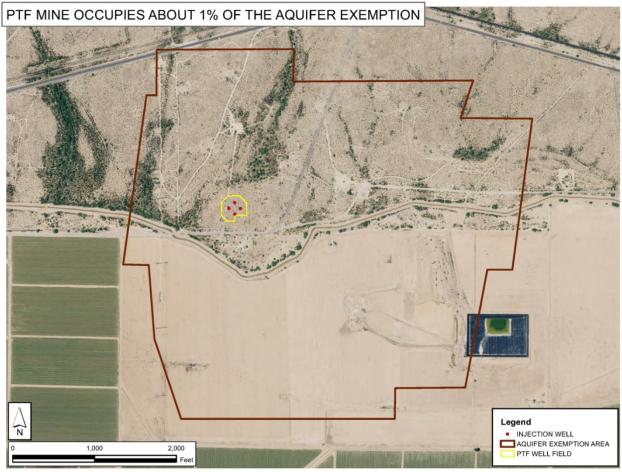


EXHIBIT C

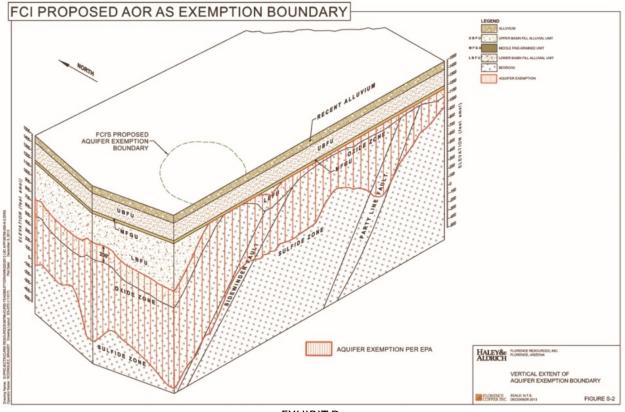


EXHIBIT D