


GWYN MCKEE

United States Nuclear Regulatory Commission Official Hearing Exhibit			
In the Matter of:		POWERTECH USA, INC. (Dewey-Burdock In Situ Uranium Recovery Facility)	
	ASLBP #:	10-898-02-MLA-BD01	
	Docket #:	04009075	
	Exhibit #:	APP-054-00-BD01	
	Admitted:	8/19/2014	
	Rejected:		
	Other:		
		Identified:	8/19/2014
		Withdrawn:	
		Stricken:	

Gwyn is the President of and Principal Wildlife Biologist for Thunderbird Wildlife Consulting, Inc. She serves as a primary contact for both the energy industry and regulators (local, state, federal) in the Northern Great Plains regarding project requirements and design, impact assessment, and mitigation strategies. Projects range from small, single-day site assessments to large, multi-year efforts. Gwyn prepares and/or reviews technical reports and documents used by agencies during the permitting process, including contributing to and/or managing environmental impact statements (EISs) and environmental assessments (EAs). She also occasionally serves as a peer review referee or co-author for professional journals, or an invited speaker at professional meetings.

Gwyn manages a staff of biologists that provides wildlife inventory, monitoring, and other consulting services to several energy clients. She has extensive experience conducting aerial and ground surveys for a wide variety of wildlife species in the Northern Great Plains, Midwest, and the Alaskan wilderness. In addition, her specialized experience includes: raptor ecology and mitigation; trapping, radio-marking, and tracking various grouse and raptor species; and conducting clearance surveys for black-footed ferrets and swift fox.

Her recent relevant experience includes: data collection, resource assessments, impact analyses, and/or project management for multiple Bureau of Land Management (BLM) and US Forest Service (USFS) National Environmental Policy Act (NEPA) documents; mitigation planning and implementation; and participation in development of a joint Candidate Conservation Agreement with Assurances/Candidate Conservation Agreement (CCAA/CCA) for the greater sage-grouse and seven other species of concern in northeast Wyoming. Gwyn is well versed in the regulatory processes associated with the Endangered Species Act, Migratory Bird Treaty Act, and Bald and Golden Eagle Protection Act. Her service on numerous local and statewide boards has further enhanced her knowledge and expertise regarding impact analysis and mitigation options for terrestrial habitats and species.

Years of Professional Experience

- Total: 27 years
 - With TWC: 20 years
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Current Location

- Gillette, Wyoming
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Education

- MS, Wildlife Management/ Ecology, University of Missouri, Columbia, 1995
 - BS, Wildlife Management, University of Missouri, Columbia, 1982
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Professional Standing(s) and Certifications

- Considered a Qualified Third Party NEPA Contractor by the BLM, USFS, and USFWS
 - Considered a Qualified Wildlife Biologist by the USFWS, USFS, BLM, WGFD, SDGFP, and MFWP
 - Published author/co-author in, and peer reviewer for, professional journals
 - Member of The Wildlife Society & Raptor Research Foundation
 - Black-footed ferret surveys, USFWS
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PROJECT EXPERIENCE

EISs and EAs, Casper High Plains District Office—BLM, WY and Douglas Ranger District—USFS, WY

Principal Biologist/Project Manager. Third-party Project Manager for a recently completed coal lease EIS with the BLM High Plains District Office in Casper, Wyoming, multiple coal-related EAs and an EIS with the USFS Douglas Ranger District in Douglas, Wyoming, and a conservation planning EA with the USFWS in Cheyenne, Wyoming. For all projects, coordinated and led all agency assigned aspects of the process from initial kick-off meetings through printing of the final documents, including: regular communications with resource specialists (internal and subcontractors), agency project managers, and project applicants; identifying and addressing data gaps (either directly or by engaging internal or subcontractor resource specialists); and either reviewing/co-editing (BLM) or preparing/editing (USFS, USFWS) the entire document to ensure completeness and “one-voice”, among others. Collected and/or supervised collection of wildlife field data for all projects following current agency protocols and prepared the associated resource assessments and impact analyses (i.e., text and maps) for NEPA documents, including any necessary supporting summary reports.

EIS/EA Project Manager List:

Thunder Basin Grasslands Prairie Ecosystem Association: CCAA/CCA/CA EA-USFWS, Northeast WY 2014

North Antelope Rochelle Mine: Mackey Road Relocation-USFS EIS, Campbell County, WY 2013

Antelope Mine: Plant Expansion (Railroad Spur)-USFS EA, Converse County, WY 2013

School Creek Mine: Ancillary Facilities—USFS EA, Campbell County, WY 2012

Buckskin Mine: Hay Creek II Coal Lease by Application—BLM EIS, Campbell County, WY 2011 (BLM plans to use EIS as future template for coal projects)

North Antelope Rochelle Mine North Pit 69kV Power Line Relocation and School Creek Mine 69kV Power Line Spur-USFS EA, Campbell County, WY 2010

North Antelope Rochelle Mine: Antelope Road Relocation-USFS EA, Campbell County, WY 2009

Also provided wildlife resource text and impact analyses for six (6) additional BLM coal EISs and one (1) additional BLM coal EA, and reviewed wildlife text and analyses prepared by a different contractor for two (2) BLM coal EISs (2000-present). These projects are not listed above but are available on the BLM Wyoming NEPA web link for the Casper, Wyoming District Office (most projects) or Miles City, Montana Field Office (one project).

NEPA-Related Documents: Buffalo, Lander, and Casper Field Offices—BLM, WY; Buffalo Field Office—USFWS, WY; Douglas Ranger District—USFS, WY; Nuclear Regulatory Commission-WY, SD; Rural Utility Services-WY

Principal Biologist/Data Collection and Impact Analysis

Collects relevant field data and prepares and/or reviews text and maps used in numerous NEPA support documents such as Biological Assessments, Biological Evaluations, Management Indicator Species appraisals, and Technical and Environmental Reports. These documents are incorporated into permit application packages submitted to the BLM, USFWS, USFS, Nuclear Regulatory Commission, and Rural Utility Services for a variety of energy-related and utility projects. 2000 to present.

Surface Mine Wildlife Monitoring and Reporting—WY, SD, MT

Principal Biologist/Data Collection and Reporting

Gwyn designs, manages, and conducts baseline wildlife inventories and annual wildlife monitoring at new and existing surface mines, respectively, and for expansions of existing mine properties. The overall coverage area has included more than 700 mi² at multiple surface coal, bentonite, and gold mines and in situ uranium projects in Wyoming, South Dakota, and Montana. Surveys encompass a variety of terrestrial vertebrates, including threatened and endangered and sensitive species (USFWS, BLM, USFS, and WGFD species), big game, lagomorphs, small mammal trapping, raptors, sage-grouse and other upland game birds, waterfowl, shorebirds, songbirds, and herptiles. Annual and baseline reports are submitted to federal and state agencies as part of permit application or amendment packages. 1994-present.

Impact Assessments, and Mitigation Planning and Implementation for Terrestrial Wildlife—WY, SD, MT

Principal Biologist/Data Collection and Impact Analysis

Gwyn routinely prepares USFWS-approved Avian Monitoring and Mitigation Plans for surface coal operators in northeast Wyoming, and similar mitigation plans for other energy-related projects in Wyoming, Montana, and South Dakota. She develops, modifies, and/or implements specific mitigation measures designed to minimize or mitigate impacts on wildlife from a wide variety of surface mine and utility projects. Recent special projects include management of sage-grouse telemetry projects in the Powder River and Big Horn basins, and prairie dog translocations to recreate mountain plover nesting habitat at a surface coal mine in northeast Wyoming. Gwyn also works with a group of private landowners as both a field biologist and in an advisory role during their ongoing development of a landscape-scale CCAA/CCA for the greater sage-grouse and seven other vertebrate species of concern in northeast Wyoming. These efforts have contributed to numerous state, regional, and national awards for the project proponents. 2000-present.

Electric Transmission and Distribution Projects—Powder River Energy Corporation (primary contractor) and Basin Electric (subcontractor), Powder River Basin, Wyoming

Principal Biologist/Data Collection, Reporting, and Impact Analysis. Manage and conduct biological inventories, habitat assessments, monitoring, and mitigation projects for T&E species and other vertebrates of concern for various transmission and distribution line projects for two electric coops operating in northeast Wyoming. Project size has ranged from 0.5 to 75 right-of-way miles. Develop and implement mitigation strategies for active and inactive raptor nests during and post construction. Prepare technical reports (including impact assessments) and mitigation plans; obtain, implement, and manage necessary state and federal permits. 2002 to present.

Sage-grouse Research—North Antelope Rochelle Mine, Campbell and Weston Counties, Wyoming

Principal Biologist/Project Manager. Captured, radio-collared, and tracked greater sage-grouse for voluntary, multi-year project in southern Campbell County and southwestern Weston County, Wyoming. This project provided current data regarding the home range, survival, nesting success, and general habitat use of grouse in a landscape heavily impacted by coal mining and oil and gas development. Efforts were expanded onto nearby private lands to assist ranchers with proactive management practices for this species. Results were summarized annually in a technical report provided to all interested entities (corporate, government) in the region. 2004-2008; project ongoing and expanded under ICF.

Black-tailed Prairie Dog Translocations for Mountain Plover Habitat Mitigation—Antelope Coal Mine, Converse County, Wyoming

Principal Biologist/Project Manager. Initiated and implemented a project to create mountain plover habitat in reclamation to mitigate the loss of habitat during surface coal mining. Constructed burrow chambers in artificial prairie dog colonies covering approximately 10 non-contiguous acres. Translocated 138 prairie dogs (males, females, juveniles) into the colonies over 5-year period; project is ongoing. Monitor prairie dog presence, reproduction, and expansion in the colonies annually, and survey for mountain plovers. This project garnered four state awards and one national award for the Antelope Coal Mine, including the Excellence in Surface Coal Mining & Reclamation National Award from the Office of Surface Mining in 2003. 2000-present.

Breeding Bird Surveys and Aerial Raptor Nest Searches—Thunder Basin Grasslands Prairie Ecosystem Association (Association), Powder River Basin, Wyoming

Managed and conducted annual breeding bird surveys at multiple properties for members of the Association using point count and belt transect methods. Conducted aerial raptor nest searches in targeted years. Project areas encompassed a sizeable portion of northern Converse County. Prepared maps and technical reports summarizing survey results for targeted project areas and incorporating results from comparable survey efforts elsewhere in the region. 2009-2012.

Black-footed Ferret Surveys—Multiple Clients (Coal, Pipelines, Railroad), Wyoming and Montana

Senior Biologist/Project Manager. Supervised and conducted snow tracking and spotlight surveys for black-footed ferrets prior to potential habitat disturbance. Projects have included surface coal and bentonite mines, natural gas pipelines, CO₂ pipelines, a railroad, and a coal-fired power plant in Wyoming and southeast Montana. Related survey work includes mapping prairie dog colonies and determining burrow density, coordinating with federal regulating agencies, and report preparation. USFWS certified for black-footed ferret surveys. 1994-2004 (surveys no longer required in NE Wyoming by early 2004).

Swift Fox Surveys—National Forest System Lands, NE Wyoming

Principal Biologist/Project Manager. Considered by the USFS as qualified to conduct track plate and nocturnal spotlight surveys for swift fox. Projects have included clearance surveys for overhead power line projects and surface coal mines on the TBNG in northeast Wyoming. Survey efforts and results were fully documented in the Biological Evaluations submitted to the Douglas Ranger District of the USFS. In addition to conducting the surveys, efforts included coordinating with the USFS, the local WGFD game warden, and the local Sheriff's Department to notify all relevant parties of spotlighting activity. 2002-present, as required.

Road and Utility (Water/Sewer) Projects and Water Treatment Plant—Northeast Wyoming

Supervised and conducted all required wildlife surveys and habitat assessments for vertebrate T&E species and other wildlife species of concern prior to construction of various water, sewer (collection and trunk lines), road, and water treatment plant projects in the cities of Gillette and Pine Haven in northeast Wyoming. Prepared summary reports and maps for submittal to state and federal regulators. 1994-present.

Coal Bed Natural Gas Biological Inventories—Multiple Clients, Powder River Basin, Wyoming

Principal Biologist/Project Manager. Supervised and conducted biological inventories, habitat assessments, wildlife inventories and monitoring, and mitigation projects for coal bed natural gas developments in northeast Wyoming. Target species included bald eagles, sage-grouse, raptors, mountain plovers, prairie dogs, and a variety of other BLM special-status species. Prepared appropriate reports for agency review. BLM used report format as model for other contractors to follow. 2002-2004.

Stormwater Management—Natural Gas Clients, Powder River Basin, Wyoming

Conducted pre-construction wildlife clearance surveys as well as monitoring for all phases of pipeline construction to document proper use of stormwater management structures and post-construction re-vegetation. Prepared stormwater plans, installed and maintained stormwater control structures. 2007-2008.

Other Related Experience (1980-present)

Worked for and with various organizations across multiple states: trapped more than 150 migrating and resident raptors of 7 species using 5 different methods; banded more than 300 raptors; radio-collared/tracked more than 50 raptors; reintroduced more than 100 raptors; identified/counted more than 1,350 migrating raptors of 17 species over 5 volunteer days; raptor rehabilitation, rearing, reintroduction, flight training, handling (eagles, vultures, hawks, falcons, accipiters, owls); trapped, banded, collared, radio-tracked more than 70 prairie grouse of 2 species; time-budget observations of nesting bald and golden eagles; vegetation sampling using various techniques in habitats ranging from the Northern Great Plains to the boreal forest of central Alaska; basic water chemistry and aquatic invertebrate sampling. Assisted local electric cooperative with creating voluntary raptor and sage-grouse protection plans. Currently assisting local group of property owners with development of a landscape scale joint CCAA/CCA for the greater sage-grouse and seven other species of concern encompassing six counties in northeast Wyoming and southeast Montana.

PUBLICATIONS AND PRESENTATIONS (in descending order)

Fedy, B.C., K.E. Doherty, C.L. Aldridge, M. O'Donnell, J.L. Beck, B. Bedrosian, M.J. Holloran, G.D. Johnson, N.W. Kaczor, C.P. Kirol, C.A. Mandich, D. Marshall, G. McKee, C. Olson, A. Pratt, and C.C. Swanson. 2013. Habitat Prioritization Across Large Landscapes, Multiple Seasons, and Novel Areas: An Example Using Greater Sage-Grouse in Wyoming (in review).

McKee, G., P. Griswold, and M. O'Rourke. 2013. Sustaining Raptor Populations at the North Antelope Rochelle Mine in Northeast Wyoming. Oral Presentation to be given at the 2013 National Meeting of the American Society of Mining and Reclamation, Laramie, WY Reclamation Across Industries, June 1-6, 2013. R.I. Barnhisel (Ed.) Published by ASMR, 3134 Montavesta Rd., Lexington, KY 40502.

McKee, G. 2010. Long-term Trends for Nesting Raptors and Prey Populations Relative to the Effects of Surface Coal Mining on Nesting Raptors in Northeast Wyoming. Invited presentation for the annual Raptor Research Foundation meeting. September 2010. Ft. Collins, CO.

_____. 2007. Wildlife Mitigation Techniques at Surface Coal Mines in Northeast Wyoming. National meeting of American Society of Mining and Reclamation. June 2007. Gillette, WY.

_____. 2007. Nesting Issues and Solutions. Invited presentation for 6th Avian Electrocution & Collision Prevention Workshop. February 2007. Albuquerque, NM.

_____. 2006. Nesting Issues and Solutions. Invited presentation for 11th International ESMO Symposium. October 2006. Albuquerque, NM.

- _____. 2006. Raptor Identification, Mitigation, and Regulation in Northeast Wyoming. Presentation at the Avian Protection Plan Public Forum hosted by Powder River Energy Corporation. March 2006. Gillette, WY.
- _____. 2006. Wildlife Issues in Reclamation. Presentation for a course on Reclamation Basics in the State of Wyoming at the Gillette Campus of the Sheridan Community College. February 2006. Gillette, WY.
- McKee, G., K.M. Clayton, H.R. Postovit, and B.C. Postovit. 2001. Long-term trends of wildlife use in native and reclaimed habitats in the Powder River Basin of northeastern Wyoming. Paper presented at the Interactive forum on surface-mining reclamation approaches to bond release: wildlife habitat construction and wildlife use of reclaimed lands in the arid and semi-arid west. August 2001. Gillette, WY.
- Clayton, K.M., G. McKee, B.C. Postovit, and H.R. Postovit. 2001. Consequences of mining, reclamation, and mitigation for raptors in the Powder River Basin of Wyoming. Paper presented at the Interactive forum on surface-mining reclamation approaches to bond release: wildlife habitat construction and wildlife use of reclaimed lands in the arid and semi-arid west. August 2001. Gillette, WY.
- McKee, G., M.R. Ryan, and L.M. Mechlin. 1998. Predicting greater prairie-chicken nest success from vegetation and landscape characteristics. *Journal of Wildlife Management* 62 (1): 314-321.
- McKee, G. 1995. Ecology of greater prairie-chickens in relation to habitat characteristics in southwestern Missouri. M.S. Thesis, University of Missouri-Columbia. Columbia, MO.
- Marshall, J.D., C.H. Hager, and G. McKee. 1986. The barn owl egg: weight loss characters, fresh weight prediction and incubation period. *Raptor Research*. Vol. 20, #3-4: 108-112

PEER REVIEWER ARTICLES

I have served as a peer reviewer for the following articles submitted to professional journals for publication.

- Atamian, M.T., Sedinger, J.S., Heaton, J.S. 2008. Landscape level assessment of brood-rearing habitat for greater sage-grouse in east-central Nevada. *Journal of Wildlife Management* 00 (0): 000-000 (to be published). Reviewed January 2008.
- Nguyen, L.P., Nol, E., Abraham, K.F. 2007. Using digital photographs to evaluate the effects of egg crypsis on survival of artificial and natural semipalmated plover nests. *Journal of Wildlife Management* 00 (0): 000-000 (to be published). Reviewed December 2006.
- Gregg, M.A., Dunbar, M.R., Crawford, J.A. 2006. Use of implanted radio transmitters to estimate survival of greater sage-grouse chicks. *Wildlife Society Bulletin* 00 (0): 000-000. Reviewed August 2005.
- Niemuth, N.D. Published year unknown. Characteristics of landscapes harboring primary and secondary populations of Greater Prairie-Chickens in Wisconsin. *American Midland Naturalist* 00 (0): 000-000. Reviewed February 2004.

RECENT AWARDS

Personal Awards

Wildlife Stewardship Award – 2008 Wyoming Game and Fish Department
Murie Audubon Society -2004 Conservation Award (nominated by USFWS Law Enforcement)
Monarch Lion-2004 Gillette Lions Club
Wyoming Wildlife Federation -2003 Special Merit Award
Lion of the Year-2003 Gillette Lions Club
Girl Scouts of Wyoming - 2002 Woman of Distinction Award

National or Regional Corporate Awards (Direct and/or Participate in Project)

2012 Excellence in Surface Coal Mining and Reclamation National Award - Supervised and/or assisted in long-term raptor monitoring and mitigation efforts at the North Antelope Rochelle Mine that resulted in this national award from the DOI Office of Surface Mining Reclamation & Enforcement (OSM)

2012 Citizen's Conservation Achievement Award – Central Mountains and Plains Section of The Wildlife Society. Awarded to the Thunder Basin Grasslands Prairie Ecosystem Association for their proactive, collaborative work on the joint, landscape-scale CCAA/CCA for the greater sage-grouse and seven other terrestrial species of concern (member participation).

2003 & 2009 - Created and implemented an innovative reclamation project for mountain plovers at a local surface coal mine that resulted in four awards at the state (three) and national (one) level for the mine during 2003, including the OSM's prestigious Excellence in Surface Coal Mining and Reclamation National Award. This project won a second award from the Wyoming Game and Fish Department in 2009 for Industry Reclamation and Wildlife Stewardship.

One coal mine and one electric utility corporation also have won awards from a statewide sportsmen's group for their innovative approaches to wildlife management in recent years.

RECENT VOLUNTEER COMMUNITY ACTIVITIES

Wyoming Wildlife and Natural Resource Trust Account Board – Appointed by the Governor of Wyoming to sit on the citizen board of the State's first Wildlife Trust Fund: March 2005-present.

Wyoming Wildlife Federation: Member 1997-present; Board of Directors – 2001-2011 (President 8/02-5/04, Secretary 5/05-5/07; volunteer on several projects).

Mallo Outdoor Education Camp for Campbell County 5th grade students: Botany Instructor – 2000-2012.

Campbell County Jr. High School Intramural Soccer program: Coach - 1998-2003.

Gillette Lions Club: Member – 1998-present; Board of Directors – 2001-2005 (Chair Eyeglass Collection - 5 years, Chair Early Vision Screening Program - 1 year).

NEW Bird Rescue and Rehab: Board of Directors – 2001-2010 (former Secretary).

Campbell County High School Mentoring Program: Mentored 2 students interested in careers in biology/wildlife for 1 semester each – 2001-2002.

Physically Challenged Bowhunters of America: Helped arrange hunting opportunities and guide antelope hunters in Campbell County – 2003-2004.

Donkey Creek Pathways Committee: Charter member of citizen's group working to establish a walking/bike path around the City of Gillette – 2004-2010; Board Vice President June 2005-2008.