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April 14, 2017

BY OVERNIGHT MAIL AND ELECTRONIC MAIL

40-8903

Director, Office of Enforcement [OE]
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike,
Rockville, MD 20852-2738

Deputy Director
Division of Decommissioning
Uranium Recovery and Waste Programs [DUWP]
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852-2738

Re: Confirmatory Order of March 28, 2017 modifying License No. SUA-1471, EA-16-114

Dear Sir or Madam:

Pursuant to Paragraph 9.a of the Confirmatory Order, Homestake Mining Company of California (HMC) provides the name and qualifications of FoxFire Scientific Inc., and their senior partners, Matthew Arno, Ph.D, and Gerald A. Schlapper, Ph.D for approval by the NRC as the independent assessor to review the results of the comprehensive assessment of facility operations directed by Paragraph 9. Foxfire will also provide independent review of the analysis required under Par. 6 of the Confirmatory Order, although the Order does not require prior approval of the independent assessor for that work.

The resumes for Foxfire and Drs. Arno and Schlapper are attached. Given the time frames within the work under the Confirmatory is to be accomplished, we respectfully request prompt action this request.

If you should request any further information regarding Foxfire, please contact me promptly at (415) 276-6526.

Sincerely,

Gerald F. George

Gerald F. George
Counsel For Homestake Mining Company of California

OEDO
NMSS01
NMSS
NRC/OE

cc: NRC Document Control Desk (hard copy)
cc: Patricia Holohan, Director of OE (email)
cc: Andrea Kock, Deputy Director of DUWP (email)
cc: Holton Barnes (email)
cc: Tom Wohlford (email)
cc: Michael McCarthy (email)

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Foxfire Scientific Qualifications Summary

The USNRC issued a confirmatory order to Homestake Mining Company of California (HMC) requiring, among other things, that HMC develop a root cause protocol and complete an assessment of all HMC activities and determine whether those activities are being conducted in compliance with NRC requirements. Both the root cause protocol and the assessment must be reviewed by an independent third party. A qualification statement for the independent third party reviewing the root cause protocol must be submitted with the protocol.[1] As a separate item, the name and qualifications of the consultant reviewing and evaluating the assessment must be submitted for NRC approval.[2] The qualifications of the independent third party reviewing the assessment require NRC approval whereas the qualifications of the independent third party reviewing the root cause protocol simply must be transmitted to the NRC. This qualifications summary serves as the description of Foxfire Scientific's qualifications to review and evaluate HMC's assessment and also presents our qualification statement regarding review of the root cause protocol.

Foxfire Scientific, Inc. is a veteran owned small business dedicated to providing clients with comprehensive environmental and operational health physics, and radiation protection engineering solutions of the highest quality. Foxfire Scientific, Inc. has enjoyed consistent growth since its incorporation in 1999 on a framework of specialized, senior-level services in health physics and litigation support. We conduct business both in the United States and abroad.

To each project, we bring a staff of highly qualified scientists and engineers with backgrounds in the military, federal government, industry, and academia. Our professionals offer nuclear industry experience with both MS and PhD educational backgrounds and a broad array of professional certifications and licensure (including CHP and PE). With our highly-qualified staff, technical reviewers, board certified professionals, and teaming partners, Foxfire Scientific has the depth of resources necessary to meet any client need across the environmental and operational health physics, and radiation protection engineering discipline.

Foxfire's staff resources include former NRC inspectors, Air Force, and Navy personnel with a diverse background in incident investigation, management oversight, and regulatory compliance auditing, review, corrective action program development and program implementation. Our fields of experience include military operations, the mining/milling and oil/gas industries, medical, and academic facilities.

For the last 13 years, Foxfire has been working as the radiological experts for the CERCLA remediation of a copper mine in Nevada with NORM (uranium and radium) contamination

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[1] Confirmatory Order Section III, preliminary settlement agreement item No. 6 and Section V license amendment paragraph 1.

[2] Confirmatory Order Section III, preliminary settlement agreement item No. 9a and Section V license amendment paragraph 4a.

issues in soils, surface water, and ground water. Although not regulated by the NRC, the issues and concerns are similar to those at HMC's facility.

Foxfire staff previously have assisted an NRC broad scope licensee with the review and correction of programmatic inadequacies and development of a validated training program and reconstructed a university's radiation safety program after the abrupt departure of all the previous staff after years of mismanagement. Foxfire staff have served as expert witnesses for toxic tort litigation involving uranium mines and mills. Both these types of projects involve extensive records review, sometimes well after the fact, forensic reconstruction of past practices and hazards and effects therefrom, analysis of regulatory compliance, development of corrective action programs, preparation of revised policies, programs, and procedures, and audit and oversight of program implementation. Routine services for clients including auditing of regulatory compliance, assistance with radiation safety program development, environmental characterization and remediation work planning, and performance of due diligence audits.

The lead Foxfire team members for this project will be Dr. Matthew Arno, CHP, PE and Dr. Gerald Schlapper, CHP. Summary CV for each of them are attached. Dr. Arno is the Foxfire Vice-President and company Principal Health Physicist for industrial (non-medical) radioactive materials licensee clients. Dr. Schlapper is a retired US Army Colonel and NRC Materials Inspector.

If you have any additional questions or need more information, please feel free to contact me at 817-995-6762 or arno@foxfirescientific.com.

MATTHEW ARNO, Ph.D., P.E., CHP

Education:

- Ph.D., Health Physics, Texas A&M University
- M.S., Nuclear Engineering, Massachusetts Institute of Technology
- B.S., Nuclear Engineering, Massachusetts Institute of Technology
- Medical Physics Certificate, University of Florida

Licenses & Certifications:

- Certified Health Physicist, # 1909
- Professional Engineer, State of Texas, license # 94411

Security Clearance:

Previous DOE "L" clearance (inactive) and trained as an authorized derivative classifier.

Experience and Training:

- Foxfire Scientific, Vice-President, Partner, Principal Health Physicist, January 2001 to Present.
- Texas A&M University, Visiting Assistant Professor, December 2002 to June 2004.
- Paducah Gaseous Diffusion Plant, Nuclear and Facility Safety Engineer, September 1994 to August 1999.
- Trained in multiple incident investigation/root cause analysis methodologies including:
    - Taproot™
    - Management Oversight Risk Tree (MORT)
    - HazOps/FMEA
    - Total Quality Management (TQM)
    - Kepner-Tregoe problem solving/incident investigation

Honors & Awards:

- Department of Energy Office of Civilian Radioactive Waste Management Fellow

Health Physics Society Robert S. Landauer Fellow

Publications:

A list of publications is available upon request.

Summary of Experience:

Dr. Arno began his career at the Paducah Gaseous Diffusion Plant (PGDP) while it was under DOE regulation. He was part of the team that developed the plant Safety Analysis Report (SAR) for the site's transition to NRC Certification, serving as a SAR chapter author and subject matter expert. He then served as the project manager and lead engineer for the recertification of the Paducah Tiger Type B overpack used to transport UF_6 cylinders and update of the safety documentation to current standards. Additionally, he was project manager and lead engineer for implementation of the OSHA 29 CFR 1910.119 Process Safety Management of Highly Hazardous Chemicals standard for the plant.

He was also a member of multiple engineering design teams for modifications to safety-related equipment, where he reviewed and approved mechanical and electrical engineering drawings and schematics and assisted with development of new and revised procedures related to the modifications. He investigated incidents and as-found conditions to evaluate plant safety and regulatory compliance, determine corrective actions needed and regulatory requirement modifications needed as appropriate.

He left PGDP to obtain his PhD, after which he was appointed as a Visiting Assistant Professor with the Texas A&M University Department of Nuclear Engineering. He taught courses in radiation detection and measurement with both laboratory and field equipment and was an investigator on multiple funded research grants which resulted in peer-reviewed publications.

For the last 16 years, Dr. Arno has been a Partner, Vice President, and Principal Health Physicist with Foxfire Scientific. He serves as the RSO of record or as a consulting RSO for multiple clients for both radioactive materials and radiation producing device licensees and registrants. Clientele include the medical, academic, industrial, oil & gas, and mining & milling industries.

His duties as an RSO or consulting RSO include administering the dosimetry program; maintaining regulatory licensing, registration and compliance; and radiation health and safety program and procedure development, maintenance, and implementation.

For various clients, he conducts radiation health and safety program development, licensing and regulatory support, and auditing for NORM, TENORM, medical, academic, and industrial radioactive material users. Duties include regulatory licensing support, health and safety plans and procedures development, personnel (worker and public) monitoring and dose assessment, incident investigation, and environmental monitoring. He has conducted due diligence audits and operational assessments in support of ownership and/or operational control transfer. Tasks included review of health physics practices, equipment inventory assessment, job task analysis, and regulatory compliance reviews

He is also a team member of the Oak Ridge Associated Universities project to implement the Energy Employees Occupational Illness Compensation Program Act of which Foxfire is a subcontractor.

GERALD A. SCHLAPPER

Education:

- Ph.D. Nuclear Engineering, University of Missouri at Columbia, 1977
- M.S. Nuclear Engineering, University of Missouri at Columbia, 1970
- B. S. Chemical Engineering, University of Missouri at Columbia, 1967

Professional License/Certification:

- Certified Health Physicist, American Board of Health Physics
- Qualified Lead Inspector, High Level Waste, US Nuclear Regulatory Commission
- Qualified Lead Inspector, Reactor Decommissioning and Complex Fuel Facilities, US Nuclear Regulatory Commission
- Qualified Technical Reviewer, US Nuclear Regulatory Commission
- Qualified Senior Technical Safety Manager, US Department of Energy
- Qualified Emergency Director, US Department of Energy/Department of Homeland Security (NIMS Certified)

Security Clearance:
Previous NRC "L", DOE "Q" and DOD Top Secret

Recent Experience:

- US Nuclear Regulatory Commission, Region IV, Division of Nuclear Materials Safety, Arlington, TX, May 2008 to March 2017, Inspector, Technical Reviewer and Alternate Radiation Safety Officer.
- US Department of Energy, National Nuclear Security Administration, Office of the Chief, Defense Nuclear Safety, Washington, DC, October 2006 to May 2008, Senior Technical Advisor.
- US Department of Energy, Los Alamos Site Office, Senior Technical and Safety Advisor, Manager of Occupational Safety and Health Team, Los Alamos, NM, October 2001 to October 2006.
- Los Alamos National Laboratory, Group Leader, Operational Health Physics July 1997 to October 2001, Team Leader, Radiological Engineering, July 1991 to October 2001, Los Alamos, NM.

Honors and Awards:

- US Department of Energy, Price Anderson Amendment Coordinator of the year, 2002
- Received Legion of Merit for service in US Army, June 2000
- Member, American Nuclear Society Standards Committee 14.1, Fast Burst Reactor Operations, August 1999 to present.

Publications:
A list of publications is available upon request.

Military Experience:
Retired Colonel, Medical Service Corps, US Army, 33 years of Active and Reserve Duty, Lead Inspector for Reactor Operations, Army Reactor Council, Deputy Chief of Staff for Operations, Pentagon, Washington DC, 1996-2000, Consultant, US Army Nuclear and Chemical Agency, Ft. Belvoir, VA 1992-2000.

Summary of Experience:
Began career at the University of Missouri Research Reactor as an Operator Licensed by the US Nuclear Regulatory Commission. Contributed to design of operating nuclear reactor fuel assemblies, justification of power upgrade to power of 10 MW including safety assessments and risk calculations, and served as nuclear material custodian with associated reporting requirements.

Upon completing Ph.D. degree moved to Texas A&M University where served as faculty member in Nuclear Engineering and Health Physics. In addition to teaching courses, obtained funded contracts, supervised research programs of Masters and Ph.D. candidates. Generated over 30 publications in recognized scientific and engineering journals.

Transitioned to position with the University of California, Los Alamos National Laboratory following 10 years at Texas A&M. Worked in the area of radiation protection in various roles developing safety standards and procedures, assessments of radiation risk and training/ supervision of technical staff. Participated in oversight of corrective action programs, quantification of experiment risks, and review of safety incidents. Served as chairman of the Reactor Safety Committee.

Joined US Department of Energy in the Los Alamos Site Office in 2001 as the Senior Technical and Safety Manager providing government oversight of all operations at the Los Alamos Nation Laboratory and serving in independent reviewer role at Livermore National Laboratory and Sandia National Laboratory. Participated in numerous safety studies to include nuclear explosive safety studies. Received awards for contribution to nuclear safety enforcement program of the Department of Energy.

In May 2008 entered service as an inspector with the Nuclear Regulatory Commission and completed training in procedures for inspection and enforcement. Formal courses taken included risk assessment, corrective action program evaluation, techniques of inspection, written and personal communication, fault and event tree analysis and root cause analysis. Formal courses were enhanced with on the job training. Following completion of training began inspection and licensing activities as fully qualified lead inspector.