MARINE VENTURES

KEN FUCIK, M.S.

Marine Environmental Consultant

Mr. Fucik completed his M.S. Oceanography at Texas A&M in 1974 where he then remained as a research associate in the biology department until 1977. During this time, he was engaged in research projects to evaluate the fate and effects on oil in the marine environment. Mr. Fucik then joined Science Applications Incorporated (SAI) where he was involved in environmental projects in Alaska, Colorado, Wyoming and Utah.

Education

M.S. Oceanography, Texas A&M University, 1974

B.S. Zoology, Texas Tech University, 1971

Many of these projects involved mining operations associated with oil shale, coal, uranium and other hard rock activities. In 1983, he left SAI and joined Continental Shelf Associates and provided management operations for the western U.S. He was also involved in environmental monitoring and impact assessment projects off the California coast, Alaska, Texas, and Puerto Rico. In 1987, he started his own company (The SeaCrest Group). SeaCrest developed into a nationally recognized aquatic toxicology lab specializing in testing services for municipal and industrial clients subject to NPDES permitting requirements. The lab expanded its services to include analytical services which involved ownership and management of Vista Labs (Broomfield) and Envirolab (Lima, Peru). The majority of this work included projects designed to address water quality issues from mining, oil and gas and municipal wastewater discharges. At the same time, the company moved into international projects which included a multiyear study doing remediation of a major oil production site in the Peruvian Amazon. Mr. Fucik was also contracted to provide technical support in negotiations over a natural resource damage claim resulting from a gas well blowout in Bangladesh. He ultimately remained in country for two years during which time he helped manage the reclamation of the impacted tea plantation and national forest and then supported the company's HSE department in permitting a gas plant and five wells.

Mr. Fucik sold his company in 2007 and has since worked as a contractor or employee to energy companies including Occidental (services provided in Bangladesh, Oman and Peru), Exxon Mobil (supporting an Iraq oil development project from Houston), BP (supporting Gulf of Mexico drilling), and Noble Energy (Israel). Over the years, Mr. Fucik was involved in projects that included environmental permitting of an enhanced oil recovery project in the Oman desert which included many water use and management issues as well as disposal of residual salt wastes from water treatment. In his most recent position with Noble Energy, Mr. Fucik directed a staff of eleven people to provide environmental and health and safety expertise for Noble's offshore and onshore oil and gas development projects in Israel. These operations included production, exploration and drilling, and permitting and oversight of a gas plant and compression facility and a proposed FPSO project. In all of his assignments both in the U.S. and abroad, Mr. Fucik has been actively involved in engaging, interacting, and negotiating with regulatory agencies.

Mr. Fucik retired from Noble Energy in March 2016 and currently provides technical expertise on a contracted basis. In his most recent assignments, Mr. Fucik was contracted to prepare an expert report on toxicity testing in offshore oil and gas operations and has provided expertise on the use of GIS tools in asset management and database construction for compliance tracking.

EXPERIENCE

2016 to Present: Consultant

- Provided an assessment of aquatic toxicity test methodologies and their applicability to monitor impacts from drilling muds for an operator in the eastern Mediterranean. The report was submitted as an appendix to an Environmental Impact Assessment for a drilling project.

2013 to 2016: Noble Energy, HSE Manager – Israel

- Managed a staff of 11 environmental and safety professionals overseeing drilling, production, and construction activities. During his tenure, Mr. Fucik's staff was responsible for HSE activities for two offshore

gas production platforms and an onshore gas production facility. Environmental permitting was provided for five wells and for development of a gas field including 30 wells, an FPSO and pipelines. Mr. Fucik coordinated with production staff in developing a safety and environmental management system (SEMS) for the operations. The SEMS was developed to meet BOEM regulations. Mr. Fucik's staff also developed an environmental management system to meet ISO 14000 standards. He also involved in developing a compliance management program for the business operations to insure Israeli and applicable international environmental regulations and standards were met. Mr. Fucik's and his staff were responsible for communications and negotiations with the Ministry of Environment and the Ministry of Energy on environmental issues.

2012 to 2013: BP, Environmental Advisor – Wells, Houston

- Supported drilling operations for five rigs in the Gulf of Mexico. This included monitoring operations to insure compliance with discharge and waste disposal operations. He was also a member of an Offshore Operators Committee group addressing new discharge requirements under the NPDES General Permit. Mr. Fucik was also working with an internal BP technical committee to evaluate the toxicity, persistence and biodegradability of drilling mud chemicals.

2010 to 2012: ExxonMobil Iraq Limited, Sr. Environmental and Regulatory Advisor, Houston

- Supported the development of environmental permitting for the Iraqi project which included drilling, ongoing production and new construction projects. He was also assigned responsibility for developing the waste management program for the operations.

2005 to 2010: ExxonMobil Iraq Limited, Sr. Environmental and Regulatory Advisor, Houston

- Provided environmental permitting expertise for the two major development projects. Mr. Fucik managed development of the Environmental Impact Assessments for these projects which included over 2000 wells for Mukhaizna. This project also involved construction with over 3000 workers and major water quality issues associated with use of mechanical vapor compressors. The EIS was produced to meet U.S. and international standards.

1987 to 2007: The SeaCrest Group, Owner/General Manager, Louisville, Colorado

- Built SeaCrest into an international firm that owned and operated aquatic toxicology and analytical chemistry laboratories in the U.S. and Lima, Peru. The Lima laboratory was a partnership of Peruvian and U.S. partners and imported USEPA methodologies to provide data that met U.S. standards. The company also expanded its operations to include extensive consulting operations in Peru to develop and implement methodologies to reclaim Amazon jungle environment from long term oil production. The company also responded to a gas well blowout in Bangladesh. The lab conducted a study for the Minerals Management Service to assess the impacts of oil and dispersed oil on the eggs and larvae of eight marine species from the Gulf of Mexico. The company also provided the laboratory support to evaluate the effects of dispersed oil and produced water discharges in the Java Sea.

1983 to 2005: Continental Shelf Associates, Sr. Scientist, Florida/Texas/California

- Supported oil and gas permitting activities in the Gulf of Mexico, California and Alaska.

1977 to 1983: Science Applications Incorporated, Sr. Scientist, Colorado

- Provided technical expertise on a contract with the National Oceanic and Atmospheric Administration evaluating and synthesizing environmental studies for Alaska offshore regions from southeast Alaska to the Chukchi Sea. Part of the Damage Assessment Team assigned responsibility for developing the environmental monitoring program for the western Gulf of Mexico following the IXTOC spill in the Bay of Campeche.

REPRESENTATIVE PUBLICATIONS

Faulk, Kimberly L, Ken Fucik, Ole Varmer, Shelley Wachsmann. 2017. Towards a Global (Public-Private) Protection Model OTC-277739-MS. Paper to be presented at the 2017 Offshore Technology Conference, Houston, Texas. (This paper will discuss a new model for preserving nautical archeological resources and promoting opportunities for study while limiting liabilities for offshore operators).

Fucik, K.W., K.A. Carr, B.J. Balcom. 1995. Toxicity of oil and dispersed oil to the eggs and larvae of seven marine fish and invertebrates from the Gulf of Mexico, pp. 135-171. In Peter Lane (ed.), The Use of Chemicals in Oil Spill Response. ASTM STP 1252, Philadelphia. 340 pp.

Fucik, K. 1992. Toxicity identification and characteristics of produced water discharges from Colorado and Wyoming, pp 187-198. In Ray, J.P. and F.R. Engelhardt (eds.), Produced Water: Technological/Environmental Issues and Solutions. Plenum Press, New York. 616 pp.

Fucik, K. (principal author). 1991. The role of biomonitoring in measuring reclamation success at a hazardous waste site, pp. 212-222. In M.A. Mayes and M.G. Barron, (eds.) Aquatic Toxicology and Risk Assessment: Fourteenth Volume. ASTM, Philadelphia, PA. 383 pp.

Fucik, K. (co-author). 1988. Compliance bioassay testing: variability in U.S. commercial laboratories evaluating drilling fluid effluents. Proceedings of the 1988 Drilling Mud Symposium, Calgary Canada, 1988.

Fucik, K. (co-author). 1984. Ecological considerations for the use of dispersants in oil spill response, pp. 363-377. In: T.E. Allen (ed.), Oil Spill Chemical Dispersants: Research, Experience, and Recommendations. ASTM Special Publication 840, ASTM, Philadelphia. 465 pp.

Fucik, K. (principal author). 1984. Measurements of damage, recovery, and rehabilitation of coral reefs exposed to oil. In: J. Cairns and A. Buikema (eds.), Restoration of Habitats Impacted by Oil Spills. Butterworth Publishers, Stoneham, MA.

Fucik, K. (co-author). 1983. The food habits of juvenile salmonids of two Alaska marshes. Estuaries 2: 102-114.

Fucik, K. and I. Show. 1981. Environmental synthesis using an ecosystems model, pp. 329 354. In: B.S. Middleditch (ed.), Environmental Effects of Offshore Oil Production. The Buccaneer Gas and Oil Field Study. Pergamon Press, New York.

Fucik, K. (co-author). 1979. Physiological basis of differential sensitivity of fish embryonic stages to oil pollution, pp. 85-108. In: F.J. Vernberg, W.B. Vernberg, and A. Calabrese (eds.), Marine Pollution: Functional Processes. Academic Press, New York.

Fucik, K. and S. El-Sayed. 1979. Effect of oil production and drilling operations on the ecology of phytoplankton in the OEI study area, pp. 325-353. In: C.M. Ward, M.E. Bender, and D.J. Reish (eds.), The Offshore Ecology Investigation. Effects of Oil Drilling and Production in a Coastal Environment. Rice University Series, Vol. 65. Rice University, Houston, TX.

Fucik, K. (principal author). 1977. The uptake of naphthalenes by the clam, Rangia cuneata, in the vicinity of an oil spill separator platform in Trinity Bay, Texas. In: Proceedings, 1977 Oil Spill Conference (Prevention, Behavior, Control, Cleanup).

Fucik, K. and J. Neff. 1977. Naphthalene uptake by the temperate clam, Rangia cuneata, and the boreal clam, Protothecа staminea, under varying conditions of temperature and salinity, pp. 305-312. In: D.A. Wolfe (ed.), Fate and Effects of Petroleum Hydrocarbons in Marine Organisms and Ecosystems. Pergamon Press, New York.

Fucik, K. 1974. The effects of petroleum operations on the phytoplankton ecology of the Louisiana coastal waters. M.S. Thesis, Texas A&M University. 82 pp.