

Michael Bronson, PhD  
BP Exploration (Alaska) Inc.  
Anchorage, Alaska 99519  
564-4566

## EDUCATION

Doctorate, Zoology, University of California, Berkeley, 1977  
Bachelor of Science, Zoology, University of California, Davis, 1971

## EXPERIENCE

Crisis Management Coordinator, BP Exploration (Alaska) Inc. September 2002 to present

**North Slope Oil Spill Contingency Plans.** Chief author of 22 oil spill contingency plans for BPXA's North Slope assets. Conduct regular negotiations with state and federal agencies in support of oil spill prevention and response developments. Instruct North Slope facilities in spill prevention.

**Oil Spill R&D.** Manage BPXA's oversight of oil spill research and development, including projects sponsored under II.A.5 of the Charter for Development. Projects include marine modeling by NOAA, oil dispersion modeling with National Institute of Standards and Technology, broken ice tactics and viscous oil pumping tests with Alaska Clean Seas. Participated in Helsinki wave tank tests of effectiveness of ice breaker vessel thrusters in aiding chemical dispersion of oil.

Contingency Planner, BP Exploration (Alaska) Inc. April 2001 to present.

**North Slope Scenarios.** Authored the oil spill response scenarios in BP's five contingency plans. The scenarios drive BP's current response equipment and training commitments.

**Point Thomson Oil Spill Contingency Plan.** Drafted the Point Thomson oil spill contingency plan with Crisis Management Unit staff. Negotiated facility plan elements with ExxonMobil Houston engineers and negotiated spill planning elements with the Alaska Department of Environmental Conservation.

**Cook Inlet Pipeline Incident Management.** Performed wildlife response planning, dispersant permit, and sensitive area identification roles in the Cook Inlet abandoned pipeline Incident Management Team in Nikiski.

**NRDA Unit Leader.** Expanded the role of the state/federal NRDA working group in BPXA's IMT..

Senior Biologist, IT Alaska, Inc. (formerly EMCON Alaska, Inc. and America North, Inc.), Anchorage, Alaska. April 1989 to April 2001.

**Beaufort Sea 2000 Tests.** Chief scientist for BP and Alaska Clean Seas' Spring 2000, Fall 2000 and Spring 2001 broken ice equipment tests. Wrote the test protocols, acted as lead data recorder, and authored the three primary data reports. The results showed the affects of ice on capabilities of existing tactics and fulfilled BP compliance orders by consent (COBC) remedial measures.

**North Slope Scenarios.** Wrote the master guidance document for North Slope oil field spill contingency plan response scenarios in 1997 and 1998 on behalf of industry and agency Project Team. Determined the numbers and capacities of skimmers, vessels and storage barges necessary to meet seven response-planning standards with liquid process calculations, in support of the Joint Industry/Agency North Slope Spill Response Project Team. The effort, sponsored by ARCO and BP Exploration via Alaska Clean Seas, resulted in new equipment configurations and accelerated approval of contingency plans for eight assets, including Northstar production island. Also main contributor to most of the current Phillips and BP North Slope contingency plan scenarios.

**North Slope Spill Response Technical Manual.** Facilitated the North Slope Project Team's Tactics Group to select Slope-wide uniform oil spill response tactics on behalf of Alaska Clean Seas. The group included tacticians from Alyeska, ARCO, BP Exploration, Alaska Department of Environmental Conservation, Navy SupSalv, Cook Inlet Spill Prevention and Response, Inc., U.S. Coast Guard MSO and Alaska Clean Seas. Managed research for the Alaska Clean Seas Technical Manual tactics and protection sites in 1997 and 1998. Determined 40 priority-sensitive sites on the North Slope with biologists from ARCO, BP Exploration and government trustee agencies. The Technical Manual became incorporated by reference as the core document in all North Slope oil spill contingency plans and streamlined those documents.

**North Slope COBC Report.** On behalf of BP's Crisis Management Unit, wrote "Compliance Orders by Consent: Report on Remedial Measures 19 to 22," December 2000. The report provided required documentation of equipment tests and other studies to Alaska Department of Environmental Conservation to fulfill several remedial measures. Illustrated the new spill response strategies expected for BP's contingency plans in 2001.

**Northstar Winter Sampling.** For BP Exploration, managed the 1999 Northstar Sediment Chemistry Monitoring Program. Incorporated agency design recommendations. The project collected samples through 3 feet of sea ice and analyzed them for very high resolution quantitated polyaromatic hydrocarbon fingerprints, five metal and two sewage indicators. The results indicated no significant differences since the Minerals Management Service sampling in the late 1980's. The results also supported an NPDES permit.

**Sensitive Areas Compliance.** Managed the expansion and maintenance of SERVS Graphical Resource Database 1993 to 1999. Supported Alyeska's Industry Representative on the Prince William Sound Steering Committee's Coastal Resources Working Group and the Alaska Regional Response Team's Sensitive Area Work Group. Worked with trustee agencies to incorporate their animal distribution and other records into the database to meet their priorities and help Alyeska comply with state contingency planning requirements for TAPS-trade tankers.

**Applied Science for Contingency Plans.** Expanded the Supplemental Information Documents that demonstrated the capabilities of Alyeska Pipeline Service Company regarding environmentally sensitive area protection, chemical dispersant use, in situ burning, bioremediation, waste management and wildlife rehabilitation to meet state and federal regulations. The documents were incorporated into Oil Discharge Prevention and Contingency Plans for Prince William Sound tankers, Valdez Marine Terminal, and the trans-Alaska pipeline system and helped the plans win agency approval.

**North Slope Hydrotest Contingency Plan.** On behalf of Phillips Alaska, Inc., wrote the spill contingency plan for Alpine sales pipeline hydrotest with salt water in 2000, with important biology sections from ABR Inc. and Jay McKendrick. The plan helped Phillips fulfill a requirement of the Joint Pipeline Office.

**Tesoro NRDA.** Initiated Tesoro Hawaii Corporation's cooperative Natural Resource Damage pre-assessment with Kauai Island federal and state trustee biologists following a fuel lightering-hose spill in 1998. Initiated Tesoro's joint surveys of seabirds, endangered monk seals, and intertidal invertebrates with Department of Defense, National Marine Fisheries Service, U.S. Fish and Wildlife Service, and Hawaii Department of Land and Natural Resources. Quickly focused trustee studies on those populations and sites most likely affected, and identified the resources requiring no further assessment.

**Exxon NRDA.** On behalf of Exxon, managed 25 scientists conducting 10 marine-water and sediment-chemistry investigations for two years following the Exxon Valdez oil spill. The work comprised oversight of cruise logistics in Prince William Sound, outer Kenai coast and Kodiak Island, scientific report writing, and coordination with eight laboratories. Worked with laboratories to generate very high resolution quantitation of polyaromatic hydrocarbons to indicate the oil's source and weathering rate for litigation support. Managed shoreline cleanup monitoring projects in support of operations. Results indicated which areas no longer required cleanup treatment.

**Other Ship Casualties.** Managed sampling and analysis of water, sediment, and tissue in following incidents with the Eastern Lion in Port Valdez and Hyundai No. 12 in Shumagin Islands. Worked jointly with agency trustees under the federal NRDA rules, Department of the Interior 43 CFR 11 and NOAA 15 CFR 990. Responded to two

additional spills at Valdez Terminal berths to provide scientific support for industry. Investigated a stranded crab processor vessel on two trips to St. Paul Island for the marine insurer's attorney to determine potential effects of crab cargo on wildlife refuge. Residual cargo indicated no significant potential effect on fish and wildlife, and did not require segregation and disposal.

**Highway NRDA.** For the Washington Department of Transportation, initiated an inter-agency cooperative planning approach where Route 100 failure had injured wetlands. Department of Ecology and NOAA accepted the restoration in lieu of Natural Resource Damage payments.

**Railroad NRDAs.** Provided technical leadership for a cooperative Natural Resource Damage settlement on behalf of Burlington Northern Santa Fe Railroad in 1996. Calculated state of Washington compensation schedule and quantity of recovered oil. Directed sampling and shoreline surveys in Puget Sound following diesel spill from derailed locomotives near Tacoma. In 2000, wrote "pre-assessment" plans in response to the Alaska Railroad's 120,000-gallon oil spill at Gold Creek for the Alaska Department of Natural Resources and Alaska Department of Fish and Game on behalf of Alaska Department of Environmental Conservation.

**Table-Top Exercises.** Carried out many oil spill sampling drills in Alaska and on the west coast for six oil companies in cooperation with trustee agencies. Participated as Alyeska Environment Unit's sampling team leader at the annual Level III Prince William Sound drills from 1990 to 1997. Drills included Spill of National Significance, MPU 1996 Mutual Aid Drill and other PREP drills. Also prepared in situ burning and dispersant application and wildlife response permit checklists for Alyeska, BP Exploration, Unocal, Shell Western and Cross Timbers.

**NRDA Pre-Spill Plans.** Developed Natural Resource Damage Assessment contingency plans for BP's North Slope oil fields and Prince William Sound tanker lanes as well as for the trans-Alaska pipeline, Valdez Terminal, and Prince William Sound on behalf of Alyeska. Wrote Natural Resource Damage Assessment plans for several other Alaska oil companies. Invited to present five NRDA pre-spill workshops sponsored by oil companies to discuss emergency preparedness under OPA 90. As a result, potential spillers became aware of new regulations and the importance of pre-spill, cooperative planning for NRDA.

**Sampling Training.** Taught oil spill sampling techniques and OSCP 18 to Alyeska Environment group and operations staff at several presentations. Assisted SERV S with its Shoreline Cleanup Assessment Team training for three years.

**Cap Review.** On behalf of BP and the five Alaska Oil Spill Removal Organizations, wrote "Proposal for Alaskan Regional Cap Review of In Situ Burning Capabilities" for marine-transportation related facilities and tank vessels. The evaluation was submitted to the US Coast Guard for consideration of in situ barrel-for-barrel credit against mechanical recovery equipment cap increases in Alaska.

**ISB Modeling.** On behalf of Alaska Department of Environmental Conservation, evaluated the performance of the National Institute of Standards and Technology's smoke plume trajectory model for in situ burning from 1996 to 1998. Incorporated reviews by EPA Region 10, EPA Office of Air Quality Planning and Standards, NOAA, and other experts. Tested model accuracy using OAQPS protocols and particulate matter (PM-10) test records. The result was shorter safe distances from potential in situ burns and greater on-scene coordinator confidence in smoke predictions.

**ADEC ISB Guidelines.** Revised the *In Situ* Burning Guidelines for Alaska on behalf of the Alaska Regional Response Team in 1998. Updated the guidelines to comply with new National Ambient Air Quality Standards. Incorporated recent research results. The guidelines became more user-friendly and reliable.

**Dispersed Oil Fluorometry.** On behalf of SERV S and Cook Inlet Spill Prevention and Response, Inc., developed fluorometer sampling capabilities for chemically-dispersed oil in Prince William Sound and Cook Inlet. Assembled Turner fluorometers and a supporting kit consistent with US Coast Guard SMART protocols. Tested them in joint field deployment exercises and with bench standards in 1996, 1998, and 1999. The capability let the cooperating plan holders comply with a state planning requirement. Taught water column fluorometry monitoring of dispersed

oil for Alyeska in 2000 and 2001, and exercised it with Alyeska in 1996 and CISPRI in 1998, to comply with regulatory commitments.

#### SELECTED PUBLICATIONS

Ice Effects on a Barge-Based Response System in the Alaskan Beaufort Sea. M. Bronson, E. Thompson, F. McAdams and J. McHale. Arctic and Marine Oilspill Program Technical Seminar. Pp. 1253-1267. 2002.

Mini Barge Shuttle Speeds in Ice. M. Bronson, E. Thompson, F. McAdams and J. McHale. Arctic and Marine Oilspill Program Technical Seminar. Pp. 1367-1369. 2002.

The Graphical Resource Database- Vital Tool for Sensitive Area Planning. P. Hankins, M. Bronson and D. Wilson. 2001 International Oil Spill Conference.

Planning Oil Spill Response Tactics for Offshore Production Islands. M. Bronson, T. Chapple, L. Dietrick, R. Hocking and J. McHale. 1999 International Oil Spill Conference.

Dispersant Field Monitoring Procedures. S. O. Hillman, S. D. Hood, M. T. Bronson, and G. Shufelt. Proceedings of the Twentieth Arctic and Marine Oilspill Program Technical Seminar. 1997.

Bioremediation of Marine Oil Spills: An Evaluation of Field Demonstrations. M. Bronson. Prepared by America North/EMCON, Inc. for Alyeska Pipeline Service Company in support of Prince William Sound Tanker Spill Prevention and Response Plan Steering Committee. 10pp. and appendix. 1993.

RCRA Closure Plan for DEMO 1 OB/OD Site, Fort Richardson, Alaska. M. Bronson, J. Mach, B. Berglund. Prepared for U.S. Army Corps of Engineers, Alaska District. 1993.

Mercury in Alaska Shelf Sediments: A Review of the Regional Data. M. Bronson. Prepared by LSIS, Univ. Rhode Island for NOAA and MMS. 12 pp and figures. 1989.

Trace Contaminants in the Greater St. George Basin: A Statistical Review. M. Bronson. Prepared by LSIS, Univ. Rhode Island for NOAA and MMS. 90 pp and figures. 1988.

Trace Contaminants in Surface Sediment of the Northern Bering Sea: A Statistical Review. M. Bronson. Prepared by LSIS, Univ. Rhode Island for NOAA and MMS. 42 pp and figures. 1988.

North American Game Birds and Mammals. Leopold, A. S., R. J. Gutierrez and M. Bronson. Scribners. New York. 1980.