The 4-month expedition is the eighth scientific cruise of the modern 364-foot ship, launched in Poland in 1982 and named for a geochemist, a former vice president of the Soviet Academy of Sciences who died in 1975. It is operated for the Vladivostok-based Pacific Oceanological Institute, part of the Far Eastern Science Center of the U.S.S.R. Academy of Sciences. It left Vladivostok on 18 June on a schedule that called for stops in the ports of Hakodate in Japan, Hilo, San Francisco, and Vancouver before returning to the Soviet Far East.

En route, its scientific complement is running a wide range of experiments. They are studying water chemistry, gathering samples of manganese nodules and cobalt-rich manganese crusts from seamounts, and studying water and bottom chemistry around seafloor spreading zones where polymetallic sulfide deposits rich in minerals are formed by hydrothermal vents, or hot springs heated by shallow magma bodies.

American visitors found a ship much larger than the typical Western survey vessel. Its 25 separate laboratories, each devoted to specific kinds of studies, reflect more compartmentalization of research than occurs in comparable U.S. ships. Equipment, said one visitor, appeared functional and complete. The ship was commodious, comfortable, and clean; many of the companionways are carpeted and the labs are spacious.

Chief scientist is Michail Fedorovich Stashchuk, professor and director of the institute's Laboratory of Mineral Formation Processes. He was found, an hour or so before the ship's unwelcome but not exactly unfriendly expulsion, sitting in his three-room quarters over a lunch of cold cuts and red caviar with a few visiting colleagues from the U.S. Geological Survey Branch of Pacific Marine Geology in Menlo Park.

Stashchuk, an engaging and friendly man with a large shock of gray hair, explained through an interpreter that planning for the expedition began well over a year ago with international cooperation and participation a prime goal. The outreach effort was his own idea, with approval obtained from appropriate officials at the Far Eastern Science Center and from the Academy of Sciences in Moscow. An American researcher, geologist Stephen Eittreim, assistant branch chief for marine geology at the USGS center in Menlo Park, called it "a real rare chance to see how these guys do business."

Plans for international participation began to run into snafus from the voyage's start. Several researchers from Hokkaido University, plus Sorem, were to join the ship in Japan. However, when it approached the coast of Hokkaido, it turned out that Soviet officials had failed to get a docking permit. The ship then waited a day for a courier boat just outside Japan's territorial waters, but Stashchuk said telegrams to his intended Japanese guests telling them how to reach the Vinogradov were not delivered. He blamed vague "communication problems." Sorem, too, did not know how to reach the ship.

Samples were taken from a western Pacific seamount called the Lamont Guyot. But without Japanese specialists on board who were particularly knowledgeable about the site, the Soviet researchers were not sure they got what was wanted.

After the Hilo stop in mid-July, the ship sampled several areas in the region of manganese nodules called the Clarion-Clipperton Fracture Zone, calibrated its instruments at a spot called the GEOSECS site off the coast of Mexico used for such purposes by marine researchers, then arrived in San Francisco on 2 September. At dawn on 3 September, nearly everybody on board headed for Chinatown and a ride on the cable cars, saving serious touring for later in the week.

That afternoon, the U.S. Coast Guard office in San Francisco told the ship's American agents it was overdue to leave, had gotten a permit good for only 1 day, and had to go immediately. The ship's master contacted the Soviet consulate in San Francisco, crew members said, and learned "some confusion was done in Moscow."

At the Soviet Affairs Desk at the State Department in Washington, where visits by research vessels must be cleared in advance, Bruce Connuck said that in fact such a permit had been routinely granted more than a month earlier. However, it had named only one date, 2 September. "I thought that was funny at the time, just 1 day, and contacted the Soviet embassy. They confirmed the date." Using just one date on the port visit application, however, limited the ship to that date and that date only. For reasons that are not clear, this was not explained to or not understood by Soviet officials getting the ship's clearance. At the Soviet consulate in San Francisco, Vice Consul Yuriy Shuyskiy said by the time he heard of the problem, it was too late to do anything about it.

When the ship left from a remote, out-of-the-way corner of San Francisco's southern waterfront where it had tied up, at least one American researcher due to join it was not aboard. He was flying from the East Coast and nobody could reach him to tell him the ship was leaving 2 days early. ■

CHARLES PETIT

Charles Petit is a reporter with the San Francisco Chronicle.

Briefing:

NIH Considers Major Change in Definition of Recombinant DNA

The National Institutes of Health's Recombinant DNA Advisory Committee (RAC) is studying a proposal to redefine recombinant molecules for purposes of regulation under NIH guidelines. Since the inception of recombinant DNA technology more than a decade ago, the term has been used to include the modification of genetic information within an organism as well as the introduction of DNA from one organism into another. Under the proposed redefinition, which was debated at the RAC's most recent meeting on 29 September, for purposes of NIH oversight, the term recombinant DNA would be used to mean only those organisms that have been genetically modified by foreign DNA. Thus, genetic modifications made by altering only material within an organism—a gene deletion or rearrangement, for instance—would, in most but not all cases, become exempt from review.

The proposed revisions were hotly debated by RAC members who have not reached a consensus on the issue but will consider it further when the committee meets again in February.

By a near unanimous vote, the RAC did, however, endorse a proposal to amend the NIH recombinant DNA guidelines with respect to oversight of the environmental release of a certain class of organisms. Already, organisms modified by gene deletion or rearrangement have, in general, been exempted from oversight when they are used only in research. Under the new amendment, these organisms would also be exempt from RAC review prior to experiments involving release into the environment. The so-called "ice-minus" experiment to test frost-free potatoes in the field would not be subject to RAC review under the amendment, for instance. However, RAC members emphasized that it would still be subject to regulation by other federal agencies, including the Environmental Protection Agency.

The amendment was introduced by RAC member Susan Gottesman of the National Cancer Institute who said that it seemed the best way to make the point that "recombinant DNA per se is not a problem," that the exempt organisms are not biologically unique, and that the change in procedure will eliminate needless regulation of certain types of scientific studies. ■

BARBARA J. CULLITON