Silver name tag: MAC 02105 (where MAC stands for MacAlpine Hills; 02 for the 2002 field season; 105 for the object number)
You can view this video at http://www.youtube.com/watch?v=furi9DuoQlU&list=PLAC7990A6668953FC&feature=plcp.
30 years of U.S. Antarctic Meteorites

Ursula Marvin - History of the U.S. effort
Ralph Harvey – Field Efforts
Kevin Righter – Curation
Mike Weisberg – Chondrites
Duck Mittlefehldt – Achondrites
Hap McSween – Martian meteorites
Brad Jolliff – Lunar Meteorites
Tim McCoy – Meteorite misfits
Cari Corrigan – Statistics of the collection
Roberts Massif (RBT) 04261, 262
Lherzolitic shergottite

78.8, 204.6 g
December 25 and 28, 2004
4.0 x 3.5 x 2.5; 6.5 x 5.5 x 3.5 cm
Weathering = B

Shergottites are FeO rich basalts that were identified as pieces of Mars by the composition of trapped gases, which match those measured by the Viking spacecraft at the surface of Mars. Their young ages (180 Ma) indicate they also came from a planet with young volcanism on it surface, like Mars. In addition, plagioclase feldspar has been entirely converted to the shock glass, maskelynite, demonstrating high shock pressures required to eject them from the surface of Mars. Studies of shergottites have also revealed information about the interior (mantle and crust) of Mars, thus helping constrain its conditions of formation.
AGREEMENT AMONG THE NATIONAL SCIENCE FOUNDATION, THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, AND THE SMITHSONIAN INSTITUTION REGARDING RESEARCH AND CURATION OF ANTARCTIC METEORITE COLLECTIONS.

Introduction

A large number of meteorites of many different types have recently been found in Antarctica, representing an accumulation span of several million years. Field and laboratory studies indicate that meteorite accumulations on the Antarctic ice sheet occur where certain rare sets of conditions are met. These conditions occur at several sites, and some of these may occur outside polar regions. As a result, suites of well-preserved meteorites that have entered the earth's atmosphere in the past several million years are being made available for scientific research.

These meteorites have unique significance for determining (1) the age, stability, and flow pattern of the Antarctic ice sheets, (2) the radiation regimes in space in the geologic past, and (3) the distribution of meteorite types over time.

The Antarctic meteorites collected thus far have been stored at the NASA Johnson Space Center (JSC). They are stored in a sterile, cold environment or in other appropriate conditions to preserve their original geochemical characteristics. Gradually, portions of each meteorite which no longer need storage in sterile conditions are transferred to the Smithsonian Institution (SI) and accessioned into the SI collections for curation and further distribution to the scientific community.

Purpose

This agreement is intended to insure the continued support of the best available scientific, technical, and laboratory resources in the United States for the discovery, collection, preservation, and research on these relatively uncontaminated extraterrestrial materials. The aims of the program are to:
Permit vessels constrained by their navigational draft or restricted in their ability to maneuver to pass within 100 yards of a large passenger vessel in order to ensure a safe passage in accordance with the Navigation Rules; and

(2) Permit commercial vessels anchored in a designated anchorage area to remain at anchor within 100 yards of a passing large passenger vessel; and

(3) Permit vessels that must transit via a navigable channel or waterway to pass within 100 yards of a moored or anchored large passenger vessel with minimal delay consistent with security.

(b) When a large passenger vessel approaches within 100 yards of a vessel that is moored, or anchored in a designated anchorage, the stationary vessel must stay moored or anchored while it remains with in the large passenger vessel’s safety and security zone unless it is either ordered by, or given permission by the Captain of the Port Puget Sound, his designated representative or the on-scene official, to do otherwise.

(i) Exemption. Public vessels as defined in paragraph (a) of this section are exempt from complying with paragraphs (e), (g), (h), (i), (j), and (k) of this section.

(ii) Exception. 33 CFR Part 161 promulgates Vessel Traffic Service regulations. Measures or directions issued by Vessel Traffic Service Puget Sound pursuant to 33 CFR Part 161 shall take precedence over the regulations in this section.

(k) Enforcement. Any Coast Guard commissioned, warrant or petty officer may enforce the rules in this section. When immediate action is required and representatives of the Coast Guard are not present or not present in sufficient force to exercise effective control in the vicinity of a large passenger vessel, any Federal Law Enforcement Officer or Washington Law Enforcement Officer may enforce the rules contained in this section pursuant to 33 CFR 6.04–11. In addition, the Captain of the Port may be assisted by other federal, state or local agencies in enforcing this section.

(l) Waiver. The Captain of the Port Puget Sound may waive any of the requirements of this section for any vessel or class of vessels upon finding that a vessel or class of vessels, operational conditions or other circumstances are such that application of this section is unnecessary or impractical for the purpose of port security, safety or environmental safety.}

The same commenter raised concerns that the definition of expeditions would enable U.S. citizens to evade application of the rule by organizing expeditions to Antarctica in a foreign country. NSF notes that the restriction in § 74.4 against collecting meteorites in Antarctica for other than scientific research purposes applies to any person subject to the jurisdiction of the U.S. This provision would apply to U.S. citizens collecting meteorites in Antarctica, regardless of the location from which the expedition was organized. Consistent with other regulations implementing U.S. obligations under the Antarctic Treaty, the more detailed requirements for preparation and plans and submissions of information to NSF are limited to expeditions for which the United States is required to provide advance notification under the Antarctic Treaty. NSF believes that this obligation is appropriately apportioned.

Another commenter expressed concern that the exception for serendipitous finds could result in meteorites “falling through the regulatory cracks before arriving at a curation site.” Section 74.7 provides that serendipitous finds may be handled in a manner that minimizes contamination and must otherwise be documented in accordance with the requirements of § 74.5. This approach recognizes that serendipitous finds will occur and assures that the opportunity to collect these specimens for scientific purposes is not lost. NSF believes that the requirement for documenting and curating serendipitous finds provides an appropriate mechanism for adequately and accurately tracking Antarctic meteorites. Another commenter suggested technical revisions to the handling requirements in Section 74.5(i)(1) to reflect current research laboratory practices. These revisions have been adopted in the final regulations. All other comments were appropriately considered in the promulgation of this final rule.

Determinations

NSF has determined, under the criteria set forth in Executive Order 12866, that this rule is not a significant regulatory action requiring review by the Office of Information and Regulatory Affairs. The rule is not a major rule under the Congressional Review Act. The Unfunded Mandate Reform Act of 1995 (Pub. L. 104–4), in sections 202 and 205, requires that agencies prepare analytic statements before proposing any rule that may result in annual expenditures of $100 million for State, local, Indian Tribal governments, or the


Danny Ellis,
Captain, Coast Guard, Captain of the Port, Puget Sound.

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NATIONAL SCIENCE FOUNDATION
45 CFR Part 74
RIN 3145–AA40

Antarctic Meteorites

AGENCY: National Science Foundation (NSF).

ACTION: Final rule.

SUMMARY: NSF is issuing a final rule that authorizes the collection of meteorites in Antarctica for scientific research purposes only. In addition, the regulations provide requirements for appropriate collection, handling, and curating of Antarctic meteorites to preserve their scientific value. These regulations implement Article 7 of the Protocol on Environmental Protection to the Antarctic Treaty and are issued pursuant to Section 8 of the Antarctic Conservation Act, as amended by the Antarctic Science, Tourism, and Conservation Act of 1998.

DATES: The rule is effective April 30, 2003.

FOR FURTHER INFORMATION CONTACT: Anita Eisenbeis, Office of the General Counsel, at 703–228–8060.

SUPPLEMENTARY INFORMATION: On August 27, 2002, NSF published a proposed rule authorizing the collection of meteorites in Antarctica for scientific research purposes only. NSF invited public comments on the proposed rule. NSF received nine comments on the proposed rule. All of the comments were supportive of the proposed rule. One of the commenters suggested that NSF revise § 74.5(3)(ii) to recognize that in some cases, a meteorite will not belong to any well-established classification. NSF agrees with this comment and has revised the language accordingly.

Another commenter requested clarification whether or not meteorites are considered mineral resources. As noted in the preamble to the proposed rule, the authority for this rule derives from Article 7 of the Protocol on Environmental Protection to the Antarctic Treaty which states that “any activity relating to mineral resources, other than scientific research, shall be prohibited.” These regulations implement this provision of the Protocol with respect to meteorites.
Select and fund a PI
Provide support and logistics on ice
Chair the oversight committee (MSG)
Final approval of all allocations

Provide short-term curation
Representation on oversight committee (MSG)

Classify meteorites
Provide long-term curation
Representation on oversight committee (MSG)
Select and fund a PI
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Classify meteorites
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Unanswered Question: Scale and cadence of activity Will depend largely on funding