Environmental Stewardship in the USAP

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Organization

- Office of Polar Environmental, Health & Safety (PEHS)
- Environmental Policy focus
- Close coordination with OPP Divisions of Antarctic Sciences and Antarctic Infrastructure and Logistics, as well as with the NSF Office of General Counsel and other Federal Agencies
- Close coordination with Contractor; Team approach
- PEHS provides direction, integration, and oversight
- Contractor *executes* the program

Highlights of USAP Environmental Program

- Environmental Impact Assessment
- Site Assessment and Remediation
- Audits
- Water Quality Management
- Spill Response and Spill Prevention, Control and Countermeasure (SPCC) Plans
- Environmental Education
- Support for US activities related the Antarctic Treaty

Protocol on Environmental Protection to the Antarctic Treaty

- A commitment to the comprehensive protection of the Antarctic environment and dependent and associated ecosystems
  - Annex I (Environmental Impact Assessment)
  - Annex II (Fauna & Flora)
  - Annex III (Waste Disposal)
  - Annex IV (Marine Pollution)
  - Annex V (Protected Areas)
  - Annex VI (Liability)

Antarctic Conservation Act (ACA)

- Applies to all U.S. citizens and all expeditions to Antarctica that are organized in and/or originate from the United States
- Unless authorized by permit, the Act makes it unlawful to:
  - take native mammals or birds
  - engage in harmful interference
  - enter specially designated areas
  - introduce species to Antarctica
  - introduce substances designated as pollutants
  - discharge designated pollutants
  - import certain antarctic items into the USA

Environmental Impact Assessment

- All US activities in Antarctica are subjected to the EIA process
- EIA is an integral part of the planning process for USAP activities, including scientific research, science support, construction, operations, logistics, and facilities maintenance, etc.
- Close coordination among OPP/Contractor/Stakeholders throughout process

Site Assessment and Remediation

- Goal: To identify and clean up past and present waste disposal sites on land and abandoned work sites, e.g.
  - Cape Hallett removal (joint US/NZ)
  - Borehole Remediation at Lake Vida
  - Odell Glacier Field Camp
  - McMurdo Station area debris removal
  - Deep Field Fuel Caches
  - Beardmore Camp
  - Byrd Surface Camp

Audits

- Environmental Impact Assessment Audits, e.g. 2007-08 season
  - To identify the environmental impacts resulting from SPSM CEE, Project IceCube CEE and South Pole Telescope IEE
  - To then compare the findings to conditions described in the EIA documents
- Field Camp Audits, e.g., at Sea Ice camps, Deep Field camps, McMurdo Dry Valley camps
  - To ensure compliance with EIAs and to support best management practices for environmental protection
- Station Audits
  - Work center inspections
  - Bulk fuel storage auditing
  - Airfield inspections

Water Quality Management

- Drinking Water Quality
  - Drinking water sampling at stations and on shipboard
  - Water Quality Reports
  - Public Health Alerts, when necessary

- Wastewater Monitoring
  - Annual wastewater sampling USAP stations
  - Improvements to MCM wastewater treatment plant operation

Environmental Education

- Goal: Provide training appropriate to activities undertaken by all USAP Participants, e.g.
  - “Protecting Antarctica’s Environment” video
  - Assist Science Support & grantees with field camp planning
  - Field Camp and Work Center Briefings
  - Field Camp Secondary Containment Briefing
  - Specialty training for MCM Dry Valley Antarctic Specially Managed Area (ASMA)
    - Videos, booklets, Code of Conduct briefings, etc.
  - Non-native Species Campaign
    - “Don’t Pack a Pest” initiative
    - Boot-washing program for vessels

Spill Response and SPCC (Spill Prevention, Control, and Countermeasure) Plans

- Collaboration with Work Units
  - Participate in USAP Spill Response Teams
  - Participate in root cause analysis studies

- Spill Prevention, Control, and Countermeasure Plans
  - Provides guidance for all U. S. Antarctic Program participants with respect to handling, transfer, removal, and storage of oil (e.g., petroleum, oil, lubricants, used oils, fuels)
  - Updated SPCC Plans for McMurdo and Palmer Stations in review
  - Future Work: SPCC Plan update for South Pole

Support for US activities Related to the Antarctic Treaty

- Management Plans for Antarctic Specially Protected Areas and Antarctic Specially Managed Areas
  - Assist in development of new plans
    - Workshops, site visits, consultation with PIs, international collaborations
  - 5-year review of established plans
  - Related activities
    - Mapping, GIS, website development
- Annual Exchange of information for the Antarctic Treaty
- Information Papers on environmental topics, e.g.
  - Borehole Remediation at Lake Vida
  - Site Guidelines for Tourist sites

Questions?