Research Support Plan
I-476-M, Jeffrey Severinghaus

Collaborative Research: Replicate Coring at WAIS Divide to Obtain Additional Samples at Events of High Scientific Interest

Award Number: ANT – 1043421

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2011-2012 McMurdo Station-Based Project

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3 October 2011

On-Ice Point of Contact: Cara Ferrier x2067

Change Management and Tracking

This table documents and tracks major changes that develop following RSP distribution.

Date	Description
10/3/2011	RSP issued to PI for concurrence
10/6/2011	PI concurred with RSP

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COMPREHENSIVE RESEARCH SUPPORT INFORMATION

Purpose

This document summarizes and provides information about the resources allocated to the subject NSF-OPP award for the upcoming field season.

Project support requirements are developed in consultation with the PI, NSF, and RPSC through the Operational Notice document and the Support Information Package (SIP).

Please review this document with all field team members. Any discrepancies should be presented to the Raytheon Polar Services Company (RPSC) project point of contact (POC) prior to deployment to Antarctica.

Field Project Overview

Two participants will deploy via LC-130 to the West Antarctic Ice Sheet (WAIS) Divide camp to provide scientific support to drilling and replicate coring activities at the WAIS Divide borehole. Participants may assist with other WAIS Divide borehole projects.

During this season, the borehole will be extended until scientific returns are diminished and/or a maximum environmentally safe depth has been reached. After the completing of borehole deepening and logging, replicate coring will begin. Less than 200m of core in total are expected to be recovered.

All ice core handling support will be provided by the WAIS Divide Science Coordination Office (SCO) : I-477-M and drilling and replicate drilling support will be provided by Ice Drilling Design and Operations (IDDO-ICDS) :T-350-M.

Logistical support includes transport of cargo and participants out to WAIS Divide, as well as standard WAIS camp infrastructure.

Outstanding Issues

None.

Deployment Dates

The table below shows the approved deployment plan for your group. The dates have been set by the PI, RPSC, and the NSF and cannot be changed without coordination and approval from your RPSC POC. Any changes must be made no later than four weeks before scheduled deployment.

Deployment Schedule					
Last Name	**First Name**	**Conus-CHC**	**CHC-MCM**	**MCM-CHC**	**Self Ticket**
Schwander	Jakob	12/10/11	12/16/11	2/4/12	Y
Severinghaus	Jeffrey	12/10/11	12/16/11	2/4/12	N

 (Dates are current as of 10/06/11)

All dates are subject to change. The table below explains each column.

Column	Description
Conus-CHC	Dates participant is scheduled to leave the U.S (four days before Ice flight, allows two nights in Christchurch).
CHC-McM	Date participant is scheduled to depart Christchurch for McMurdo Station.
McM-CHC	Date participant is scheduled to redeploy from McMurdo Station to Christchurch.

Column	Description
Self-Ticket	"Y" indicates the participant will purchase airline tickets without the assistance of RPSC. Self-ticketers must provide their itinerary (deploy@usap.gov or fax 303-705-0742). RPSC will arrange self-ticketers' hotel accommodations in Christchurch, schedule a date and time to obtain cold weather clothing, and make sure they get a seat on the flight to Antarctica.

McMurdo Station Housing

The housing request worksheet included in the deployment packet should have been completed by this time. If not, please submit it as soon as possible. It is available at
http://www.usap.gov/USAPgov/travelAndDeployment/documents/DSG-DT-100AX.pdf

Permits

The Principal Investigator is responsible for ensuring that all applicable permits have been obtained prior to deployment.

See appendix for more information.

Cargo

Science Cargo will provide the following support:

	Weight (lbs)	ROS	Comments
Southbound	355	5 Nov (1309)	
COMAIR Retrograde	0		
Vessel Retrograde	355	7 Apr (2098)	

Keep in mind the following cargo-related information:

- Baggage, hand-carried items, and items purchased and shipped by RPSC are not listed.
- ROS (Required On Site) is the Saturday closing the week that cargo will be delivered to the research station (McMurdo or South Pole Stations).
- Unplanned northbound COMAIR cargo will require approval from the NSF representative on station.

Environmental Documentation

The Principal Investigator is responsible for ensuring that all required environmental documentation has been completed before deployment.

Please contact your POC for more information, or in the event your POC cannot be reached, contact RPSC's Environmental Manager, Nate Biletnikoff (telephone 1-800-688-8606 ext. 32225, e-mail nathan.biletnikoff.contractor@usap.gov). See appendix for more information.

Fuel and Liquid Waste Containment

No support requested.

Science Construction

Science Construction support provided under I-477-M.

Computers

Crary Lab IT will provide the following support:

* LAN connections for your grantee-supplied laptops will be provided.

Locally-generated (McMurdo Station) e-mail messages will be sent to the e-mail address indicated in the SIP for all team members. If the group has team members who were not identified in the SIP (example, "TBDs"), the Crary IT staff will add them to the McMurdo Station grantee list upon their arrival.

If any member of the group would like to have a McMurdo Station local account, or the group would like a 'group account' to facilitate the sharing of data and information while on station, these can be created upon your arrival either by informing the Help Desk or the Crary Lab computer coordinator.

Please reference the list of IT security guidelines at the end of this document for IT security questions.

Communications

Field Party Communications will provide the following support:

Requested Item	Qty Requested	Qty Provided	PI Notes
Advisor II/Advisor Gold Pager			TBD on arrival
Iridiuim Sat. Phone			
Iridium Field Kit	1	1	Includes: handset, AC charger, 12V DC charger, 2 batteries
SIM Card	1	1	
Carry Bag			Small Medium Large
Special			

Wireless connectivity will be available at the WAIS Divide Camp.

Crary Science and Engineering Center

Crary resources will be allocated to accommodate science groups as best possible. Due to limited space availability you may be required to share resources with other groups. For the same reason, the dates listed may not be the exact dates you entered in your SIP. **Please review this carefully as space will not be available before or after these dates, regardless of arrival and departure dates.**

Laboratory/Office Space

Description	Start Date	End Date	Sh/Ded	Comments
Office 233	19-Dec-11 26-Jan-12	21-Dec-11 30-Jan-12	Dedicated	

At the end of your deployment, you will be required to complete a laboratory check-out with the Crary staff. Please include time for this in your plans.

Laboratory Instruments and Equipment

No support requested.

Laboratory Materials and Supplies

No support requested.

Laboratory Chemicals, Gases, Cryogens, Dry Ice, Blue Ice

No support requested.

Radioactive Materials

No support requested.

Staging and Storage Space

Cage space will be available.

Scientific Services

Spatial Analysis, Remote Sensing, and GIS Support

GIS Support is now being handled by the Polar Geospatial Center (PGC). All requests for support can be directed to Michelle LaRue at larue010@umn.edu.

Geodetic Support

UNAVCO will work with grantees to provide support as requested within the guidelines of the NSF/UNAVCO agreement. Please contact UNAVCO with any support related questions:

Joe Pettit
UNAVCO Antarctic Support Project Manager
e-mail: pettit@unavco.org
phone: (303) 381-7615

Ultraviolet Data Services

Please contact NOAA with any support related questions:

Patrick Disterhoft
NOAA Antarctic UV Monitoring Program, NOAA-EPA Brewer UV-ozone Monitoring Network (NUEBrew) Central UV Calibration Facility NOAA GMD
email: patrick.disterhoft@noaa.gov
phone: (303) 497-6355

Ice Core Drilling Support

ICDS-IDDO will work with grantees to provide support as requested within the guidelines of the NSF. Please contact ICDS-IDDO with any support related questions:

Tony Wendricks
ICDS-IDDO Project Coordinator
e-mail: tonyw@ssec.wisc.edu
phone: (608) 263-6755
http://www.ssec.wisc.edu/icds/

National Ice Core Laboratory (NICL) Ice Core Support Service

NICL will work with grantees to provide support as requested within the guidelines of the NSF. Please contact NICL with any support related questions:

Geoffrey Hargreaves
Curator, National Ice Core Laboratory

e-mail: nicl@usgs.gov
phone: (303) 202-4830
http://nicl.usgs.gov/

Research Associate Services

No support requested.

Meteorological Services

Meteorological questions, including questions about weather observation requirements, should be directed to:

Mike Carmody
RPSC Meteorological Coordinator
e-mail: michael.carmody.contractor@usap.gov
phone (Denver): (720) 568-2310

Field Safety and Training

Participants will be required to complete the FSTP courses listed below prior to going into the field. For further details about each course, please see the attachment at the end of this document.

Participant Name	Required USAP Field Safety Training Course
Jeffrey Severinghaus	Refresher
Jakob Schwander	Snowcraft I (Happy Camper)

Field Medical Kit

No medical kit required.

Berg Field Center (BFC) Field Equipment

Name	Total Issued	UOI	Total Weight	Total Cube
Cargo/Duffle Bag	3	ea	9.00	0.90
Chair, crazy creek	3	ea	3.00	3.00
Cot, Low, metal or wood, 8"x 76"x 30"	3	ea	24.00	12.00
Ensolite Pad, 1/2"x28"x84"	6	ea	30.00	6.00
Pile Liner	3	ea	12.00	3.00
Pillow, Camp	3	ea	1.50	0.90
SLEEPING BAG, UNDER 6' TALL	3	ea	27.00	0.00
Thermarest	3	ea	15.00	3.00
Thermos, 1 QT Nissan (includes camo)	3	ea	7.50	0.90
Urine bottle, 32 oz.	6	ea	1.80	1.20
Water Bottle Warmer	3	ea	0.90	0.90
Water Bottle, 1 QT, Nalgene	6	ea	1.80	1.20
Approximate Weight/Cube Total			**133.50**	**33.00**

Mechanical Equipment Center (MEC)

No support requested.

Air Support

Fixed-Wing Aircraft

The following support will be provided:

- Week ending 3 December: One LC130 mission allocated for transport of passengers and equipment from McMurdo Station to WAIS Divide.
- Week ending 24 December: One LC130 mission allocated for transport of passengers and equipment to and from McMurdo Station and WAIS Divide.
- Week ending 14 January: One LC130 mission allocated for transport of passengers and equipment to and from McMurdo Station and WAIS Divide.
- Week ending 4 February: One LC130 mission allocated for transport of passengers and equipment from WAIS Divide to McMurdo Station.

*Flight dates are approximate and are subject to change due to weather, aircraft availability, logistical constraints, NSF priorities, etc. You will be notified of any changes and/or updates to your fixed-wing support.
*Fixed Wing planning is based on a six-day flight week beginning on Monday and ending on Saturday of each week.

Helicopter

No support requested.

Diving

No support requested.

Icebreaker Support

No support requested.

Heavy Equipment and Explosives

No support requested.

Grantee Arrival Checklist

The checklist below provides a list of suggested briefings, trainings, and tasks at McMurdo Station. Some of these may be required.

Type	Course Name/ Task	Estimated Time	When activity occurs during the course of the season	Class/ Task Date, Time, and Location	On-Ice Contact/ Phone Number	Required or Suggested
Training	Protecting Antarctica's Environment	17 minutes	Prior to deployment to field site. Training requirement can be completed online before deploying to Antarctica. Link: http://www.usap.gov/onlinelearningcenter/ Log-in code: 91nbe1a3	When: Every Monday and Thursday at 9:15am; or at your convenience Where: Online or Crary Library	Cindy Dean / 2581	R
Training	Information Security Awareness	40 minutes	Prior to logging onto the USAP network. Training requirement can be completed online before deploying to Antarctica. Link: http://www.usap.gov/onlinelearningcenter/ Log-in code: 91nbe1a3	When: Anytime, no scheduling needed Where: Online course	Science events: Holly Troy / 4242 Karen Joyce / 4177	R
Meeting	Arrival Brief	60 minutes	Upon arrival in McMurdo	When: Immediately upon arrival in McMurdo Where: 155 dining hall or Chalet	Chalet Admin. / 4168	R
Meeting	Science Support Inbrief	30-45 minutes	The day after arrival in McMurdo	When: Scheduled upon arrival in McMurdo, usually takes place the day after arrival Where: Chalet	Science Support Lead	R
Meeting	On-Ice POC Meeting(s)	15-60 minutes	Prior to deployment to field site.	When: Schedule upon arrival in McMurdo Where: TBD	On-Ice POC	S
Briefing	Crary Laboratory Orientation	15-30 minutes	Prior to using the Crary facility	When: Schedule upon arrival in McMurdo Where: Crary Lab	Crary Lab Manager / 4169	R
Briefing	Laboratory Safety	15-20 minutes	Within the first week of being issued a Crary Lab key card.	When: Every Monday and Thursday, 8am Where: Crary Library	Crary Lab Manager / 4169	R
Task	Meet with IT staff to bring personal computers online at McMurdo	15 minutes to 1 hour	Prior to using personal computers on station	When: Anytime during normal work hours; no scheduling needed. Where: Crary Lab or contact the McMurdo helpdesk	Science events: Holly Troy / 4242 Karen Joyce / 4177	R
Task	Submit Redeployment Forms	15 minutes	Submit forms to the Chalet upon arrival; information can be updated at a later date if necessary. Information on submitted forms must be up to date at least 2 weeks prior to redeployment.	When: Anytime during normal work hours, scheduling not required Where: Chalet	Chalet Admin. / 2337	R

Type	Course Name/ Task	Estimated Time	When activity occurs during the course of the season	Class/ Task Date, Time, and Location	On-Ice Contact/ Phone Number	Required or Suggested
Briefing	Environmental Field Brief	15 minutes	Prior to deployment to field site	When: Every Monday and Thursday at 8:15am Where: Crary Library	Cindy Dean / 2581	R
Training	Refresher; Snow Craft 1 & Sea Ice Safety Training (aka PUSH course)	4 Hours	Prior to deployment to field site.	When: Scheduled prior to arrival in McMurdo; course is offered 2-4 times a week throughout the mainbody season Where: SSC	Pam Hill / 2356	R
Training	Snow Craft 1 (aka Happy Camper/ Snow School)	2 days, 1 overnight	Prior to traveling to field site	When: Scheduled prior to arrival in McMurdo; course is offered Tuesday-Wednesday and Friday-Saturday Where: SSC and Ice Shelf	Pam Hill / 2356	R
Training	Snowmobile Driving and Repair	3 hours	Prior to deployment to field site	When: Schedule upon arrival in McMurdo Where: MEC	Sally Lyon / 2352	R
Briefing	Waste Management - Sorting Trash	60 minutes	Prior to departure to field site	When: Schedule upon arrival in McMurdo Where: Varies	James VanMatre / 2740	S
Meeting	Fixed Wing field plan review	30 minutes	Prior to departing for the field site	When: Schedule upon arrival in McMurdo Where: Building 165	Liz Kauffman / 2529	R
Task	Collect field equipment	1/2-2 days	At least 4 days prior to departing to a field site if gear will be transported by fixed wing or helicopter	When: Anytime during normal work hours (Mon-Sat, 8am-5pm), no scheduling required Where: BFC/Bldg 160	Jessy Jenkins / 2348	R
Briefing	Mac Ops Pre-Field Communications Briefing	30 minutes to 1 hour	Prior to receiving communications equipment and prior to deployment to field site.	When: Schedule upon arrival in McMurdo Where: Mac Ops/Bldg 165	Shelly Campbell / 2821	R
Task	Receive Communications Equipment	30 minutes to 1 hour	Prior to deployment to field site and after the Mac Ops Pre-Field Communication Briefing	When: Schedule upon arrival in McMurdo Where: Bldg 159	Bill Nesbit / 2796	R
Task	Pick up all allocated lab equipment	Variable depending on allocations	As needed	When: As needed Where: Crary Lab Supply	Sally Moore / 4170	R
Task	Pick up all project cargo shipped to McMurdo	Variable depending on cargo	As needed, prior to deployment to the field	When: Anytime during normal work hours, no scheduling required Where: Crary Lab Supply	Sally Moore / 4170	R
Task	Prepare cargo and equipment for transport to field site via fixed wing aircraft	1-3 days to pack cargo, variable depending on the amounta of cargo	Prior to departure for field site; All standard cargo must be brought to Science Cargo a minimum of 3 business days before the scheduled flight. See hazardous cargo task for haz cargo information.	When: Anytime during normal work hours, no scheduling required Where: USAP Science Cargo building - Bldg 73	Michael Davis, Brian Connell / 2546 Lisa Gacioch / 2072	R

Type	Course Name/ Task	Estimated Time	When activity occurs during the course of the season	Class/ Task Date, Time, and Location	On-Ice Contact/ Phone Number	Required or Suggested
Task	Confirm permits for science samples	Variable depending on number of samples	At least two weeks before redeployment	When: Anytime during normal work hours, no scheduling required Where: Crary	Crary Lab Manager / 4169 Michael Davis-Brian Connell / 2546	R
Task	Prepare/Pack Northbound Cargo	Variable depending on the amount of cargo	As soon as possible once field work is completed.	When: Anytime during normal work hours, no scheduling required Where: USAP Science Cargo building - Bldg 73	Michael Davis,Brian Connell / 2546 Lisa Gacioch / 2072	R
Task	BFC Equipment clean-up and Returns	Variable depending on field gear	Upon return from field and before redeploying to New Zealand	When: Schedule upon return from the field for anytime during normal work hours (Mon-Sat, 8am-5pm). Where: BFC/Bldg 160	Jessy Jenkins / 2348	R
Task	Crary Lab Clean up and Returns	Variable depending on lab equipment and space used	Prior to redeployment	When: Schedule prior to redeployment Where: Crary Lab	Crary Lab Manager / 4169	R
Meeting	Outbrief	15-60 minutes	Two weeks before planned departure from McMurdo	When: Schedule at end of field season Where: Chalet	Crary Admin. / 4168 On-Ice POC	R
Task	Complete all end of season surveys and paperwork	Varies	End of season before leaving McMurdo	When: Anytime at end of season prior to redeployment Where: Anywhere	Crary Admin. / 4168 On-Ice POC	S
Briefing	Outdoor Safey Lecture	30 minutes	Prior to hiking in the vicinity of McMurdo	When: 7 pm Tuesdays, 10:30am Saturdays Where: Crary Library	Jessy Jenkins / 2348	S

ADDITIONAL INFORMATION AND TABLES

Pre-Deployment Information

Medical

It is the PI's responsibility to ensure that all dental, medical and travel processing requirements are addressed in a timely manner for all members of the deploying party.

Upon receipt of this RSP, participants should have already submitted medical and dental exam results to RPSC. The status of the field team's PQ processing is available in the POLAR ICE application. Additionally, weekly updates are provided to the PI or Co-PI via e-mail. If you are not receiving these status reports and would like to, please contact your RPSC POC.

Travel

Ticketing

Ticketing cannot be initiated until the physically qualified (PQ) status is obtained. Tickets may not be issued less than two weeks prior to scheduled departure. If PQ status cannot be obtained two weeks prior to departure, the alternatives are to 1) contact the program manager and request a waiver, 2) change the travel dates, or 3) purchase one's own ticket with no reimbursement from the USAP.

Each participant who purchases his/her airline tickets without the assistance of RPSC must provide their itinerary to deploy@usap.gov or via secured fax at 303-705-0742 at least two weeks prior to departure in order to ensure the participant receives hotel accommodations and an appointment to obtain cold weather clothing (ECW).

If you have not yet filled out your Grantee Travel Request Worksheet, please do so as soon as possible. (http://www.usap.gov/USAPgov/travelAndDeployment/documents/DS-A-100b.pdf) This needs to be completed at least 4 weeks prior to deployment.

If needed, the deployment packet can be found at: (http://www.usap.gov/USAPgov/travelAndDeployment/documents/TravelPacket-Grantee.pdf)

Excess Baggage

The NSF no longer authorizes RPSC to issue excess baggage coupons or to reimburse excess baggage costs on commercial carriers.

Excess baggage for Ice flights may be allowed (ie: carrying excess baggage on flights to/from McMurdo and South Pole Stations); however, NSF approval is required. Submit the Excess Baggage Form in the link to request approval: (http://www.usap.gov/USAPgov/travelAndDeployment/documents/DSG-DT-100AU.pdf).

Shipping via the USAP Cargo System is the preferred method of transport.

Registering with the U.S. Embassy

RPSC suggests that all team members register with the U.S. Embassy in New Zealand. This can be done online at: http://travel.state.gov/travel/tips/registration/registration_1186.html

Station Arrival Information

After arrival at McMurdo Station, a general orientation will be provided to the field team.

Additionally, the first field team members to arrive in McMurdo will be invited to a Science In-Brief to discuss project requirements, meet essential RPSC personnel, and review mandatory briefings and trainings. The on-ice field team leader for the project should be identified by the science group at this time.

Each field team member must complete the required briefings and trainings appropriate to the project's research before heading into the field.

Safety, Environmental Documentation and Permitting

Safety

Raytheon Polar Services Company is dedicated to safe operations at McMurdo and all other field locations. While deployed to Antarctica the entire research team will be expected to maintain a high awareness of safe conduct and comply with safety and health related guidance from the NSF and RPSC management.

Environmental Documentation

To comply with the Antarctic Conservation Act, the PI or designee is required to track and report planned or accidental disturbances to the environment resulting from their research. Please be prepared to track and report geographic locations of disturbances that result from the project's field work (e.g. tent camps, helo landing sites, sampling sites, etc). An environmental end of season report template will be provided to each team upon arrival in Antarctica during their Inbrief. Please become familiar with the document so the form can be completed at the end of the field work and submitted at the Outbrief meeting before leaving Antarctica.

Dry Valleys

If the field team will be working in the McMurdo Dry Valleys Antarctic Specially Managed Area (ASMA), each team member is required to attend a Dry Valleys ASMA Briefing prior to traveling to the field. Briefings are offered several times per week in Crary Lab. Additionally, all USAP participants working in the Dry Valleys are required to comply with all provisions of the Dry Valleys ASMA Management Plan. A copy of the plan is provided during the ASMA briefing, along with a review of information specific to each field party.

Permits

Ministry of Agriculture and Forestry (MAF) permits are required to transship and import samples through and into New Zealand. Due to the large volume of permit requests and processing limitations, MAF permits should be in place prior to deployment. All permits must be presented to MAF upon transit through New Zealand with samples. On-ice applications will be limited to emergency situations. For MAF application procedures and forms, please contact Hope Rogers at Raytheon Polar Services (NZ) Limited, CHC-MAFPermits@usap.gov.

Antarctic Conservation Act (ACA) permits are required to enter Antarctic Specially Protected Areas (ASPA). For ACA application procedures and forms, please contact Nadene Kennedy at NSF, nkennedy@nsf.gov. ACA permits require three months processing time.

The United States Department of Agriculture (USDA) http://www.aphis.usda.gov/ regulates importation of samples into the US. It is the responsibility of the PI to determine if a USDA permit is required. Permits can take up to 16 weeks for clearance.

FSTP Course Descriptions

Snow Craft 1 (aka Happy Camper/Snow School): Classroom and hands on two-day overnight outdoor survival course. The class will also cover helicopter safety.

Snow Craft 2: Basic Mountaineering Skills; glacier travel and crevasse rescue training for parties planning to travel in crevassed areas.

Refresher; Snow Craft 1 & Sea Ice Safety Training (aka PUSH Course): Classroom and hands on training to re-familiarize participants with topics covered in Snowcraft 1, Sea Ice, and helicopter safety training.

Sea Ice Safety: Classroom and field training about safe sea ice travel and survival techniques.

Altitude Awareness: Classroom training on the prevention and treatment of physiological effects caused by traveling to altitude.

Handheld GPS Instruction: Classroom and practical training on the basics of operating a BFC-issued handheld GPS.

IT Security Guidelines

Computer Security

The U.S. federal government requires security and operational practices for computing systems in all government funded programs. The United States Antarctic Program's (USAP) compliance with this federal requirement entails the screening of all computers prior to connecting to the USAP network (wired or wireless). The following requirements are aligned with the NSF Computer Security Policy and apply to all personal, science, and business equipment that will connect to the USAP network. Please direct inquiries to the USAP Help Desk at (720) 568-2001 or helpdesk@usap.gov.

General System Requirements

Administrator Access

Obtain the Administrator password for personal computers prior to deployment. Technicians must have the authority to log on to personal computers at an Administrator level. This enables the screener to accurately review the system configuration and run screening software. If an Administrator password is not available, the screening process, as well as the ability to connect to the USAP network and its resources, will be delayed.

Media

Participants should consider bringing their laptop's original OS installation disks and software registration numbers to assist the computer staff in repairing them, in the unlikely event that they experience hardware or software failures either in transit or while on the Ice.

Connectivity

Participants must provide all the equipment necessary to connect the computer system to a network, including the NIC (network interface card), cables, external adapters, device drivers, etc. All equipment must be in working order.

Antivirus

For computers running McAfee antivirus software, the Admin ID and password are needed to configure the software to update automatically from a local USAP server. Raytheon Polar Services Company (RPSC) can provide current DAT files for McAfee and Norton users. All other antivirus software users must ensure proper updates are installed and the computer is virus free prior to deployment.

Patches

All computing devices should be updated to the current levels for the operating system and security patches. Applications should also be updated, as provided by the manufacturer to include the latest security patches.

Client and Server Software

- Client software used for the purposes of email and web browsing, and other client software, such as SSH and SFTP are permitted.
- Web cameras for training, meetings, educational outreach programs, official business, or personal use is permitted according to NSF policy and with the approval of NSF
- Peer-to-peer (P2P) software, e.g., Kazaa and BitTorrent, are not allowed.
- Email server software that provides SMTP/POP port services should not be used without prior permission.

- Web server software that provides HTTP/HTTPS/FTP services should not be utilized without prior permission.
- Use of non-USAP supported Voice-over Internet Protocol (VoIP) software (Skype™, etc.) is prohibited.
- Network management services, like DNS and SNMP, should not be running.

Personal Use of the Internet

Some limited personal use of Internet services is permitted, provided it does not interfere with the participant's work or the work of others. Extreme care must be taken regarding content matter. Typical authorized limited personal Internet use includes:

- Accessing travel information, forms or information on the intranet or Internet.
- Accessing parent organization information and online resources.
- Accessing state and local government agencies on personal matters.
- Work-related events, such as technical symposiums, classes, and presentations.
- Activities sponsored by the program, such as station recreational activities.
- Events and activities specific to a particular USAP station or organization.
- Program-sanctioned activities, such as blood drives, sanctioned clubs, and organizations.
- Communications of reasonable duration using instant messaging applications.
- Recreational web-browsing of a reasonable duration, during off-duty hours, that does not violate other elements of this policy and does not conflict with mission activities.

Operating System Specifications

Operating systems (OS) have certain criteria that must be met in order to pass the computer screening process. All operating systems should be currently supported by the operating system vendor.

If a user's OS is not in one of the below categories, their connection to the network must be evaluated at a USAP location by an IT technician prior to connecting to the USAP network.

Apple

Mac OS systems running current antivirus software are permitted to connect to the USAP infrastructure at any station.

Linux

Linux systems/partitions running current antivirus software are permitted to connect to the USAP infrastructure at any station. If the computer is configured to dual boot with Microsoft, the Windows partition must comply with the criteria stated below for Microsoft systems.

Microsoft

Ensure the following conditions are met:

- Windows XP Service Pack 3 (SP3) plus all hot fixes. Windows Vista (SP1) with all hot fixes or Windows 7 (SP1) with all fixes.
- Current antivirus software with latest virus definition files (DAT files).
- Complete/full system virus scan within the previous two weeks.

Computer Screening Process

Screening technicians will gather computer information and make it available to all technicians performing screenings on station. Users found using the USAP network without a screening rating of PASS may be limited in their network access until updates can be made or additional

security can be applied. Computers will be screened for supported operating systems, current antivirus software, and preferably automatic updates for both. If possible, applications should have the latest updates as well.

Continuous Monitoring

All users' devices (including governmental, commercial, grantee, and personal) connected to the USAP information infrastructure are subject to continuous monitoring for quality of service (QoS), security vulnerabilities, attacks, threats, risks, and violations of the Enterprise Rules of Behavior. Users are required to work with their IT point of contact (POC) to remediate weaknesses in their systems in a timely manner to reduce the risks to the USAP environment. NSF Management may rate limit, segregate, block, or disconnect without notice any user or device that poses an unacceptable threat or risk to the USAP. Should your system be identified as having security vulnerabilities which pose a risk to USAP resources or other science projects, you will be expected to remediate those vulnerabilities within a reasonable time frame.

Wireless Encryption

Use of USAP provided wireless access points at USAP locations must be approved via local IT personnel before access is provided. Since a greater level of insecurity exists on a wireless network, data transmitted over the wireless network may not be secure, and appropriate precautions should be taken. Effective August 1, 2009, WiFi Protected Access (WPA) is the minimum requirement.

USAP Firewall

Due to changes in the USAP information security posture directed by NSF OPP, our approach to firewall management has changed. If you require connectivity other than e-mail, outgoing file transfers, or web-based applications between your workstations and other systems at your home institution or another collaborating location, you will need to contact us for approvals and to set up the connection through the firewall.

Note   If you have already supplied information and have received approval for this through the SIP/RSP process, there is no need to re-contact us.

Outbrief Notification Letter

Dear Researcher,

At the end of your deployment to Antarctica, the PI or designee will be asked to attend a meeting called the Outbrief hosted by Raytheon. The Outbrief is an informal way for the USAP to solicit comments on the overall productivity of the science team's work in Antarctica with a primary focus on the topics listed below. Please be prepared to discuss/provide information related to these meeting goals:

- determine whether the scientific goals of the science project were achieved

- obtain explicit statements on how direct logistical support positively or negatively impacted the field team's ability to conduct science during this field season

- solicit suggestions for improving the quality of USAP support

- gather information for planning the next field season

- provide information related to the Government Performance and Results Act (GPRA) -- an online survey which aims to assist NSF fulfill its requirement to report on the effectiveness of USAP facilities http://www.usap.gov/surveys

- submit the Customer Satisfaction Survey

In McMurdo, the Crary Laboratory Administrative Coordinator will work with the PI or designee to schedule a convenient meeting time a few days before redeployment. At the other Stations and Vessels, the lead Raytheon staff member will schedule this meeting with the science team.

The meeting is generally led by the Raytheon Science Support Staff and, if present, the on-site NSF Representative or NSF Science Representative. A report summarizing the statements made at the Outbrief will be distributed after the meeting.

The information that is provided at the Outbrief is particularly useful to RPSC and NSF to fine tune future support, both specific to each project and for overall improvements. If a grant is continuing for the next field season, it is an opportunity to express thoughts about changes or adjustments to the level of support that may improve research success in future seasons.

Regards,

The Raytheon Polar Services Science Planning Group

Terms and Acronyms

Term	Definition
ACA	Antarctic Conservation Act.
BFC	Berg Field Center. The facility at McMurdo Station that houses and distributes field party equipment such as camping gear, waste disposal supplies and sleds.
CHC	Christchurch, New Zealand. The departure point for groups deploying to the Antarctic continental research stations.
CONUS	Continental United States.
DSG	Deployment Specialist Group. The organization within RPSC that makes participant travel arrangements.
ECW	Extreme Cold Weather. The clothing and personal gear loaned to participants during their Antarctic deployments.
MAF	New Zealand Ministry of Agriculture & Forestry.
MCM	McMurdo Station.
MEC	Mechanical Equipment Center. The facility at McMurdo Station that houses and distributes mechanical equipment, such as generators, vehicles and solar power units.
PI	Principal Investigator.
POC	Point of Contact. The person assigned to your project for planning the logistical support that will be provided to you by RPSC during your fieldwork. Your on-ice POC may be different from the one assigned during the planning phase of your logistical support.
PQ	Physical qualification.
PSM	Planning Support Manager.
PSS	Planning Support Specialist.
PSC	Planning Support Coordinator.
RPSC	Raytheon Polar Services Company. The support contractor providing logistical support to grantees in Antarctica.
RSP	Research Support Plan. This document which describes the support to be provided to field parties.
SIP	Support Information Package. An online form that describes support logistics, equipment and supplies requested by science groups.
ASPA	Antarctic Specially Protected Area.
TRW	Travel Request Worksheet.
USAP	United States Antarctic Program.