

Please review all of the following information, including the gear allocations and field team information, to ensure accuracy. This plan is an agreement between CH2M HILL Polar Services (CPS), formerly VECO Polar Resources, and your group, documenting the logistics support you will receive.

SECTION ONE: PROJECT INFORMATION

Lead Principal Investigator	Alberto Behar
Institute	National Aeronautical and Space Administration, Jet Propulsion Laboratory
Project Title / Grant #	Tumbleweed Rover Test (NASABehar)
NSF Program and Manager	Other Agency - NASA, Dr. Seelye Martin
CPS Project Manager	Sandra Starkweather

Logistics Summary

<p>With this NASA project, the investigator will travel to several arctic sites to test JPL's "Tumbleweed Rover," a 2m inflated ball containing an interior payload. The ball can travel over various uneven surfaces while the interior instruments take measurements.</p> <p>In winter 2002 the ball was tested at Barrow, Alaska, with support provided by BASC. 2003 and 2004 deployments at Summit were supported by CPS. In 2007, CPS technicians were scheduled to deploy another Tumbleweed Rover at Summit Station but the deployment was unsuccessful due to technical difficulties with wind and temperatures.</p> <p>The PI will again travel to Summit Station to deploy the Tumbleweed Rover in May of 2008, traveling there after visiting Swiss Camp for field work supporting his NASA moulin study.</p> <p>CPS will provide ANG travel arrangements, access to and use of Summit infrastructure, including snowmobile use for an afternoon and lab space. Aside from user days in Kangerlussuaq, the NSF will cover logistics outlined in this plan. All other logistics will be arranged by the PI and paid via the grant.</p> <p>Note: This plan covers only the Tumbleweed work at Summit. CPS will document support for the PI's moulin study (NASAMoulin) in a separate plan.</p>
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For the complete CPS online project record for this grant, including science objectives, go to: http://www.vecopolar.com/arlss_reports/arlss_projectsdetail.asp?cbPropNum=NASABehar

For up-to-date information on the project's schedule, please view the online [Greenland calendar](http://www.vecopolar.com) (<http://www.vecopolar.com> > Greenland > Calendars/Schedules).

SECTION TWO: SEASON FIELD PLANS

Outstanding Actions and Notes

Issue	Responsibility	Date Completed
Review support plan for accuracy and distribute to all field team members	PI	April 18, 2008
Obtain all necessary permits for fieldwork	PI	Included under general Summit permit
Visit all hyperlinks and review all documents referred to in the support plan	Field Team Members	April 18, 2008

Contact the GEOSummit Science Coordination Office (SCO) sco@summitcamp.org regarding your project's plans for the season	PI	April 21, 2008
Medical Clearance is not required for NASA or short deployments	Behar	Note
Passports are required for ANG and international travel. It's a good idea to bring two IDs and to pack a copy of your passport in case the original is lost.	Field Team Members	Note
Complete Critical Success Factors	PI	April 18, 2008

Allocations and Services

Allocations from Inventory

Quant/Unit	Item
1/ea	Arctic Oven Sleep Tent
2/ea	Sleep pads
1	Snowmobile (intermittent use)

Other Services

Project Allocations	Comments
ANG travel Scotia><Kanger><Summit	
Freight	See below
User days at Summit	~ 3
4' of bench space	Greenhouse, back lab, clean room side
Housing arrangements in Kanger	Note: The PI will cover all of his own costs at KISS

Location Information

Please visit <http://www.vecopolar.com> and navigate to the Greenland menu for en route and location-specific Greenland information. Prior to deployment, your entire field team should be familiar with the content of the *Greenland Guide* and the *Summit Users' Guide*. Both are available electronically via our Web site's Greenland menu.

Cargo and Customs

All cargo required for your project should arrive in Scotia, NY, **no later than 2 weeks prior** to the desired northbound Air National Guard (ANG) flight, must be entered into our online Cargo Tracking System, and must be properly registered with Customs.

For the most current ANG flight schedule go to <http://www.vecopolar.com> and navigate to Greenland > Calendars/Schedules.

For Customs requirements please refer to the Greenland Guide, also available at <http://www.vecopolar.com> under Greenland.

The following is our current understanding of your overall cargo requirements:

Cargo List

Items	Weight/Cube
1 large suitcase-sized box	100 lbs

For the most up-to-date information on the project's schedule, please view the online [Greenland calendar](http://www.vecopolar.com) (<http://www.vecopolar.com> > Greenland > Calendars/Schedules).

Field Team Information

Name	Location	Date In	Date Out	Email
Behar, Alberto	Kangerlussuaq	05/04/08	05/18/08	alberto.behar@jpl.nasa.gov
Behar, Alberto	Summit	05/13/08	05/16/08	alberto.behar@jpl.nasa.gov

Project Contact Information
Research Team

Role	Name	Email	Phone / Fax
Principal Investigator	Alberto Behar	alberto.behar@jpl.nasa.gov	818 687-8627 / 818 354-8172

SECTION THREE: CPS CONTACT INFORMATION
CPS Team Members

Contact for	Name	Email	Primary Phone(s)
Summit operations	Sandy Starkweather	sandy@polarfield.com	Denver: 303.518.8714
Greenland operations (project support)	Jason Buenning	jason@polarfield.com	Denver: 303.638.6669 Greenland: 011.299.524218
Greenland operations (On-island support)	Mark Begnaud	mark@polarfield.com	Denver: 720.320.6160 Greenland: 011.299.524281
Greenland operations (project support)	Robin Abbott	robin@polarfield.com	Denver: 303.748.8507
Denver operations	Jill Ferris	jill@polarfield.com	Denver: 720.320.6155
Scotia operations & customs	Earl Vaughn	earl.vaughn@gmail.com vpjscotia@hughes.net	Scotia: 518.331.3103

CPS Offices

Denver	Kangerlussuaq	Scotia
CH2M HILL Polar Services Western Office 8110 Shaffer Parkway Suite 150 Littleton, CO 80127 Tel: 303.984.1450/1439 Fax: 303.984.1445	CH2M HILL Polar Services Attn: Name of Employee/Researcher Postboks 1015 DK-3910 Kangerlussuaq, Greenland Tel: 011.299.841598 Fax: 011.299.841599	Earl Vaughn C/O 109 th Aerial Port Bldg. 20 Stratton Air Base Scotia, NY 12302-9752 Tel: 518.331.3103 Fax: 518.334.2537

Summit Station

Summer
CH2M HILL Polar Services Attn: Name of Employee/Researcher - Summit Station C/O Earl Vaughn 109 th Aerial Port Bldg. 20 Stratton Air Base Scotia, NY 12302-9752 Tel: 518.331.3103 Fax: 518.334.2537

Other

Organization	Internet	Phone
Summit Science Coordination Office (SCO)	http://www.geosummit.org sco@summitcamp.org	John Burkhart 209.658.7142

SECTION FOUR: SAFETY, ENVIRONMENT, HEALTH and PERMITS

Critical Success Factors

Please list the factors that are most important for the success of your science. We track these factors in order to measure the success of CPS' support. Examples might be the availability of the helicopter or camp gear.

Factors
Required cargo is delivered to Summit on time
4' of bench space available for assembly/diagnostics

Government and Performance Reporting Act of 1993 (GPRA)

NSF/OPP requires your help in complying with the Government Performance and Reporting Act of 1993 (GPRA). One measure of CPS' performance is a "facility-performance metric" which counts the number of productive days your project has in the field while relying on CPS facilities or support. Please keep track of any "lost days" and report these to us at the end of the season.