Station Installation Suggested Materials List

Introduction:

One of the worst things that can happen during a deployment, especially a highly remote deployment, is not having the correct tools or supplies. The following is a minimum suggested list of things to take if you are constructing a station that will house PASSCAL equipment for more than a few weeks. This list is in addition to the construction materials that will be used to make vaults, enclosures and fences. Usually this would pertain to passive-source, broadband (or midband) experiments that deploy equipment for 1-2 years and will be visited approximately every three months during that time in order to check the data and the condition of the station. PASSCAL will advise if any other specialty tools are required. Please adjust quantities to provide for all installation teams and number of stations.

Create checklists for your experiment and use them. Here’s an example checklist for loading vehicles to go out into the field.

Tools:

Tool roll or bag
Adjustable wrenchs (4" and 8". Alternately, use spanners)
Screwdriver, flat
Screwdriver, phillips
Fence wire cutters
Wire stripper/cutter/crimper
Channel locks
Vice grips
Needle-nose pliers
Bubble level & triangle
Butane torch (remember, butane cannot be carried on an airline)
Utility knife
Leatherman
Tweezers
Gloves
Compass
Headlamp or flashlight
Files (small and large)

Shovels (varying styles and handle lengths)
Spade
Post-hole digger
Pick/hoe
Rock bar or pry bar
T-post pounder (if T-posts are used)
Trowel (for mixing concrete)
Handheld GPS
Tape measure

Consumables:

Zip ties
Solder  
Electrical tape, red and black  
Duct tape  
Marker pens  
Pencils  
Notebook  
Installation/service sheets  
Silicon sealant  
Rubber vulcanizing tape  
Plumbers putty  
Flagging tape in bright colors  

Example Vehicle-Loading Checklist:

<table>
<thead>
<tr>
<th>Station Equipment</th>
<th>Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qty</td>
<td></td>
</tr>
<tr>
<td>1 Seismometer - Type</td>
<td>Plus</td>
</tr>
<tr>
<td>1 Seismometer - Type</td>
<td>Letters of Introduction</td>
</tr>
<tr>
<td>1 Seismometer - Type</td>
<td>First Aid Kit</td>
</tr>
<tr>
<td>1 Stations (R-boxes, checked equip)</td>
<td>Drinking Water/ Snacks</td>
</tr>
<tr>
<td>1 Batteries</td>
<td>Personal</td>
</tr>
<tr>
<td>1 65 Watt Solar Panels</td>
<td>Passport</td>
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<tr>
<td>1 Station Enclosure Box With Lid</td>
<td>Sleeping Bag</td>
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<tr>
<td>1 Seismo VAULT Barrel</td>
<td>Toilet Paper</td>
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<tr>
<td>1 Vault Barrel Lid</td>
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<tr>
<td>1 Seismometer Cover</td>
<td></td>
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<tr>
<td>1 INSULATION</td>
<td></td>
</tr>
<tr>
<td>1 Plastic Tarp</td>
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<tr>
<td>1 Chargers for A/C sites</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Supplies (per Station)</th>
<th>Supplies/Tools (per Team)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check or Qty</td>
<td>Checklist</td>
</tr>
<tr>
<td>1 Lumber for Solar Panel Mounts</td>
<td>1 TOOL KIT (see Tool Kit Checklist)</td>
</tr>
<tr>
<td>1 Bolts, Nuts</td>
<td>1 Voltmeter</td>
</tr>
<tr>
<td>1 Tubing for Drainage Pipe</td>
<td>2 Clip (Palm Pilot) w/ chargers</td>
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<tr>
<td>1 Conduit for cable protection</td>
<td>Compass and Handheld GPS</td>
</tr>
<tr>
<td>1 Bailing Wire - Thick and Thin</td>
<td>Level</td>
</tr>
<tr>
<td>1 Shielded Wire – for battery …</td>
<td>Ring Binder w/</td>
</tr>
<tr>
<td>1 Barbed Wire rebar</td>
<td>Install &amp; Service Data Sheets</td>
</tr>
</tbody>
</table>

* TOOL KIT  
** Voltmeter  
2 Clip (Palm Pilot) w/ chargers  
1 Compass and Handheld GPS  
Level  
1 Ring Binder w/  
Install & Service Data Sheets  
1 Leatherman or screw drivers, pliers & knives  
1 Guralp Hex Wrench & Control Box  
1 STS-2 screw driver & Orienting R  
1 Tapes: Electrical, Duct, Vulcanize, Flag  
1 LAPTOP & cabling/ +data hi/ media  
extra Battery for charging  
AC Chargers / Adapter Plugs  
1 Maps, Station-Coordinate List  
1 Padlocks, Keys, Access Phone #s  
1 Clipboards  
1 Pens/Pencils/ Markers  
1 Instructions/Notes  

Related categories: Procedures  Station Installation