

**VI. OVERHEAD**  
**A. INCIDENT SUPPORT TEAM**

**Overview**

- Federal, State and local emergency response officials may not be fully aware of FEMA's US&R Response System or a US&R Task Force's full capabilities and use. Upon activation by FEMA Headquarters and under the direction of the ESF-9 Leader, the US&R IST responds rapidly to an impending event (or one which has just occurred), assesses the need for and potential use of FEMA ESF-9 resources, communicates their tactical capabilities and provides support to state and local officials in managing the logistics for incoming task forces.
- Moreover, the IST recommends assignments to be accomplished by task forces, identifies task force support requirements and provides advice on the most efficient means of incorporating task forces into the response efforts of Federal, State and local officials on scene and at the various EOCs and management entities.
- It is NOT FEMA's intent to deploy an IST to directly manage state or local disaster response activities. Instead, the IST provides assistance in order to meet the needs of local government officials.

**Mission Statement**

"The mission of the IST is to provide federal, state and local officials with technical assistance in the acquisition and utilization of ESF-9 resources through advice, incident command assistance, management and coordination of US&R task forces and obtaining ESF-9 logistic support. "

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OVERHEAD

INCIDENT SUPPORT TEAM

- Overview
  - Officials may not be aware of US&R Response System.
  - IST responds rapidly to assess need for US&R TFs, identify their capabilities and provide support.
  - IST recommends TF assignments.
  - IST does not usually manage state/local US&R activities unless requested.

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VIEW GRAPH VI - A - 1

OVERHEAD

INCIDENT SUPPORT TEAM

- Mission Statement

"The US&R Incident Support Team was developed to provide a group of highly qualified specialists readily available for rapid assembly and deployment to a disaster area. The mission of the IST is to provide (ESF-9) Urban Search and Rescue management and support, provide technical assistance, logistical support and advice about US&R issues to public officials at the Federal, State and local levels."

**VI. OVERHEAD**  
**A. INCIDENT SUPPORT TEAM (continued)**

**IST Capabilities**

- The capabilities of the IST are:
  - Identifying the support needs of the FEMA ESF-9 resources.
  - Informing, Federal, State and local disaster officials about FEMA US&R response capabilities.
  - Providing State and/or local officials with technical expertise.
  - Making preparations for incoming ESF-9 resources, including the identification of special logistical support requirements.
  - Recommending appropriate mitigation measures.
  - Recommending activation of ESF-9 resources and/or technical elements.
  - Providing a mechanism for resupply of important tools, supplies and equipment for the ESF-9 resources.
  - Providing management of ESF-9 resources if requested by local officials and or the IC.
  - Providing assessment information to the disaster management officials at all levels.
  
- In addition, there may be occasions where a full US&R Task Force response is not warranted to support local search and rescue operations. Rather, the requirements may be for an individual specialist or a group of US&R specialists (i.e, Canine Search Specialists, Structures Specialists, etc.), or a composite of different disciplines. These resources are identified in FEMA's US&R database which the IST can access for dispatch.
  
- The initial mission of the IST is redefined after the field assessment process is performed, and the deployed ESF-9 resources arrive and become operational. In this case, IST personnel may be reassigned by the ESF-9 Leader as needed to support other technical assistance requirements, such as support Disaster Field Office (DFO) operations, and other state and local government relief operations. The IST Leader will periodically assess the continued need for the IST and recommend to the appropriate Federal official when a change in team assignment is appropriate.

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| <p>FEMA US&amp;R RESPONSE SYSTEM</p> <p>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>OVERHEAD</p> <p>INCIDENT SUPPORT TEAM</p> <ul style="list-style-type: none"><li>■ IST Capabilities</li><li>• Identifying the needs of ESF-9 resources.</li><li>• Informing disaster officials about ESF-9 capabilities.</li><li>• Providing officials with technical expertise.</li><li>• Making preparations for incoming ESF-9 resources.</li><li>• Recommending mitigation measures.</li><li>• Recommending activation of ESF-9 assets.</li><li>• Providing a mechanism for resupply.</li><li>• Providing management of ESF-9 assets if requested.</li><li>• Providing assessment info to disaster management officials at all levels.</li></ul>  |
| <p>FEMA US&amp;R RESPONSE SYSTEM</p> <p>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>OVERHEAD</p> <p>VIEW GRAPH VI - A - 3</p> <p>INCIDENT SUPPORT TEAM</p> <ul style="list-style-type: none"><li>■ IST Capabilities</li><li>• There may be occasions where a full US&amp;R Task Force response is not warranted. Rather, the requirements may be for an individual specialist or group of specialists.</li><li>• The initial mission of the IST is redefined after the field assessment process is performed, and the deployed US&amp;R Task Forces arrive and become operational.</li><li>• The IST Leader will periodically assess the continued need for the IST and recommend to the appropriate Federal official when a change in team assignment is appropriate.</li></ul> |

**VI. OVERHEAD**  
**A. INCIDENT SUPPORT TEAM (continued)**

**Development Criteria**

- The US&R IST was developed to be:
  - Consistent with the terminology and organizational structure of the Federal Response Plan, and National Interagency Incident Management System (NIIMS).
  - Representative of the primary disciplines involved in US&R operations.
  - Comprised of sufficient personnel to provide initial assistance at the Regional Operations Centers (ROC), state EOCs, DFOs and local EOCs (may be augmented as necessary).
  - Provide 24-hour coverage at EOC/DFO and other facilities for ESF-9.
  - Deployable within 2 hours of activation.
  - Outfitted with an Administrative Support Kit.

FEMA US&R RESPONSE SYSTEM  
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**OVERHEAD**

**DEVELOPMENT CRITERIA**

- The US&R IST was developed to be:
  - Consistent with the terminology and organizational structure of the Federal Response Plan, and National Interagency Incident Management System (NIIMS).
  - Representative of the primary disciplines involved in US&R operations.
  - Comprised of sufficient personnel to provide initial assistance at the Regional Operations Centers (ROC), state EOCs, DFOs and local EOCs (may be augmented as necessary).
  - Provide 24-hour coverage at EOC/DFO and other facilities for ESF-9.
  - Deployable within 2 hours of activation.
  - Outfitted with an Administrative Support Kit.

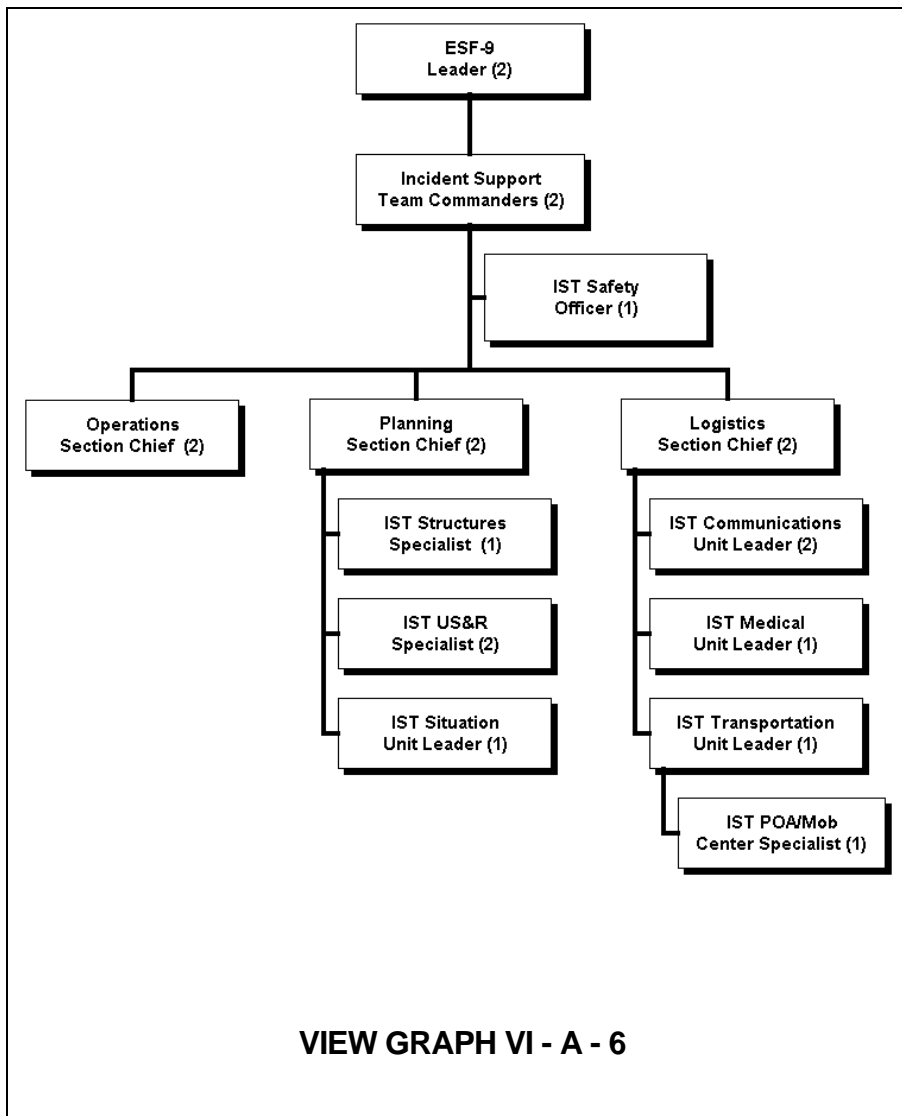
VIEW GRAPH VI - A - 5

**VI. OVERHEAD  
A. INCIDENT SUPPORT TEAM (continued)**

**IST Organization Structure**

The advance element of the Incident Support Team (IST-A) represents FEMA's initial efforts to establish on-site management and support for anticipated or actual arrival of one or more US&R task forces at a disaster. The IST-A is comprised of the following 20 positions:

**IST ADVANCE (IST-A)**

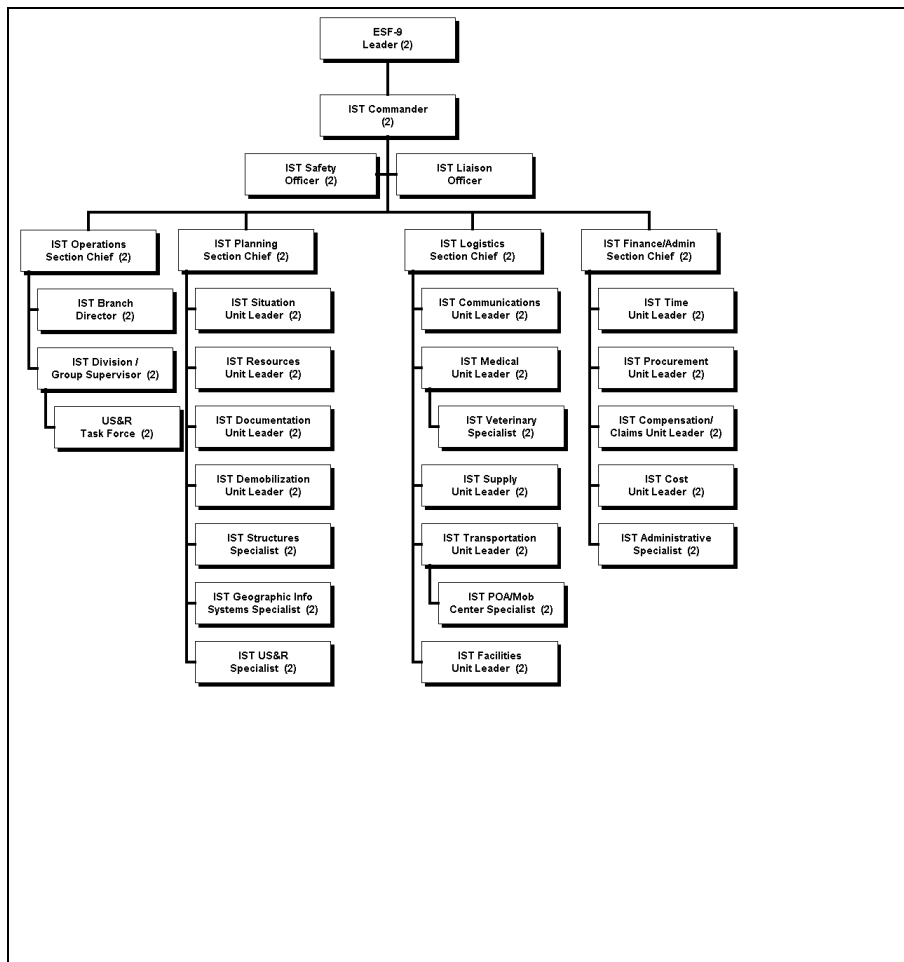


**VI. OVERHEAD  
A. INCIDENT SUPPORT TEAM (continued)**

**IST Expansion**

- An initial response of the IST may prove to be inadequate as the complexity and duration of an event escalates and/or the duties of the IST expand.
- At this point, positions may be filled with two persons each, depending on the present IST deployed and the need for 24-hour coverage. The following organization structure depicts an expanded IST:

**EXPANDED INCIDENT SUPPORT TEAM**



**VIEW GRAPH VI - A - 7**

**VI. OVERHEAD**  
**A. INCIDENT SUPPORT TEAM (continued)**

**The IST Logistics Section**

- One of the primary responsibilities of the IST is to ensure that support is provided to the US&R Task Forces in a timely manner during all phases of a mission. This includes anticipating the potential logistical needs in the areas of resupply, medical support, transportation, facilities, search and rescue equipment, Base of Operations support, radio frequency assignment, etc.
- During any of these activities, the IST Logistics Section Chief, in close consultation with the Administrative/Finance Section Chief and the ESF-9 Leader, is responsible for ensuring that Federal procurement principles and practices are followed in all procurements.
- During the initial stages of the disaster, the FEMA DFO is not yet operational. Consequently, the IST will work closely with the State EOC and may provisionally be located at or near this facility. Top priorities during this phase for the IST Logistics Section will be responding to ESF-9 needs for transportation, communications and siting of the task force Base(s) of Operations.
- Once the DFO becomes operational, the IST will have access to the resources of 27 Federal agencies and departments, per the provisions of the Federal Response Plan.
- Some examples of the available support within the DFO are:
  - Medical items: Public Health Service  
Veterans' Administration.
  - Supplies and equipment: General Services Administration  
USDA Forest Service  
Department of Defense
  - Communications support: General Services Administration  
USDA Forest Service
  - Transportation: Department of Transportation  
Department of Defense  
USDA Forest Service  
General Services Administration
  - Logistics support: General Services Administration  
USDA Forest Service  
Department of Defense

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INCIDENT SUPPORT TEAM

- Logistics Section
  - One of the primary responsibilities of the IST Logistics is to ensure that support is provided to the US&R Task Forces in a timely manner during all phases of a mission.
  - During any of these activities, the IST Logistics Section Chief is responsible for ensuring that Federal procurement principles and practices are followed
  - During the initial stages of the disaster, the FEMA DFO is not yet operational. Consequently, the IST will work closely with the State EOC and will provisionally be located at or near this facility.

VIEW GRAPH VI - A - 8

OVERHEAD

INCIDENT SUPPORT TEAM

- Examples of available support:
  - Medical items:
  - Supplies/equip: GSA, FFS, DoD
  - Communications: GSA, FFS
  - Transportation:
  - Logistics support:

FEMA Logistics



**VI. OVERHEAD**  
**A. INCIDENT SUPPORT TEAM (continued)**

**ESF-9 Resource Ordering**

- ESF-9 resource requests originate primarily from three sources: local/state, the ESF-9 cell at the DFO and from activated US&R Task Forces.
- The initial ordering process for ESF-9 resources prior to a functioning DFO should originate at the local level after initial situation assessments are conducted.
- The request goes through local channels to the State EOC, which forwards it to the FEMA Regional Operations Center (ROC).
- The ROC then processes the request through the Emergency Support Team at FEMA Headquarters in Washington, DC.
- With the exception of the Initial Response Resources, all ESF-9 resources must be requested by the state before being processed by Federal agencies. Requests for ESF-9 resources will eventually be processed through the DFO after it becomes operational.
- During an incident, State ESF-9 requests may be communicated to the DFO, which forwards them to the ESF-9 Leader. Local/state US&R requests are typically for US&R Task Forces and technical specialists.
- The IST Leader may request additional ESF-9 resources, additional staffing for ESF-9 functions and logistical support for the ESF-9 cell. Such requests are forwarded to the ERT ESF-9 Leader.
- The US&R Task Forces may request logistical support, resupply and transportation. These resources are requested from the IST, which will forward the requests through the ESF-9 Leader to other appropriate agencies and ESFs within the DFO.
- The process for ordering supplies, equipment and personnel may vary, depending on the size and complexity of a particular disaster. However, basic ordering principles and procedures should be followed regardless of the situation.

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| <p><small>FEMA US&amp;R RESPONSE SYSTEM</small></p> <p><small>LOGISTICS SPECIALIST TRAINING</small> <span style="float: right;"><small>10/98</small></span></p>   |
| <p><b>OVERHEAD</b></p> <p><b>INCIDENT SUPPORT TEAM</b></p>  |
| <ul style="list-style-type: none"> <li>■ Resource Ordering                     <ul style="list-style-type: none"> <li>• Requests originate from three sources:                             <ul style="list-style-type: none"> <li>- local/state</li> <li>- ESF-9 cell at the DFO</li> <li>- US&amp;R task forces.</li> </ul> </li> <li>• The initial ordering process originates at the local level after initial situation assessment.</li> <li>• The request goes through local channels to the State EOC, which forwards it to the ROC.</li> <li>• The ROC then processes the request.</li> </ul> </li> </ul>      |
| <p><small>All US&amp;R resources must be requested by the State EOC before being processed by Federal agencies.</small></p> <p><small>FEMA US&amp;R RESPONSE SYSTEM</small></p> <p><small>LOGISTICS SPECIALIST TRAINING</small> <span style="float: right;"><small>10/98</small></span></p>   |
| <p><b>VIEW GRAPHIC - A - 10</b></p>   |
| <ul style="list-style-type: none"> <li>■ Resource Ordering                     <ul style="list-style-type: none"> <li>• Local/state US&amp;R requests are typically for US&amp;R Task Forces and technical specialists.</li> <li>• The IST Leader may request additional ESF-9 resources. Such requests are forwarded to the ERT ESF-9 Leader.</li> <li>• The US&amp;R Task Forces may request logistical support, resupply and transportation.</li> <li>• The process for ordering supplies, equipment and personnel may vary, depending on the size and complexity of a particular disaster.</li> </ul> </li> </ul> |



**VI. OVERHEAD**  
**A. INCIDENT SUPPORT TEAM (continued)**

**Communications Unit**

- Communications equipment, distribution, maintenance, inventory and planning is provided by the IST Communications Unit Leader in the Logistics Section. The IST Communications Unit Leader also provides planning and communications logistical support to US&R Task Forces, as needed.
  
- IST Communications capabilities include:
  - Repeaters
  - Base station
  - Pagers
  - Cellular phones
  - Handheld radios (20)
  
- Requests by Task Force Leaders or IST members for additional radios and related equipment are reviewed by the IST Logistics Section Chief, approved by the IST Commander and processed by the IST Communications Unit Leader.
  
- Depending on the status of the disaster, equipment may be obtained by redistribution of on-site equipment, or by ordering through the DFO.
  
- Communications needs are planned for in advance by the IST Communications Unit Leader by participating in incident action and strategic planning.
  
- The need for equipment maintenance and repair is anticipated by having extra equipment when appropriate, to provide rotation and by having service technicians available to make prompt repairs.

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INCIDENT SUPPORT TEAM

- Communications Unit
  - Comm equipment, distribution, maintenance, inventory and planning are provided by the Communications Unit Leader.
  - Requests are reviewed by the Log Section Chief, approved by the IST Leader and processed by the Comm Unit Leader.
  - Equipment may be obtained by redistribution on-site or by ordering through DFO.
  - Comm needs are planned for by participating in incident action and strategic planning.
  - The need for equipment maintenance and repair must be anticipated.

VIEW GRAPH VI - A - 12

## **VI. OVERHEAD**

### **A. INCIDENT SUPPORT TEAM (continued)**

#### **Communications Unit (continued)**

- Equipment inventory includes tracking to assure prompt return of communications and all other equipment, thereby providing accountability in case equipment is not returned.
  
- Communications equipment transferred from the Logistics Section is documented using FEMA Form 61-8 - Property Transfer Report.
  
- For property that is reported lost, stolen, or damaged, use FEMA Form 61-10 - Government Property Lost or Damaged.
  
- Communications planning requires the IST Communications Unit Leader to work closely with counterparts in the ROC, State EOC and the DFO.
  
- A Communications Plan (ICS Form 205) should be part of tactical and strategic plans. This should include:
  - Obtaining frequencies for ESF-9 resources to operate on.
  - Developing a communications plan for incident useage.

FEMA US&R RESPONSE SYSTEM

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**OVERHEAD**

**INCIDENT SUPPORT TEAM**

- Communications Unit
  - Equipment inventory includes tracking to assure prompt return of communications.
  
  - Communications equipment transferred from the Logistics Section is documented using FEMA Form 61-8 - Property Transfer Report.
  
  - For property that is reported lost, stolen, or damaged, use FEMA Form 61-10.
  
  - A Communications Plan (ICS Form 205) should be part of tactical and strategic plans.

VIEW GRAPH VI - A - 13

**VI. OVERHEAD**  
**A. INCIDENT SUPPORT TEAM (continued)**

**Transportation Unit**

- Maintains inventory of all transportation resources.
- Requirements during the disaster, beginning and ending at the Mobilization Center or other POA, is provided through the IST Transportation Unit Leader in the IST Logistics Section.
- The Federal government provides transportation for ESF-9 resources in order to minimize the demands on the affected State and localities.
- If local agencies volunteer local transportation, it may be used, as long as action planning objectives are met.
- Through contact with the IST Logistics Section Chief, IST US&R Specialist and the IST POA/MOB Center Specialists, the IST Transportation Unit Leader assures that transportation is available when and where needed. The IST Transportation Unit Leader should work closely with the IST Resources Unit Leader to assure status is tracked on transportation resources assigned to all ESF-9 activities:
  - Prepares transportation plan for all ESF-9 resources.
  - Arranges for all vehicle refueling and maintenance.

**POA/Mobilization Centers**

- It is essential that an IST POA/Mobilization Center Specialist is assigned to the Mobilization Center and other areas to support task force movement into the affected area.
- The POA/MOB Center Specialist assumes responsibility for coordinating task force needs with the facility managers.
- This position also coordinates closely with the Task Force Leader, IST Facility Unit Leader and the IST Logistics Section Chief.

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| <p>FEMA US&amp;R RESPONSE SYSTEM<br/>LOGISTICS SPECIALIST TRAINING 10/98</p> <p style="text-align: center;"><u>OVERHEAD</u></p> <p style="text-align: center;"><b>INCIDENT SUPPORT TEAM</b></p> <ul style="list-style-type: none"><li>■ Transportation Unit<ul style="list-style-type: none"><li>• Requirements during the disaster is provided through the Transportation Unit Leader.</li><li>• The Federal government provides transportation for US&amp;R to minimize the demands on the affected State and localities.</li><li>• If local agencies volunteer local transportation, it may be used.</li><li>• The Transportation Unit Leader should work closely with the Resource Status Unit Leader to assure status is tracked on transportation resources assigned to all ESF-9 activities.</li></ul></li></ul>                             |
| <p>FEMA US&amp;R RESPONSE SYSTEM VI - A - 14<br/>LOGISTICS SPECIALIST TRAINING 10/98</p> <p style="text-align: center;"><u>OVERHEAD</u></p> <p style="text-align: center;"><b>INCIDENT SUPPORT TEAM</b></p> <ul style="list-style-type: none"><li>■ POA/Mobilization Centers<ul style="list-style-type: none"><li>• It is essential that an IST POA/Mobilization Center Specialist is assigned to the Mobilization Center and other areas to support task force movement into the affected area.</li><li>• The Specialist assumes responsibility for coordinating needs with the facility managers.</li><li>• This position also coordinates closely with the Task Force Leader, Facility Unit Leader and the IST Logistics Section Chief.</li></ul></li></ul> <p>• An Specialist will be represented at every Federal facility processing TFs.</p> |

**VI. OVERHEAD**  
**A. INCIDENT SUPPORT TEAM**

**Mobilization Centers (continued)**

- An IST POA/MOB Center Specialist will be represented at every Federal facility processing incoming or demobilized task forces. The Specialist:
  - Provides briefings and situation assessment information to the task forces and incoming ESF-9 resources,
  - Expedites task force assignments to field operations,
  - Coordinates between the task force and local jurisdiction,
  - Exchanges and provides DFO/ESF-9 and other relevant Point of Contact phone and radio frequency information.
  - Serves as the primary ESF-9 point of contact for all participating agencies at the Mobilization Center.

**Facilities Unit**

- The IST Facilities Unit Leader provides for workspace, maintenance, use coordination and set up of equipment and supplies for the IST.
- During the early stages of the disaster, IST members may be using facilities already established and operating, such as the ROC and state and local EOCs.
- The IST Commander should give direction to the IST Logistics Section as needed, to plan for and obtain necessary space for IST operations at the DFO and POA/MOB Center(s).
- The IST Facilities Unit Leader, working with the IST Logistics Section Chief, assures that the space and facilities provided meet team needs and are equipped, supplied and maintained to meet existing and future needs.
- Responsible for the health aspects for all food prepared for ESF-9 consumption. Assists the IST Supply Unit Leader in providing ESF-9 food, water and sanitation facilities.

FEMA US&R RESPONSE SYSTEM  
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**INCIDENT SUPPORT TEAM**

- Facilities Unit
  - The Facilities Unit Leader provides for workspace, maintenance, use coordination and set up of equipment and supplies in support of IST operations.
  - The IST may already be using facilities such as the ROC and state and local EOCs.
  - The Logistics Section should plan and obtain space for IST ops at the DFO and MOA Centers.
  - The Facilities Unit Leader assures that space and facilities provided meet team needs.

**VI. OVERHEAD**  
**A. INCIDENT SUPPORT TEAM (continued)**

**Supply Unit**

- Requests personnel, equipment and supplies for operations.
- Establishes on-site supply requisition procedures.
- Receives supplies and maintains an inventory of supplies on hand.
- Coordinates delivery of supplies to ESF-9 locations.

**Medical Unit**

- The IST Medical Unit Leader provides medical service to the IST, serves as medical liaison with US&R task forces and the ERT, and supplies medical reports and medical care as directed by the IST Commander. The IST Medical Unit Leader provides direction to the IST Veterinary Specialist in providing canine services and assistance in some human needs.
- The IST Medical Unit Leader anticipates the need for medical supplies and services, based on incident action and strategic plans.
- The IST Medical Unit Leader assists the IST Supply Unit Leader to assure supplies are ordered and arrive as ordered to meet needs.
- The IST Medical Unit Leader assures medical services are provided, and documents illness or injury for ESF-9 personnel.
- The IST Medical Unit Leader, in concert with the IST Safety Officer, is responsible for developing the Medical Plan component for the Incident Action and Strategic Plans.
- This role involves performing health risk assessment of the disaster site and mitigating risks to US&R personnel.

FEMA US&R RESPONSE SYSTEM  
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**OVERHEAD**

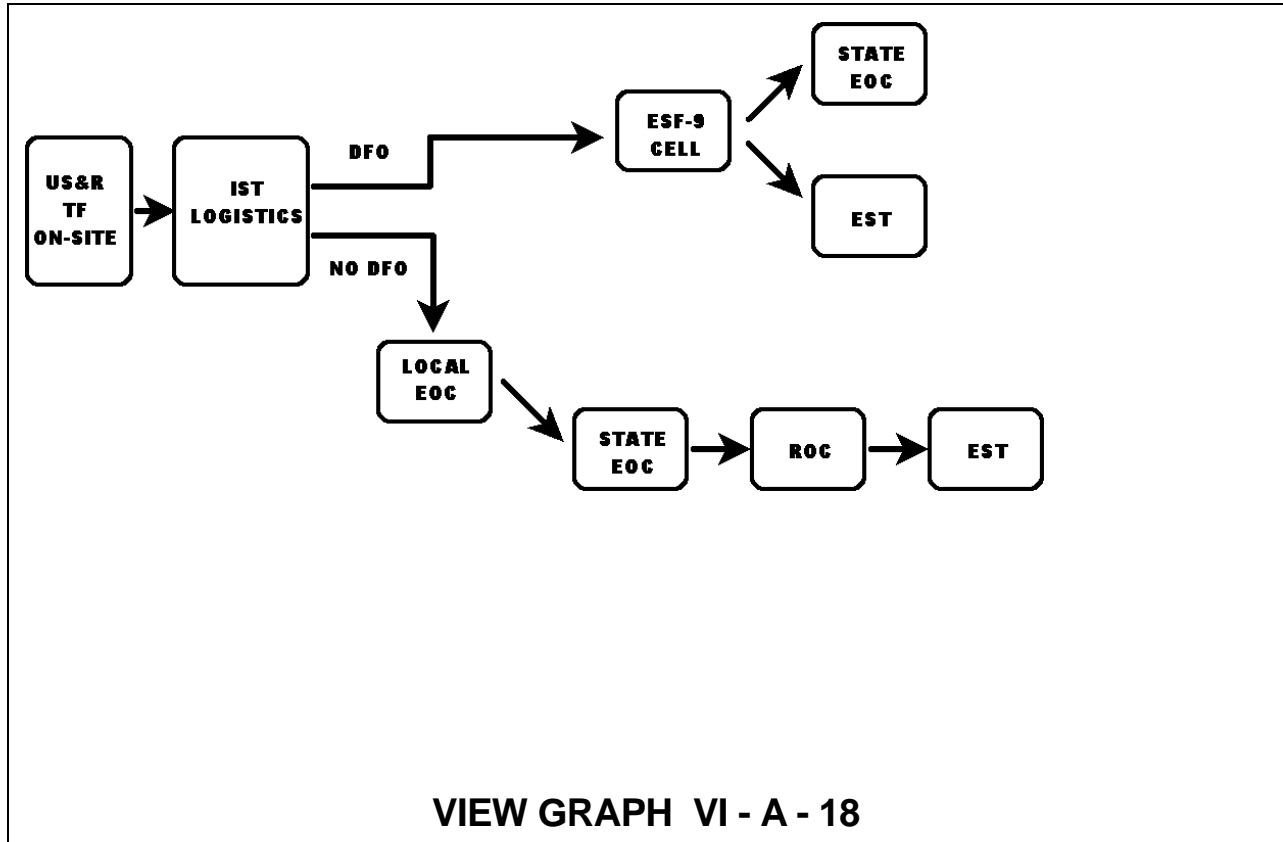
**INCIDENT SUPPORT TEAM**

- Medical Unit
  - The IST Medical Unit Leader provides medical service to the IST, serves as medical liaison with US&R resources and the ERT.
  - The IST Medical Unit Leader anticipates the need for medical supplies and services, based on incident action and strategic plans.
  - The IST Medical Unit Leader assures medical services are provided, and documents illness or injury for ESF-9 personnel.
  - The IST Medical Unit Leader develops the Medical Plan component for the IAP.

VIEW GRAPH VI - A - 17

**VI. OVERHEAD  
A. INCIDENT SUPPORT TEAM (continued)**

**ESF-9 Resupply Process**



**IST Administrative Support Kit**

Kit equipment categories:

- Administrative supplies
- Office/ADP equipment
- Communications equipment
- Medical equipment and supplies
- Shelter requirements

**VI. OVERHEAD**  
**B. INCIDENT ACTION PLAN**

The operational procedures used by US&R task forces during deployments is based on the Incident Command System. Task force organizational structure, use of common terminology, reporting and documentation forms are all based on the ICS concepts.

The incident planning process used by task forces is also base on ICS concepts. It is important that we all understand the ICS planning process and how the Logistics Specialist contributes to the process.

**INCIDENT ACTION PLANNING**

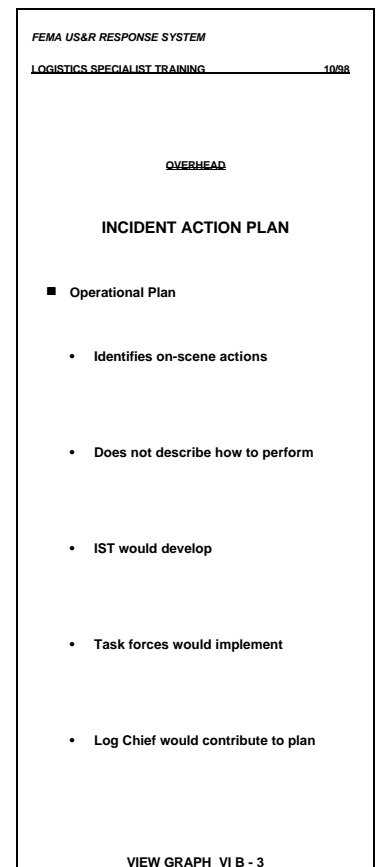
- It is essential that every incident be managed according to a plan. In the ICS, this plan is called the Incident Action Plan (IAP). IAPs are developed whenever:
  - Two or more jurisdictions are involved.
  - The incident continues into another operational period.
  - A number of organizational elements have been activated.
  - It is required by agency policy.
- Written action plans provide:
  - A clear statement of objectives and actions for the entire incident.
  - A basis for measuring cost and work effectiveness.
  - A method of providing accountability.
- Only one action plan is developed for each operational period for the entire incident.
- The development of the IAP is the responsibility of the agency or organization that has jurisdictional responsibility for the incident.
- It would be extremely rare for a US&R Logistics Specialist to be involved in or have input into the development of the IAP. However, a Logistics Section Chief on an ERT in a DFO would certainly be involved in its development.

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| <p>FEMA US&amp;R RESPONSE SYSTEM</p> <p>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>OVERHEAD</p> <p>INCIDENT ACTION PLAN</p> <p>■ IAPs are developed when:</p> <ul style="list-style-type: none"><li>• Two or more jurisdictions.</li></ul>   |
| <p>FEMA US&amp;R RESPONSE SYSTEM</p> <p>LOGISTICS SPECIALIST TRAINING 10/98</p> <ul style="list-style-type: none"><li>• More than one ops period.</li><li>• Agency requirement.</li></ul> <p>OVERHEAD</p> <p>INCIDENT ACTION PLAN</p> <p>■ Written action plans provide:</p> <ul style="list-style-type: none"><li>• Clear objectives/actions</li></ul> <p>VIEW GRAPH VI B - 1</p> |
| <ul style="list-style-type: none"><li>• Cost measurements</li><li>• Accountability</li></ul>   |

**VI. OVERHEAD**  
**B. INCIDENT ACTION PLAN**

**OPERATIONAL PLAN**

- In the hierarchy of ICS action planning, the next level of planning is the Operational Plan.
- The Logistics Specialist does have a role in the development of the Operational Plan.
- The US&R Operational Plan is simply a plan that identifies the on-scene actions US&R task forces are taking to meet an Operational Objective identified in the IAP.
- The IAP does not describe how these activities are to be carried out, only that the activity is needed. The ERT Operations Section would be responsible for accomplishing this objective. What would happen next?
  - ESF-9 would be tasked by ERT Operations to provide US&R assets to meet the objective.
  - ESF-9 would determine the level of US&R assets required and mobilize and deploy them.
- Assume two task forces are deployed along with an IST. The IST would develop the Operational Plan that identifies the on-the-ground strategy and tactics the task forces will implement to meet the US&R objective identified in the IAP.
- When an IST is deployed, the Operational Plan is put together by the IST Planning Section Chief with input from the IST staff.
- The IST Logistics Section Chief contributes to the development of the Operations Plan by providing logistical information that supports the actions or objectives identified in the plan. Logistical information provided by the Logistics Section Chief may also lead to changing a course of action due to lack of resources or the inability to support the planned action.
- The IST Logistics Section Chief does not provide logistical input to the Operational Plan in a vacuum. They depend on the task force Logistics Specialist for information.





**VI. OVERHEAD**  
**B. INCIDENT ACTION PLAN**

**OPERATIONAL PLAN (continued)**

- What type of information do you provide that might be important to the IST Logistics Section Chief?
  - Supply deficiencies.
  - Equipment malfunctions.
  - Specialized equipment needs.
  - Safety issues.
  - Accomplishments.
  
- This information is relayed to the IST Logistics Section Chief through your Technical Team Manager.
  
- The IST Logistics Section Chief uses this information at the Operational Planning meeting when a tactic or strategy is discussed. They would know whether the tactic or strategy being discussed can be logistically supported, which would result in whether or not the tactic or strategy is achievable.
  
- In the absence of an IST, the burden of fulfilling the responsibility of the Logistics Section Chief during the planning process may fall upon you.
  
- You can keep informed of what the planning tactics and strategy area by reviewing the Operational Plan. This also helps prepare you for what logistical requirements may be needed during the operational period.
  
- In review, the IAP describes operational objectives in broad statements, one of which may involve US&R requirements. Example: Conduct US&R operations in communities on the barrier islands. The Operational Plan developed by US&R describes how they are going to conduct these operations.
  
- The IAP and the Operational Plan are similar in appearance. They both may include a communications plan, medical plan, weather forecast, safety message, etc. A map of the entire incident would be included in the IAP, whereas, a map in the Operational Plan would be limited to the US&R area of operations.

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| <p>FEMA US&amp;R RESPONSE SYSTEM</p> <p>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>OVERHEAD</p> <p>INCIDENT ACTION PLAN</p> <ul style="list-style-type: none"><li>■ Operational Plan — Log input<ul style="list-style-type: none"><li>• Supply deficiencies</li><li>• Equipment malfunctions</li><li>• Specialized needs</li><li>• Safety issues</li><li>• Accomplishments</li></ul></li></ul>                             |
| <p>FEMA US&amp;R RESPONSE SYSTEM</p> <p>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>VIEW GRAPH VI B - 4</p> <p>OVERHEAD</p> <p>INCIDENT ACTION PLAN</p> <ul style="list-style-type: none"><li>■ Operational Plan<ul style="list-style-type: none"><li>• If not IST, Log Chief develops</li><li>• Ops Plan should be reviewed</li><li>• IAP and Ops Plan are similar</li><li>• Map should be part of IAP</li></ul></li></ul> |

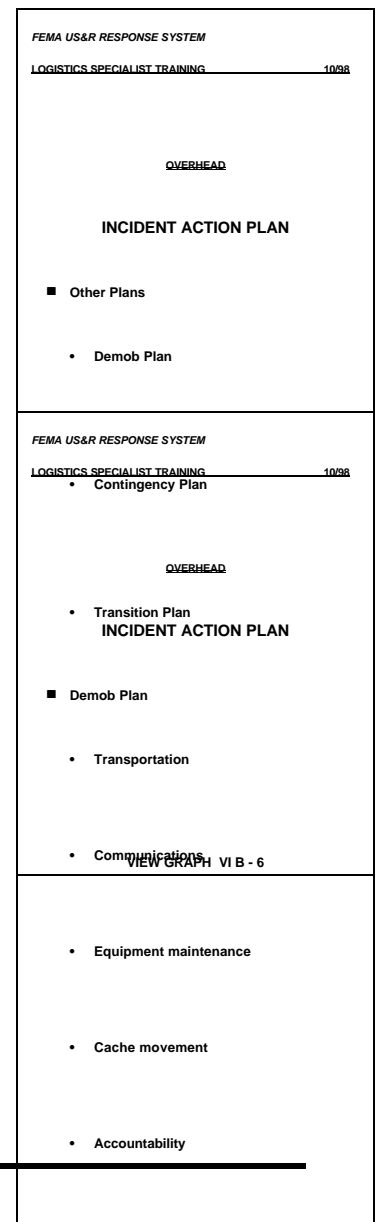
**VI. OVERHEAD**  
**B. INCIDENT ACTION PLAN**

**OPERATIONAL PLAN (continued)**

- MST, USFS and other response entities develop similar Operational Plans to accomplish the operational objectives in the IAP that they are tasked to accomplish.
- At times, you may work with an agency having jurisdictional responsibility that does not use ICS. This means they would not have an IAP and give the Task Force Leader or IST Commander their operational objective verbally. It doesn't impact the way the task force or IST does its planning.

**OTHER PLANS**

- Although the Operational Plan is the primary plan you need to be familiar with, there are other types of plans that you might get involved in. These include:
  - Demobilization Plan.
  - Contingency Plan.
  - Transition Plan.
- Demobilization planning would occur on all deployments, whereas the Contingency and Transition plans may not be developed on all deployments.
- Demobilization Plan — helps assure a controlled, safe, efficient and cost effective demobilization process.
  - It outlines how this process will be carried out.
  - Much of the responsibility for executing this plan lies with the Logistics personnel.
  - Many of the procedures in the plan deal with:
    - transportation.
    - communications.
    - equipment maintenance and inventory.
    - packaging, movement and loading of caches.
    - accountability of issued items.
- These are all procedures you deal with. If you have a system or process that would be efficient and timely in implementing the above procedures, you need to make them known so it can be put in as part of the Demob Plan.



**VI. OVERHEAD  
B. INCIDENT ACTION PLAN**

**OTHER PLANS (continued)**

- Contingency Plan — is put together to meet anticipated needed requirements for an event not yet certain to happen.
  - If one is developed, you need to be aware of its contents. If one exists, you not only have to be concerned of providing task force logistical support for the tactics described in the Operational Plan, but have to be prepared to meet the logisitical requirements identified in the Contingency Plan if it is put into effect.
  - Contingency Plans can be put into effect within hours or even minutes depending on that the contigency is.
  
- Transition Plan — is designed to provide for an orderly assumption of responsibilities from one group to another.
  - Whenever you are involved in a Transition Plan, this means the duties and responsibilities you have been performing for several operational periods is going to be assumed by someone else.
  - It is helpful to develop a checklist of key transition point to review or discuss with your replacement. This would include:
    - past actions you have taken.
    - equipment maintenance issues.
    - equipment replacement problems.
    - listing of issued property/equipment items.
    - inventory of equipment.
    - names and phone numbers of key contacts outside the task force, if any.
  - The US&R Field Operations Guide does not provide guidance on what some of the key transition points should be. You have to develop these on your own.

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| <p style="font-size: small; margin: 0;">FEMA US&amp;R RESPONSE SYSTEM</p> <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> <p style="font-size: x-small; margin: 0;">LOGISTICS SPECIALIST TRAINING <span style="float: right;">10/98</span></p><br><br><p style="text-align: center; font-weight: bold; font-size: small;">OVERHEAD</p> <p style="text-align: center; font-weight: bold; font-size: small;">INCIDENT ACTION PLAN</p> <ul style="list-style-type: none"> <li>■ Contingency Plan                             <ul style="list-style-type: none"> <li>• For anticipated needs</li> <br/> <li>• Provide logistical support</li> </ul> </li> </ul>   |
| <p style="font-size: small; margin: 0;">FEMA US&amp;R RESPONSE SYSTEM</p> <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> <p style="font-size: x-small; margin: 0;">LOGISTICS SPECIALIST TRAINING <span style="float: right;">10/98</span></p> <ul style="list-style-type: none"> <li>• Can be put into effect quickly</li> </ul><br><br><p style="text-align: center; font-weight: bold; font-size: small;">OVERHEAD</p> <p style="text-align: center; font-weight: bold; font-size: small;">INCIDENT ACTION PLAN</p> <ul style="list-style-type: none"> <li>■ Transition Plan</li> </ul> <p style="text-align: center; font-weight: bold; font-size: x-small;">VIEW GRAPH VI B - 8</p> <ul style="list-style-type: none"> <li>• Past actions taken</li> <br/> <li>• Equipment maintenance</li> <br/> <li>• Equipment replacement</li> <br/> <li>• Listing of issues items</li> <br/> <li>• Equipment inventory</li> <br/> <li>• Key contacts</li> </ul> <p style="text-align: center; font-weight: bold; font-size: x-small;">VIEW GRAPH VI B - 9</p> |

**VI. OVERHEAD**  
**C. FEMA MERS**

- The Federal Emergency Management Agency (FEMA) through the Mobile Operations Response Branch (MORB) maintains mobile elements consisting of five Mobile Emergency Response Support (MERS) Detachments.
  
- These mobile elements can respond rapidly and provide a wide variety of support to deployed emergency responders. This support is designed to be responsive to the needs of government emergency managers in their effort to save lives, protect property, and coordinate disaster operations. (This support is not designed to meet the emergency requirements of the general population.)

**Available Support**

- The mission of the FEMA response support assets is to provide a wide range of support to FEMA Emergency Response Teams (ERTs), the Advance Element of the ERTs, Urban Search and Rescue (US&R) and other Federal, State, and local agencies at the scene of a disaster, emergency, special event, or exercise.
  
- To fulfill these needs, response resources from MERS will respond promptly and provide, as required:
  - Multi-media communications and information processing support.
  
  - Operational support; information and planning.
  
  - Logistical and life support for emergency responders.
  
  - Automated information and decision support capability.
  
  - Power generation.
  
  - Safety and security (facility, equipment and personnel) management and consultation.

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| <p>FEMA US&amp;R RESPONSE SYSTEM<br/>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>FEMA OVERHEAD</p> <p>MERS DETACHMENT</p> <ul style="list-style-type: none"><li>■ Introduction<ul style="list-style-type: none"><li>• FEMA maintains mobile elements consisting of five Mobile Emergency Response Support (MERS) Detachments.</li><br/><li>• These elements can provide a wide variety of support to deployed emergency responders.</li><br/><li>• This support is designed to save lives, protect property, and coordinate disaster operations.</li><br/><li>• This support is not designed to meet the emergency requirements of the general population.</li></ul></li></ul> |
| <p>FEMA US&amp;R RESPONSE SYSTEM<br/>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>VIEW OVERHEAD - 1</p> <p>MERS DETACHMENT</p> <ul style="list-style-type: none"><li>■ Available Support<ul style="list-style-type: none"><li>• comm and information processing support.</li><br/><li>• Operational support.</li><br/><li>• Logistical and life support for TFs.</li><br/><li>• Automated information capability.</li><br/><li>• Power generation.</li><br/><li>• Safety and security.</li></ul></li></ul>  |

**VI. OVERHEAD**  
**C. FEMA MERS**

**Support Concepts**

- Each deployment is tailored to meet specific emergency response requirements.
- Equipment and personnel can be pre-positioned to support response to forecasted emergencies or forecasted events.
- Resources may be driven or airlifted to event locations.
- Equipment can be airlifted by C-5, C-141, or C-130 depending on the specific system to be deployed.
- The mobile assets are self-sustaining and are fully operational in austere conditions.
- Most services will normally be provided in a building selected as an operating site. However, initial service can be provided directly from mobile equipment.

**Requests for Assistance**

- All requests should contain the following information:
  - Name and agency of the requestor.
  - Event/activity causing the request to be made.
  - Date(s) support requested.
  - Purpose of the requested support.
  - Support requirements.
  - Fund site.
- Urgent requests for immediate assistance, such as those following a disaster or emergency that occurs without warning should be called immediately to the National Emergency Coordination Center (NECC) at (202) 898-6100.

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| <p>FEMA US&amp;R RESPONSE SYSTEM<br/>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>FEMA OVERHEAD</p> <p>MERS DETACHMENT</p> <ul style="list-style-type: none"><li>■ Support Concepts<ul style="list-style-type: none"><li>• Each deployment is tailored to meet specific emergency response requirements.</li><li>• Equipment/personnel can be pre-positioned.</li><li>• Resources may be driven or airlifted.</li><li>• Equipment can be airlifted by C-5, C-141, or C-130 depending on the specifics.</li><li>• The mobile assets are self-sustaining.</li></ul></li></ul>  |
| <p>FEMA US&amp;R RESPONSE SYSTEM<br/>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>FEMA OVERHEAD</p> <p>VIEW GRAPH VI - C - 3</p> <p>MERS DETACHMENT</p> <ul style="list-style-type: none"><li>■ Requests for Assistance<ul style="list-style-type: none"><li>• All requests should contain the following information:<ul style="list-style-type: none"><li>- Name and agency of the requestor.</li><li>- Event/activity causing the request to be made.</li><li>- Date(s) support requested.</li><li>- Purpose of the requested support.</li><li>- Support requirements.</li><li>- Fund site.</li></ul></li><li>• Urgent requests for immediate assistance, should be called immediately to the National Emergency Coordination Center (NECC) at (202) 898-6100.</li></ul></li></ul> |

**VI. OVERHEAD  
C. FEMA MERS**

**Requests for Assistance (continued)**

- Other requests should be written and contain the required information. Submission of requests should be as follows:
  - Requests from Federal Field Elements and States should be submitted to the FEMA Regional Director in your area.
  - Requests from local governments should be submitted to the appropriate State Emergency Management Agency.
  - Requests from any sources not listed above should be submitted to FEMA, Response and Recovery Directorate, Operations Division, (202) 646-4129.

**Movement Timing**

- Estimated rate of travel: 50 miles per hour, (for non emergency event, driving is restricted to 8 hours per day, Monday-Friday.)
- Estimated time to arrive at the operations site:

|                                     |   |         |                        |
|-------------------------------------|---|---------|------------------------|
| Recall                              |   | 4 hours |                        |
| Drive time or<br>air transport time | + | # hours | _____                  |
|                                     |   |         | = hours to arrive site |

**MERS Communications**

- Multi-Radio Van with the Secondary Antenna System
  - KU-Band Satellite Telephone.
  - Within 1 hours of arrival on site.
    - 48 telephone lines (2 T-1s).
    - 96 telephones (2/line) OR 48 dedicated telephones, or
    - 24 lines and a Real Time Video, or
    - a mix of shared and dedicated lines.
    - Secure or nonsecure data. voice or FAX.

FEMA US&R RESPONSE SYSTEM  
LOGISTICS SPECIALIST TRAINING 10/98

**FEMA OVERHEAD**

**MERS DETACHMENT**

- Requests for Assistance
  - Other requests should be written and contain the required information. Submission of requests should be as follows:
    - Requests from Federal Field Elements and States should be submitted to the FEMA Regional Director in your area.
    - Requests from local governments should be submitted to the appropriate State Emergency Management Agency.
    - Requests from any sources not listed above should be submitted to FEMA, Response and Recovery Directorate, Operations Division, (202) 646-4129.

FEMA US&R RESPONSE SYSTEM  
LOGISTICS SPECIALIST TRAINING 10/98

**FEMA OVERHEAD**  
VIEW GRAPH VI - C - 5

**MERS DETACHMENT**

- Movement Timing
  - Estimated rate of travel: 50 miles per hour.
  - Estimated arrival at the operations site:

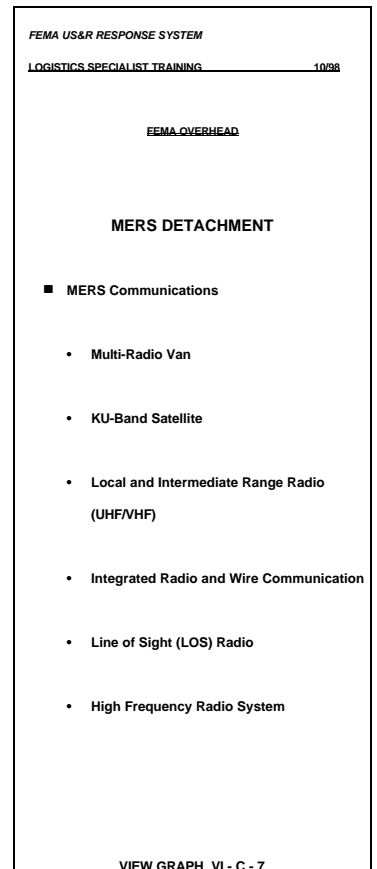
|             |   |         |                        |
|-------------|---|---------|------------------------|
| Recall:     |   | 4 hours |                        |
| Drive time: | + | # hours | _____                  |
|             |   |         | = hours to arrive site |

VIEW GRAPH VI - C - 6

**VI. OVERHEAD**  
**C. FEMA MERS**

**MERS Communications (continued)**

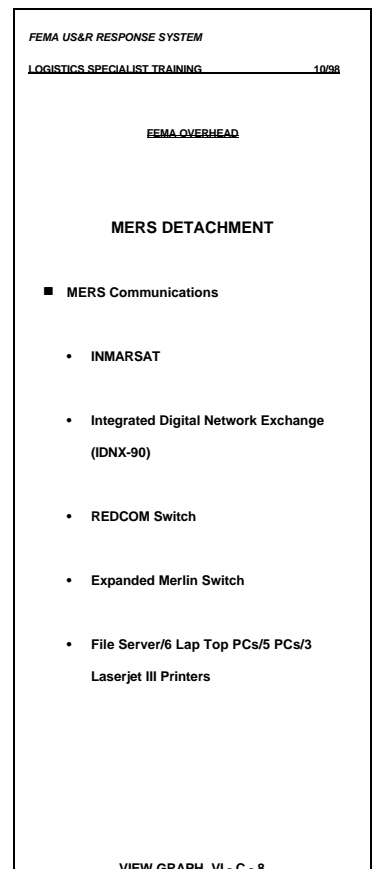
- **KU-Band Satellite - Video** (two-way teleconferencing and full broadcast video)
  - Two-way teleconferencing.
  - Full broadcast television transmission for Recovery Channel or Response/Recovery operations.
  
- **Long-Distance Radio (High Frequency)**
  - Arrival + 2 hours.
  - Secure and nonsecure data, voice, or FAX to other facilities that have HF radio capability.
  
- **Local and Intermediate Range Radio (UHF/VHF)**
  - Arrival + 1 hour.
  - Voice communications between operating sites and local emergency services.
  - Repeater, retransmission, and cross patching of UHF and VHF radios.
  - A limited number of hand-held FM radios are also available.
  
- **Integrated Radio and Wire Communication**
  - Arrival + 1 hour.
  - Allows an on-site field representative to talk directly to a distant headquarters or any working telephone.
  
- **Line of Sight (LOS) Radio**
  - Expanded telephone capability.
  - Arrival + 6 hours.
  - 21 telephone circuits with secure or nonsecure data, voice, or FAX.
  - Telephone service can be extended a maximum of 56 miles.
  
- **High Frequency Radio System**
  - Long distance radio.
  - Arrival + 8 hours.
  - Four voice and four data circuits for communication with Federal, State, and Local Emergency operations Centers via FEMA National Radio Network and Fema Regional Radio Network.



**VI. OVERHEAD**  
**C. FEMA MERS**

**MERS Communications (continued)**

- **INMARSAT**
  - Initial telephone service for advance response personnel.
  - Arrival + 10 minutes.
  - One telephone circuit providing world-wide secure and nonsecure voice, data, FAX service. Up to 5 telephone sets may be operated off the circuit.
  
- **Integrated Digital Network Exchange (IDNX-90)**
  - Multi-media interface.
  - Arrival + 2 hours.
  - Interface LOS, HF, KU Band Satellite, and landlines with the MERLIN and REDCOM Switchboards.
  - Provide LAN/WAN interface.
  
- **REDCOM Switch**
  - Telephone service.
  - Arrival + 2 hours.
  - 48 Circuits which will provide:
    - 144 shared telephone extensions, or
    - 48 dedicated telephones, or
    - a mix of shared and dedicated lines.
  - Secure or nonsecure data, voice or FAX.
  
- **Expanded Merlin Switch**
  - Telephone service.
  - Arrival + 2 hours.
    - 48 circuits (using 2 T-1s) which will provide:
      - 96 shared telephone extensions, or
      - 48 dedicated telephones, or
      - a mix of shared and dedicated lines.
  - Secure or nonsecure data, voice or FAX.
  
- **File Server/6 Lap Top PCs/5 PCs/3 Laserjet III Printers**
  - FEMA LAN/WAN access, automated data processing advisory and technical support.
  - Arrival + 4 hours.
  - Experienced in most commercial software as well as Local and Wide Area Network (LAN, WAN and Novell) ADP operations.

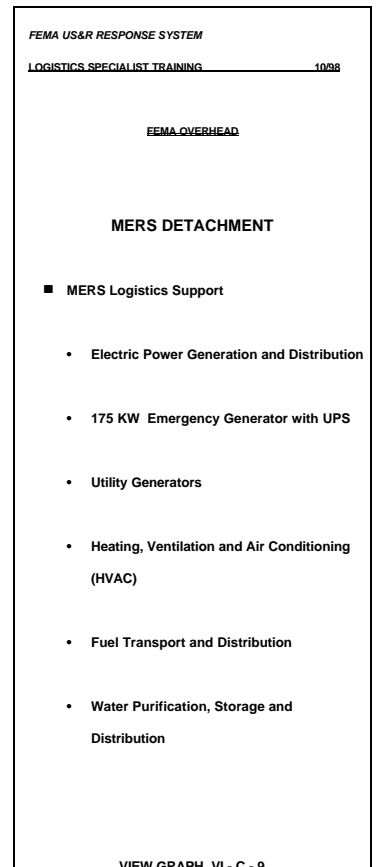




**VI. OVERHEAD**  
**C. FEMA MERS**

**MERS Logistics Support**

- Electric Power Generation and Distribution
  - 400 KW generators.
  - Arrival + 4 hours.
  - Electrical Power and distribution provided via power cables and distribution panels to desired locations. Power is generally not supplied to existing building circuits.
  - Lighting for general area illumination.
  
- 175 KW Emergency Generator with UPS
  - Arrival + 4 hours.
  - Provide uninterrupted electrical power to critical systems (ADP, etc.).
  - Tractor trailer mounted.
  
- Utility Generators
  - Arrival + 2 hours.
  - 20 - 110 KW.
  - Truck mounted and trailer mounted.
  
- Heating, Ventilation and Air Conditioning (HVAC)
  - Arrival + 4 hours.
  - Heating or cooling provided through portable, temporary ducting system.
  - Requires generator power.
  
- Fuel Transport and Distribution
  - Upon arrival.
  - Diesel fuel resupply.
  - Two 3500 gallon tankers.
  - Three 2000 gallon tankers.
  
- Water Purification, Storage and Distribution
  - Arrival + 8 hours.
  - Reverse Osmosis Water Purification Unit (ROWPU).
  - Non-potable water transported by tanker from source to the purification unit for processing and transfer to storage bladders for distribution.



**VI. OVERHEAD**  
**C. FEMA MERS**

**MERS Logistics Support (continued)**

- Emergency Response Team - Support (ERT-S)
  - Upon arrival.
  - Supports 100 people for 10 days.
  - Subsistence - MREs.
  - General Health and First Aid Supplies.
  - OTC medications, First aid kits.
  - MERS personnel trained in basic first aid.
  
- Personal Hygiene
  - Soap, towels, wash basins, shampoo, etc.
  
- Personal Clothing
  - Initial - rain gear, coveralls, underwear, etc.
  - Long term - parkas socks, shoes (follow-on vehicle).
  
- Sleeping
  - Sleeping bags, cots, pillows, sheets, blankets.
  
- Administrative Supplies and Equipment
  - Basic office supplies - pens, paper, etc.
  - Tables, chairs, lamps, etc.
  
- Fork lift - 3000 lb capacity

**Logistics Management**

- Facility Management
  - Logistics personnel experienced in site management.
  
- Acquisition Support
  - Government Commercial Credit Card.
  
- Warehouse Operation
  - Logistics personnel experienced in warehouse management.

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| <p>FEMA US&amp;R RESPONSE SYSTEM<br/>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>FEMA OVERHEAD</p> <p>MERS DETACHMENT</p> <ul style="list-style-type: none"><li>■ MERS Logistical Support<ul style="list-style-type: none"><li>• Emergency Response Team - Support (ERT-S)</li><li>• Personal Hygiene</li><li>• Personal Clothing</li><li>• Sleeping</li><li>• Administrative Supplies and Equipment</li><li>• Fork lift - 3000 lb capacity</li></ul></li></ul> |
| <p>FEMA US&amp;R RESPONSE SYSTEM<br/>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>VIEW GRAPH VI - C - 10</p> <p>FEMA OVERHEAD</p> <p>MERS DETACHMENT</p> <ul style="list-style-type: none"><li>■ Logistics Management<ul style="list-style-type: none"><li>• Facility Management</li><li>• Acquisition Support</li><li>• Warehouse Operation</li><li>• Transportation Management</li><li>• Property Accountability</li></ul></li></ul>                           |

**VI. OVERHEAD**  
**C. FEMA MERS**

**Logistics Management (continued)**

- Transportation Management
  - Logistics personnel experienced in transportation management.
- Property Accountability
  - Logistics personnel experienced in property management.

**MERS Information and Planning**

- Situation Reporting/Briefing
  - Prepare and submit SITREPS.
  - Prepare and present periodic situation briefings.
- Data Collection
  - Provide central processing for data collection and analysis of information.
- Data Display
  - Prepare and maintain charts and graphs.
- Message Distribution Center/Inter-Agency Coordination
  - Establish message distribution and action tracking.

**MERS Safety**

- Alert Warning
  - Provide advice concerning existing or predicted adverse conditions which might require alerting of the population in the affected area.
- Disaster Location and Hazard Plotting
  - Provide advice concerning areas that are or will be affected by disasters.
- Evacuation Planning and Implementation
  - Provide advice on population evacuation.

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| <p>FEMA US&amp;R RESPONSE SYSTEM<br/>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>FEMA OVERHEAD</p> <p>MERS DETACHMENT</p> <ul style="list-style-type: none"><li>■ MERS Info and Planning<ul style="list-style-type: none"><li>• Situation Reporting/Briefing</li></ul></li></ul>  |
| <p>FEMA US&amp;R RESPONSE SYSTEM<br/>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>FEMA OVERHEAD</p> <ul style="list-style-type: none"><li>• Data Display</li></ul> <p>MERS DETACHMENT</p> <ul style="list-style-type: none"><li>• Message Distribution Center/<br/>Inter-Agency Coordination</li><li>■ MERS Safety<ul style="list-style-type: none"><li>• Alert Warning</li><li>• Disaster Location and Hazard Plotting</li></ul></li></ul> <p>VIEW GRAPH VI - C - 12</p> <ul style="list-style-type: none"><li>• Evacuation Planning and Implementation</li><li>• Disaster Reporting</li><li>• Fire/Safety Inspections</li><li>• Incident/Accident Investigation</li><li>• Injury/Illness Reporting</li></ul> |

**VI. OVERHEAD**  
**C. FEMA MERS**

**MERS Safety (continued)**

- Disaster Reporting
  - Advise disaster response organizations of current or pending actions.
  
- Fire/Safety Inspections - Hazard Identification and Mitigation
  - Conduct fire and safety inspections.
  - Prepare inspection reports.
  - Provide technical advice regarding hazard abatement.
  - Liaison with environmental and safety personnel from federal, state, and local agencies.
  - Oversee compliance with FEMA, OSHA, EPA, DOT, State and Local Health, Safety and environmental regulations.
  - Assist with the identification of PFE and hazard mitigation requirements.
  - Monitor and document individual exposure to hazardous/harmful material.
  
- Incident/Accident Investigation
  - Investigate and prepare accident reports.
  - Conduct accident trend analysis and recommend preventative measures.
  
- Injury/Illness Reporting
  - Manage the Federal Employee Compensation Act claims process.
  - Coordinate actions between FEMA and the Dept of Labor Office of Workers Compensation Programs.

**MERS Security**

- On-site security planning and supervision
  - Security of operating site and equipment.
  
- Liaison/coordination with Law Enforcement
  - Acquire assistance, coordinate actions, and exchange information of mutual interest with law enforcement agencies.

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| <p>FEMA US&amp;R RESPONSE SYSTEM</p> <p>LOGISTICS SPECIALIST TRAINING 10/98</p> <p style="text-align: center;">FEMA OVERHEAD</p> <p style="text-align: center;">MERS DETACHMENT</p> <ul style="list-style-type: none"><li>■ MERS Security<ul style="list-style-type: none"><li>• On-site security planning and supervision<ul style="list-style-type: none"><li>- Security of operating site and equipment.</li></ul></li><br/><li>• Liaison/coordination with Law Enforcement<ul style="list-style-type: none"><li>- Acquire assistance</li><li>- coordinate actions</li><li>- exchange information of mutual interest with law enforcement agencies.</li></ul></li></ul></li></ul> |
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**VI. OVERHEAD**  
**F. EQUIPMENT TRACKING/LOGISTICS DOCUMENTATION**

- The task forces comprising the FEMA Urban Search and Rescue (US&R) System rely on the availability and readiness of appropriate equipment and supplies to support disaster rescue operations. A comprehensive property system is essential for ensuring that this readiness is maintained.
  
- Accountability is also a key element in the terms and conditions of the *Memorandum of Agreement* between the task forces and FEMA. *Attachment D* of the document states specific cache accountability activity which must be carried out annually. (The text of *Attachment D* is in the appendix of this manual.
  
- To clarify terminology used extensively in this document, note the definitions of the following terms as found in FEMA documents:
  - Equipment - tangible, nonexpendable property having a useful life of more than one year and an acquisition cost of \$5,000 or more per unit.
  - Supplies - all tangible property other than equipment; meaning all tangible property with a useful life of less than one year and an acquisition cost of less than \$5,000.
  - Non-expendable property - normally includes high-cost tools and equipment, such as generators, radios, power tools, medical equipment and technical equipment.
  - Expendable property - normally includes such items as gloves, batteries, food, medications which have limited useful lives and are normally classified as supplies.
  - Personal property - includes any items that are taken to the disaster by task force members that are not provided by FEMA or the sponsoring organization, such as cameras, radios, binoculars, etc.
  
- Any cache accountability system is contingent on two processes:
  - A comprehensive pre-mission inventory to set the baseline quantities of cache property, and
  - A process-oriented resource tracking system which documents any alteration to the inventory, whether due to training or mission activity, equipment going out of service for repair, or cache additions or deletions.

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| FEMA US&R RESPONSE SYSTEM  |       |
| LOGISTICS SPECIALIST TRAINING  | 10/98 |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES   |       |
| TRACKING/DOCUMENTATION   |       |
| ■ To clarify terminology used extensively in this document, note the definitions   |       |
| of the following terms as found in FEMA US&R RESPONSE SYSTEM FEMA documents:   |       |
| LOGISTICS SPECIALIST TRAINING  | 10/98 |
| • Equipment  |       |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES   |       |
| • Supplies   |       |
| TRACKING/DOCUMENTATION   |       |
| • Non-expendable property  |       |
| ■ Any cache accountability system is contingent on two processes:  |       |
| • Personal property  |       |
| • A comprehensive pre-mission inventory.   |       |
| • A process-oriented resource tracking system which documents any alteration to the inventory.   |       |
| ■ Only by establishing this baseline of data, plus detail-oriented tracking, can the cache be maintained in maximum operational capacity at all times. |       |

**VI. OVERHEAD**  
**F. EQUIPMENT TRACKING/LOGISTICS DOCUMENTATION**

- Only by establishing this baseline of data, plus detail-oriented tracking, can the cache be maintained in maximum operational capacity at all times.
- As a point of this process, ongoing maintenance and exercise (mechanical operation) of the cache tools and equipment must be performed between mobilizations. As such, there must be an organized system of equipment inventory, maintenance and routine operation to ensure that the cache is ready for immediate response.
- Within the task force, these activities are the responsibility of the Logistics Specialist. These personnel must track, distribute, maintain and account for all equipment and supplies in the task force cache.

**Cache Inventory**

- The only way to maintain accountability is to establish it from the beginning with a comprehensive inventory.
- Required inventories
  - All items that have been purchased with federal, state, or local agency funds must be accounted for.
  - All items that are listed on the US&R task force equipment list.
- Inventory Intervals
  - It is recommended that all components of the cache be inventoried at least every six months.
  - The sponsoring agency should identify an individual or individuals -- a cache manager -- to assume responsibility for the routine inventory, maintenance and inspection of the cache during non-mission periods.
  - The cache must be fully inventoried after each use, whether actual mission response or training exercise.
  - Each team is accountable/liable for the disposition of all non-expendable property and expendable items.

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| FEMA US&R RESPONSE SYSTEM   |       |
| LOGISTICS SPECIALIST TRAINING   | 10/98 |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES  |       |
| TRACKING/DOCUMENTATION  |       |
| ■ The only way to maintain accountability is to establish it from the beginning with a comprehensive inventory.         |       |
| LOGISTICS SPECIALIST TRAINING 10/98   |       |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES  |       |
| ■ Required inventories  |       |
| TRACKING/DOCUMENTATION  |       |
| • All items that have been purchased with federal, state, or local agency funds must be accounted for every six months. |       |
| • The sponsoring agency should identify a cache manager.  |       |
| • All items that are listed on the US&R task force equipment list.  |       |
| • The cache must be fully inventoried after each use, whether actual mission response or training exercise.             |       |
| VIEW GRAPH VI F-3   |       |
| • Each team is accountable/liable for the disposition of all non-expendable property and expendable items.              |       |

**VI. OVERHEAD  
F. EQUIPMENT TRACKING/LOGISTICS DOCUMENTATION**

**Cache Inventory (continued)**

- Any fixed item lost, damaged, or destroyed, regardless of the circumstances, must be justified in writing to the Task Force Leader, sponsoring agency and FEMA.
  - Document on Government Property Lost or Damaged Certificate — FEMA Form 61-10.
  - The cost of repair is charged to the appropriate entity that initiates the use of the cache (i.e., FEMA, state agency, local jurisdiction, etc.) for use, including training, simulation exercises and disaster response.
  - Consumable item use will be identified through the restocking process and charged to the appropriate agency, as for fixed assets.
  
- The inventory procedure for all phases of cache management will use computer-generated and maintained inventory databases.
  - The inventory database will be updated as required for equipment additions, deletions, or repairs.
  - Computer database applications allow much more freedom in cross-referencing items, keeping track of minimum stocking levels of consumable items and post-mission reporting issues. They are effective in keeping track of vendor information and replacement cost calculations.
  
- Examples of pertinent databases are:
  - File Maker Pro
  - Q&A, Access
  - Microsoft Works
  - Excel
  - Fox Pro
  
- It is imperative that a strict data backup system be maintained, with information stored on hard disk and/or floppy disk media.
  - Hard copy printouts will constitute non-digital backup sources for the inventory process.
  - The annotated hard copy should be filed, after the electronic inventory is updated, to provide an historical record of cache management.
  - On a deployment, four (4) copies of this hard copy should accompany Logistics Specialists with their other cache documentation.

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| FEMA US&R RESPONSE SYSTEM   |       |
| LOGISTICS SPECIALIST TRAINING   | 10/98 |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES  |       |
| TRACKING/DOCUMENTATION  |       |
| <ul style="list-style-type: none"> <li>■ Any fixed item lost, damaged, or destroyed must be justified in writing to the Task Force Leader, sponsoring agency and FEMA.</li> </ul>     |       |
| <ul style="list-style-type: none"> <li>• Document on Government Property Lost or Damaged Certificate — FEMA Form 61-10.</li> </ul>  |       |
| <ul style="list-style-type: none"> <li>• The repair is charged to the appropriate entity that initiates the use of the cache.</li> </ul>  |       |
| <ul style="list-style-type: none"> <li>• Consumable item use will be identified through the restocking process and charged to the appropriate agency, as for fixed assets.</li> </ul> |       |
| <ul style="list-style-type: none"> <li>■ Examples of pertinent databases:</li> </ul>  |       |
| LOGISTICS SPECIALIST TRAINING   | 10/98 |
| VIEW GRAPH VTF - 5  |       |
| <ul style="list-style-type: none"> <li>• File Maker Pro.</li> </ul>   |       |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES  |       |
| TRACKING/DOCUMENTATION  |       |
| Q&A, Access,  |       |
| <ul style="list-style-type: none"> <li>■ A strict data backup system must be maintained, with information stored on hard disk and/or floppy disk media.</li> </ul>                    |       |
| <ul style="list-style-type: none"> <li>• Microsoft Works.</li> </ul>  |       |
| <ul style="list-style-type: none"> <li>• Hard copy printouts is non-digital backup sources for the inventory.</li> </ul>  |       |
| <ul style="list-style-type: none"> <li>• The annotated hard copy should be filed to provide an historical record of cache management.</li> </ul>                                      |       |
| VIEW GRAPH VTF - 6  |       |
| <ul style="list-style-type: none"> <li>• On a deployment, four (4) copies of this hard copy should accompany Logistics Specialists.</li> </ul>  |       |

**VI. OVERHEAD**  
**F. EQUIPMENT TRACKING/LOGISTICS DOCUMENTATION**

**Cache Inventory (continued)**

- A barcode system is utilized by several task forces with success. Once set up, this technology streamlines the inventory process and can perform several functions at once. Examples are:
  - Indicate minimum quantities to initiate reordering,
  - Indicate age of cache item and shelf life, if pertinent,
  - Indicate maintenance/servicing intervals.

**Manual Backup Inventory**

- It is recommended that each task force should maintain at a minimum a paper copy inventory system that employs "T" cards along with the itemized lists. Computers are ideal, but unless there are two of them with identically updated systems, they cannot be relied upon fully.
- The T card system will be color-coded for each cache subdivision as follows:
  - Rescue - red
  - Medical - blue
  - Technical - yellow
  - Logistics - white
  - Communications - green
- All information included on the T-card is also entered on the computer printout.
  - Each container, tool and kit will have a separate card listing pertinent info for the item and related equipment.
  - A workable scenario may be an individual container, packed as a comprehensive kit, may have a T-card. Or, there may be a T-card for each tool in the container when it is probably that the box's contents will be divided during operations.
  - Packing boxes using the kit concept allows the system to work with less repacking of tools and supplies and with the preparation and use of fewer T-cards. Planning in this area reaps tremendous rewards during deployments.

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| FEMA US&R RESPONSE SYSTEM   |  |
| LOGISTICS SPECIALIST TRAINING   | 10/98  |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES  |  |
| TRACKING/DOCUMENTATION  |  |
| <ul style="list-style-type: none"> <li>■ A barcode system is utilized by several task forces with success. Once set up, this technology streamlines the inventory process and can perform several functions at once. Examples are:</li> </ul> |  |
| <ul style="list-style-type: none"> <li>• Indicate minimum quantities to</li> </ul>  | <ul style="list-style-type: none"> <li>initiate reordering.</li> </ul> |
| FEMA US&R RESPONSE SYSTEM   |  |
| LOGISTICS SPECIALIST TRAINING 10/98   |  |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES  |  |
| TRACKING/DOCUMENTATION  |  |
| <ul style="list-style-type: none"> <li>• Indicate age of cache item and shelf life, if pertinent.</li> </ul>  |  |
| <ul style="list-style-type: none"> <li>• Indicate maintenance/servicing intervals.</li> </ul>   |  |
| <ul style="list-style-type: none"> <li>■ The T card system will be color-coded for each cache subdivision as follows:</li> </ul>  |  |
| <ul style="list-style-type: none"> <li>• Rescue - red</li> </ul>  | <ul style="list-style-type: none"> <li>Medical - blue</li> </ul>       |
| <ul style="list-style-type: none"> <li>• Technical - yellow</li> </ul>  | <ul style="list-style-type: none"> <li>Logistics - white</li> </ul>    |
| <ul style="list-style-type: none"> <li>• Communications - green</li> </ul>  |  |
| VIEW GRAPH V.I.F - 9  |  |



**VI. OVERHEAD**  
**F. EQUIPMENT TRACKING/LOGISTICS DOCUMENTATION**

**Equipment Checks and Maintenance**

- Coordinating with the cache inventory every six months, all necessary tools and equipment checks, maintenance and exercise should be performed.
  - Notations of exercise, maintenance and repair should be made on the hard copy of the inventory list at the time of the routine cache inventory.
  - Items with limited shelf life, such as batteries, food, medicines, etc., should be evaluated at this time.
  - A system for tracking shelf life and rotation/reorder of stock must be addressed.

**FEMA Annual Inventory Requirements**

- According to Section IV, Part D, of the Memorandum of Agreement between the sponsoring jurisdictions and FEMA, a physical inventory must be taken of all US&R equipment acquired in whole or in part with FEMA funds. This inventory must be submitted to the US&R Program Manager on or before September 30 of each year.
- If your task force already maintains a standard format for inventory reporting which includes all information requested on the *US&R Equipment Cache Inventory Report* form, you may fill out the first page of the form and attach your inventory report to it. This avoids unnecessary administrative work.
- Information required in the annual inventory report includes:
  - Item Description - a brief description of the item,
  - Item Identification Number - the serial number, model number, Federal Stock Number, National Stock Number, or other identification number,
  - Quantity/Unit - quantity and unit of measure,
  - Acquisition Cost Per Item - cost of item at time of acquisition - not the fair market or depreciated value of item,
  - Total Cost - quantity x acquisition cost

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| FEMA US&R RESPONSE SYSTEM<br>LOGISTICS SPECIALIST TRAINING <span style="float: right;">10/98</span>  |  |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES<br><br>TRACKING/DOCUMENTATION   |  |
| ■ All necessary tools and equipment checks, maintenance and exercise should be performed every six months.   |  |
| • Notations of exercise, maintenance and repair should be made.  |  |
| • Items with limited shelf life, such as batteries, food, medicines, etc. should be evaluated at this time.  |  |
| FEMA US&R RESPONSE SYSTEM<br>LOGISTICS SPECIALIST TRAINING <span style="float: right;">10/98</span>  |  |
| • A system for tracking shelf life and rotation/reorder of stock must be addressed.  |  |
| TRACKING/DOCUMENTATION   |  |
| ■ Information requested on the annual inventory report includes:   |  |
| <ul style="list-style-type: none"> <li>• Item Description</li> <li>• Item Identification Number</li> <li>• Quantity/Unit</li> <li>• Acquisition Cost Per Item</li> <li>• Total Cost</li> <li>• Reference Number</li> </ul> |  |
| • Source   |  |
| • Percentage of FEMA participation   |  |
| • Title holder   |  |

**VI. OVERHEAD  
F. EQUIPMENT TRACKING/LOGISTICS DOCUMENTATION**

**FEMA Annual Inventory Requirements (continued)**

- Reference Number - original invoice number, order number, SF-122 transfer order number, or other reference number, if available,
- Source - source of item; e.g. DLA, GSA, or private vendor.
- Percentage of FEMA participation - if property was acquired with funds other than a matching grant, list cost share; if property owned by FEMA, enter "100%",
- Title holder- owner of property at time of report.

**Cache Inventory During Deployment**

- The Logistics Specialist will report any deficiencies through the Technical Team Manager.
- The Logistics Specialist will then ensure the integrity of the cache as it is moved from the cache storage location to the POD, and then to the POA and Mobilization Center. Finally, he/she will oversee the arrival of the cache to the BoO site and then ensure sufficient security for the cache as the cache component is set up. At this time, an inventory will be conducted to ensure that all cache boxes arrived. Any loss will be reported through the Technical Team Manager.
  - Logistics Specialists should not minimize the importance of this process. Valuable equipment can be lost during the transfer of the cache, and security problems often develop in disaster situations.
  - All pertinent inventory information should be noted on the inventory hard copy and updated on the electronic database as soon as practical.

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| <p>FEMA US&amp;R RESPONSE SYSTEM</p> <p>LOGISTICS SPECIALIST TRAINING 10/98</p>  |  |
| <p>LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES</p>  |  |
| <p>TRACKING/DOCUMENTATION</p>  |  |
| <p>■ The Log Specialist is responsible to maintain the operational readiness of the entire cache deployed with the task force.</p>   |  |
| <p>■ The Logistics Specialist will report any deficiencies through the Technical Team Manager.</p>   |  |
| <p>■ The Logistics Specialist will ensure the integrity of the cache as it is moved from the cache storage location of the POD, and then to the POA and Mobilization Center.</p> |  |
| <p>VIEW GRAPH VI F - 12</p>  |  |

**VI. OVERHEAD**  
**F. EQUIPMENT TRACKING/LOGISTICS DOCUMENTATION**

**Cache Inventory During Deployment (continued)**

- When demobilization begins, a complete inventory and status check must be performed as the cache is readied for transport from the assigned work site to either a new assignment or return to the POD.
- The inventory may be affected by decisions to leave some cache items which would prove valuable to the affected jurisdiction.
  - The decision to approve leaving US&R cache items, and to whom, will be made by the appropriate FEMA ESF-9 official at the Disaster Field Office. This decision is made in conjunction with the Task Force Leader and representatives from the affected local jurisdiction.
  - It is the responsibility of the Task Force Leader and the Logistics Specialist to ensure that proper documentation of such, including the names of the officials approving the transfer, is noted.
  - Document transfer on FEMA Form 61-8 — Property Transfer Report.
  - The cost of replacement of these items will be borne by FEMA, and must be identified in the shortfall/cost summary submission completed after the mission.
- All pertinent inventory information must be noted on the inventory hard copy list and updated on the electronic database as soon as practical.

**Post-Mission Inventory**

- Once home, the post-mission inventory and status check are extremely important for the subsequent readiness of the cache, and to ensure a complete paper trail for all logistics-related documentation involved with the mobilization.
  - A task force cache is expected to be returned to its initial state of readiness within 30 days of returning from the last mission.
  - The only exception would be specialized equipment which is being repaired or replaced by a distributor within the available time frame.

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| <p>FEMA US&amp;R RESPONSE SYSTEM</p> <p>LOGISTICS SPECIALIST TRAINING 10/98</p>        |  |
| <p>LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES</p>                                    |  |
| <p>TRACKING/DOCUMENTATION</p>  |  |
| <p>■ The inventory may be affected by decisions to leave some cache items:</p>         | <p>• The decision to approve leaving US&amp;R cache items, and to whom, will be made by the appropriate FEMA ESF-9 official at the DFO.</p> <p>• It is the responsibility of the TFL and the Log Specialist to ensure that proper documentation.</p> |
| <p>• Document transfer on FEMA Form 61-8 — Property Transfer Report.</p>               | <p>• The cost of replacement of these items will be borne by FEMA, and must be identified.</p>   |
| <p>■ All pertinent inventory information must be noted on the inventory hard copy.</p> |  |
| <p>VIEW GRAPH VI F - 13</p>  |  |

**VI. OVERHEAD**  
**F. EQUIPMENT TRACKING/LOGISTICS DOCUMENTATION**

**Post-Mission Inventory (continued)**

- During this process, all items must be inventoried, cleaned, overhauled and checked for damaged prior to return to storage.
- Records of this activity must be transferred to the inventory database.
- The results of the inventory will be used to develop:
  - A damage/loss report identifying all tools, equipment and supplies which were expended, damaged, or lost during a mission. The basis for this task force-level report will come from notes made during the mission -- the various repair logs, the Logistics Specialist's personal mission notes and pertinent input to the IAP.
  - An equipment performance report should also be prepared, using mission notes and logs.
  - These documents become part of TF documentation for permanent records, post-mission briefings and task force training.
- A shortfall/cost summary for the entire mission must be completed and forwarded to FEMA within ten days of returning home. This document should outline:
  - All items expended
  - All items damaged
  - All items lost
  - An analysis of task force organizational materials, equipment and supplies consumed in providing requested assistance. These costs will be reimbursed on a replacement cost basis.
- A rehabilitation or replacement cost summary must be submitted by the task force to FEMA within 30 days of returning from a mission. This document tracks rehab or replacement costs of damaged equipment if the cache item was used at the disaster site as authorized by FEMA.
  - FEMA will incur all costs associated with the resupply and rehabilitation of the cache for sanctioned missions.
  - To receive payment, the TF must submit replacement cost, initial purchase price and/or rehabilitation reimbursement requests and related receipts.

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| FEMA US&R RESPONSE SYSTEM   |       |
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| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES  |       |
| TRACKING/DOCUMENTATION  |       |
| <ul style="list-style-type: none"> <li>■ A post-mission inventory and status check are extremely for the subsequent readiness of the cache.</li> </ul>  |       |
| <ul style="list-style-type: none"> <li>• A cache should be returned to its state of readiness in 30 days.</li> <li>• The only exception would be specialized equipment which is</li> </ul>  |       |
| <ul style="list-style-type: none"> <li>• being repaired or replaced.</li> <li>• All items must be inventoried, cleaned, overhauled and checked for damaged.</li> <li>• Records of this activity must be transferred to the database.</li> <li>• The results of the post-mission inventory will be used to</li> </ul>                        |       |
| <ul style="list-style-type: none"> <li>develop:</li> <li>■ A <u>shortfall/cost summary</u> for the mission must be completed and forwarded to FEMA within ten days.</li> <li>• An <u>equipment performance report</u></li> </ul>  |       |
| VIEW GRAPH VI F - 14  |       |
| <ul style="list-style-type: none"> <li>• All items expended</li> </ul>  |       |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES  |       |
| TRACKING/DOCUMENTATION  |       |
| <ul style="list-style-type: none"> <li>• All items damaged</li> </ul>   |       |
| <ul style="list-style-type: none"> <li>• All items lost</li> </ul>  |       |
| <ul style="list-style-type: none"> <li>■ A <u>rehabilitation or replacement cost summary</u> must be submitted by the task force to FEMA within 30 days of returning from a mission. This document tracks rehab or replacement costs of damaged equipment if the cache item was used at the disaster site as authorized by FEMA.</li> </ul> |       |
| VIEW GRAPH VI F - 15  |       |
| <ul style="list-style-type: none"> <li>• FEMA will incur all costs associated with the resupply and rehabilitation of the cache for sanctioned missions.</li> <li>• The TF must submit replacement cost, initial purchase price and/or rehabilitation reimbursement requests and related receipts.</li> </ul>                               |       |

**VI. OVERHEAD**  
**F. EQUIPMENT TRACKING/LOGISTICS DOCUMENTATION**

**Resource Tracking**

- The Logistics Specialist has primary responsibility for resource tracking during the mobilization, mission operation and demobilization phases for any training exercises or deployments.
  - The efficient management and tracking of the resources in the cache during a mission or training exercise is extremely important for the maximum utilization of the cache.
  - Coupled with this requirement is the organization of the cache and the sheltering of sensitive and/or perishable items.
  - The resource tracking system used on the disaster site must be efficient and comprehensive. Specialized or limited-supply items must be shared by different elements within the task force. Their availability and location must be tracked through the mission for the most efficient and effective utilization of these items.
  - The bottom line is: The Logistics Specialist must be able to locate all cache items at all time.
  
- As in the inventory process, a computer database will be the primary source regarding the location and status of any item.
  - Barcode systems have been particularly useful in this process, as the instrument can scan the equipment being issued and then scan the helmet barcode of the personnel to whom the item is being issued. This makes checkout a one-step process, as long as personnel accountability is being maintained.
  
- As in inventory, electronic resource tracking must be backed up by a secondary means. This is where T-cards have proven their value.
  - T-cards are utilized just like old-fashioned library cards, in that the card is pulled from the tool kit or cache box, the name of the personnel is noted with their work location and the card is then placed in the Equipment Issued file.
  - Should other personnel need that same item, the card can be pulled to find out who has the equipment and where they are working.

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| FEMA US&R RESPONSE SYSTEM   |       |
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| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES  |       |
| TRACKING/DOCUMENTATION  |       |
| <ul style="list-style-type: none"> <li>■ The Logistics Specialist has primary responsibility for resource tracking.</li> </ul>  |       |
| <ul style="list-style-type: none"> <li>• The efficient management and tracking of the resources is extremely important.</li> </ul>  |       |
|   |       |
| <ul style="list-style-type: none"> <li>• The organization of the cache and the sheltering of sensitive and/or perishable items is</li> </ul>  |       |
| FEMA US&R RESPONSE SYSTEM   | 10/98 |
| LOGISTICS SPECIALIST TRAINING   |       |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES  |       |
| TRACKING/DOCUMENTATION  |       |
|   |       |
| <ul style="list-style-type: none"> <li>• The resource tracking system used on the disaster site must be efficient and comprehensive.</li> </ul>   |       |
|   |       |
| <ul style="list-style-type: none"> <li>■ A computer database will be the source regarding the location and status of any item.</li> </ul>   |       |
| <ul style="list-style-type: none"> <li>• The bottom line is: The Logistics Specialist must be able to locate all cache items at all time.</li> </ul>  |       |
| FEMA US&R RESPONSE SYSTEM   |       |
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| 10/98   |       |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES  |       |
| TRACKING/DOCUMENTATION  |       |
| <ul style="list-style-type: none"> <li>• Barcode systems have been particularly useful in this process, as the instrument can scan the equipment being issued and then scan the helmet barcode of the personnel to whom the item is</li> </ul>                            |       |
| <ul style="list-style-type: none"> <li>■ As in inventory, electronic resource tracking must be backed up by a</li> </ul>  |       |
| manual means.   |       |
| <ul style="list-style-type: none"> <li>• This makes checkout a one-step process, as long as</li> </ul>  |       |
| <ul style="list-style-type: none"> <li>• T-cards are utilized just like old-fashioned library cards, in that the card is pulled from the tool kit or cache box, the name of the personnel is noted with their work location and the card is then placed in the</li> </ul> |       |
| Equipment Issued file.  |       |
|   |       |
| <ul style="list-style-type: none"> <li>• Should other personnel need that same item, the card can be pulled to find out who has the equipment and where they are working.</li> </ul>  |       |

**VI. OVERHEAD**  
**F. EQUIPMENT TRACKING/LOGISTICS DOCUMENTATION**

**Resource Tracking (continued)**

- When the item is returned and returned to service, the T-card is removed from the Equipment Issued file and returned to the container storing the item.
- If the item needs to go out of service for repair, the T-card is transferred from Equipment Issued and placed in the Out for Repair file. If repairs can be made, the equipment will then return to service, as described above.
- The efficiency of this system is its speed and simplicity. Another factor is that no data is lost should electric power go down. As long as the Logistics Specialist operating this system captures the information and notes it on the appropriate card, the process is foolproof.

**Personal Property Taken on a Mission**

- Authorization for taking personal property must be obtained *in writing* from the appropriate FEMA official prior to departure. Only personal property which supports a legitimate task force activity will be considered.
  - FEMA will then assume responsibility for personal property that is lost or damaged as outlined in the written authorization.
  - Items which are taken by task force personnel without prior written approval and then subsequently lost or damaged will not be covered by FEMA or the task force.

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| <p>FEMA US&amp;R RESPONSE SYSTEM</p> <p>LOGISTICS SPECIALIST TRAINING 10/98</p> <p>LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES</p> <p>TRACKING/DOCUMENTATION</p>   |
| <ul style="list-style-type: none"><li>■ Authorization for taking personal property must be obtained <i>in writing</i> from the appropriate FEMA official prior to departure. Only personal property which supports a legitimate task force activity will be considered.</li></ul>                           |
| <ul style="list-style-type: none"><li>• FEMA will then assume responsibility for personal property that is lost or damaged as outlined in the written authorization.</li><li>• Items which are taken by task force personnel without prior written approval and then subsequently lost or damaged</li></ul> |
| <p>Will not be covered by FEMA or the task force.</p>   |

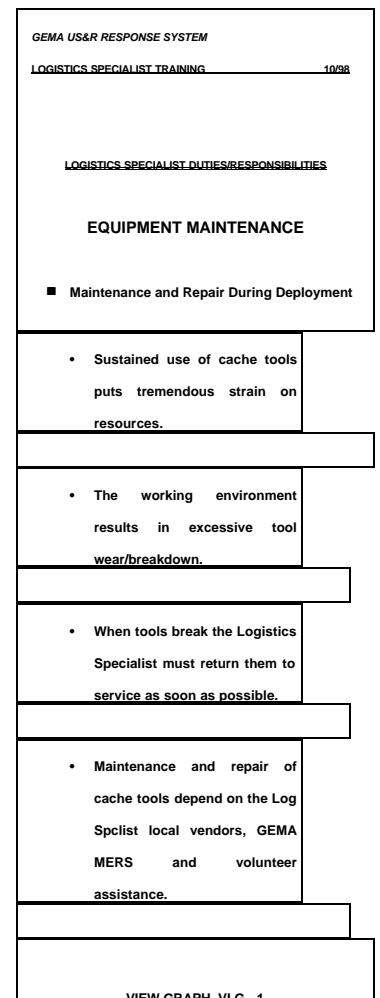
**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**Maintenance and Repair During Deployment**

- The FEMA equipment list specifies that all cache equipment should be relatively easy to maintain in the disaster environment with commonly available tools. However, sustained use of cache tools, accompanied by their misuse by fatigued or untrained operators, puts tremendous strain on these resources.
- The typical US&R working environment, even in the best of conditions, will result in excessive tool wear and breakdown.
- It is the responsibility of Logistics Specialists to ensure that tools and equipment are available for use during deployment. When tools break down, the Logistics Specialist must return them to service as soon as possible.
- Successful maintenance and repair of cache tools and equipment during a deployment depend on more than just the mechanical aptitude of Logistics Specialists. It also depends on the local vendors, FEMA MERS and volunteer assistance.
- In-depth knowledge of cache tools and equipment must be coupled with careful packing of every needed spare part and maintenance tool to do the job.
- A portable cache maintenance and repair shop must be created that is comprehensive, yet not too big as to create excess cache weight. How well the Logistics Specialists plans this shop has a direct bearing on their ability to keep tools running once the task force is in the field.

**Identifying/Planning for Field Maintenance and Repair**

- The development of field maintenance and repair capabilities begins with a thorough familiarity with all cache tools and equipment.
- To attain this level of familiarity, cache tools and equipment must be operated for extended periods in a variety of conditions.



**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**Identifying/Planning for Field Maintenance and Repair**

- Logistics Specialists must identify design problems which affect serviceability and repair considerations in the field.
- All such problems must be thoroughly researched, with maintenance and repair strategies identified.
- Once this information is compiled, Logistics Specialists will have to package all necessary tools to perform the maintenance and repairs.
- Task forces should acquire tools that have similar maintenance and repair requirements. This is particularly true when the task force has multiple units of a certain cache tool. For example, task forces should purchase chain saws that are the same brand in order to have uniform maintenance procedures, fluids and spare parts.
- Logistics Specialists that are in the early stages of cache acquisition should confer with their colleagues on other task forces to learn from the acquisition experience of others.
- If a tool consistently proves unreliable during testing, even when operated by trained personnel, Logistics Specialists should endeavor to replace it.
  - Continuous repair headaches during training will become nightmares during a ten-day deployment.
  - Conversely, high-quality tools that are reliable, easy to operate and uncomplicated to maintain will pay for themselves.
- The FEMA equipment list is not written to mandate specific brand names - task forces can replace required components with comparable items made by other manufacturers.
  - The same holds true for cache equipment which has complex maintenance and repair procedures that are difficult to perform in the field.
  - Currently, manufacturers are making advances in tools technology, and they are even producing new tools designed specifically for US&R applications.

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| <small>FEMA US&amp;R RESPONSE SYSTEM</small>  |                      |
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| <br><small>LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES</small><br><br><b>EQUIPMENT MAINTENANCE</b><br><br>■ Identifying/Planning for Field Maintenance |                      |
| <ul style="list-style-type: none"><li>• Log Spclsts must identify design problems that affect serviceability and repair in the field.</li></ul>         |                      |
| <ul style="list-style-type: none"><li>• Task forces should acquire tools that have similar maintenance and repair requirements.</li></ul>               |                      |
| <ul style="list-style-type: none"><li>• If a tool consistently proves unreliable Logistics Specialists should endeavor to replace it.</li></ul>         |                      |
| <ul style="list-style-type: none"><li>• The FEMA equipment list is not written to mandate specific brand names.</li></ul>                               |                      |
| <small>VIEW GRAPH VI G - 2</small>  |                      |



**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**Identifying/Planning for Field Maintenance and Repair**

- In the case of tools which use up parts such as power saws with several types of blades, will require the Logistics Specialists to estimate the operational life of each type of blade in order to decide how many spares of each type to pack. This process must be repeated whenever a cache tool has multiple blades or attachments.
  
- Logistics Specialists should compile lists of the total number of disposable alkaline batteries in all required sizes that would be needed during a full deployment.
  - These totals are derived by adding up the total number of batteries in each size that are required to initially power all battery-powered cache equipment.
  
  - Logistics Specialists should estimate how many hours of operation a group of fresh batteries provides this cache equipment.
  
  - The final step is to compare this figure with the total operating time that Logistics Specialists estimate the equipment will be used during a deployment.
  
  - This same multiplication process is required for gauging appropriate supplies of spare parts, such as belts, spark plugs, fluids, lubricates, etc., that form an integral form part of cache maintenance and repair shop.
  
  - Logistics Specialists must plan for ten days of demanding tool and equipment operation.
  
- Detailed tool use and repair logs will enable Logistics Specialists to track this information for all cache tools and equipment.
  - The tool usage log tracks when upcoming maintenance procedures are due. It will also document which tools have been found most useful to task force personnel for US&R operations.

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| RESPONSE SYSTEM  |       |
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| ■ Identifying/Planning for Field Maintenance   |       |
| • Power saws with several types of blades will require the Logistics Specialists to estimate the life of each type of blade in order to decide how many spares of each type to pack. |       |
| • Logistics Specialists should list the total number of disposable batteries in all required sizes.  |       |
| • Detailed tool use and repair logs will enable Logistics Specialists to track this information for all cache tools and equipment.   |       |
| VIEW GRAPH VI.G-3  |       |

**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**Identifying/Planning for Field Maintenance and Repair**

- The usage log during deployment will simply be the same document used to record training hours involving the tool.
- The log also indicates how much training task force personnel received regarding the use of the tool.
- The tool repair log documents intervals when the tool was out of service because of breakdown. In the case of multiple log entries, Logistics Specialists will be able to identify tool design problems or personnel training deficiencies.
- The tool repair log during a deployment will also be the same document used to track equipment repairs between deployments.

**Prevention of Field Maintenance and Repair**

- Before a task force is deployed, Logistics Specialist should do everything possible to minimize the amount of maintenance and repair of tools and equipment they will have to do in the field.
- Task forces should purchase tools that are reliable and easily maintained. Tools that require extensive off-site maintenance and repair procedures should not be part of a US&R task force cache.
- Field exercises involving extensive cache tool use have identified that several tools listed in the FEMA Equipment List are not powerful enough for US&R operations. Such tools should not be taken with the cache.
  - These field exercises have also identified insufficiently trained task force personnel as a major source of tool breakdown.
  - Tool training is an ongoing process, and Logistics Specialists play a major role in teaching correct operating procedures. It is in the interest of the Logistics Specialist to be diligent in this task.

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| <b>EQUIPMENT MAINTENANCE</b>   |              |
| ■ Prevention of Field Maintenance and Repair   |              |
| • Logistics Specialist should minimize the amount of maintenance and repair of tools they will have to do in the field.  |              |
| • Task forces should purchase tools that are reliable and easily maintained.   |              |
| • Field exercises involving extensive cache tool use have identified that several tools listed in the FEMA Equipment List are not powerful enough for US&R operations. |              |

**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**Field Reference Resources**

- As part of the portable shop, Logistics Specialists should prepare shop manuals which have tool diagrams and include step-by-step maintenance and repair instructions.
  - As soon as a tool arrives at the cache storage facility, the owner's manual should be removed from the tool packing box and stored in a master manual file.
  - As soon as possible, the Logistics Specialist should make a minimum of three photocopies of the manual.
  - One copy will go with the tool in the cache box and the other two copies will become part of two task force shop manuals.
  - Two manuals are prepared in case one is lost. Under no circumstances, should both manuals be removed from the cache repair area.
  - Extra copies of parts lists can be made into a parts list manual. This allows support personnel to research parts numbers without using the shop manual.

**Cache Repair Area in the Base of Operations**

- A cache repair area should be an integral of the cache storage area in the task force's Base of Operation during a deployment.
  - The cache repair area should be in a protected part of the cache storage, where Logistics Specialists and support personnel can work without interruption and are protected from the elements.
  - The cache repair area should also be secure so that nothing can be left or removed without the knowledge of the on-duty Logistics Specialists.

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| EQUIPMENT MAINTENANCE  |       |
| ■ Field Reference Resources  |       |
| • Owner's manual should be removed and stored in a master manual file.   |       |
| • Log Spclsts should make a minimum of three photocopies of the manual.  |       |
| • One copy will go with the tool in the cache box and the other two copies will become part of two task force shop manuals.                                |       |
| • Extra copies of parts lists can be made into a parts list manual. This allows support personnel to research parts numbers without using the shop manual. |       |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES   |       |
| VIEW GRAPH VI G - 5  |       |
| EQUIPMENT MAINTENANCE  |       |
| ■ Cache Repair Area in the Base of Operations  |       |
| • The cache repair area should be in a protected part of the cache storage.  |       |
| • It should be secure so that nothing can be left or removed without the knowledge of the Log Specialists.   |       |
| • All tools brought for repair must be accompanied by a written statement indicating what is wrong with the tool.  |       |

**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**Cache Repair Area in the Base of Operations (continued)**

- All tools and equipment that are brought to the cache repair area must be accompanied by a written statement indicating what appears to be wrong with the tool ("It won't start."), accompanied by a description of the circumstances of the breakdown ("Following twenty minutes of cutting timbers for shoring, the saw would not start after being refueled.")
  - Having a written statement attached to the out-of-service tools allows the Logistics Specialist to repair it at his or her convenience.
  - The written statement also becomes an important entry in a tool repair log. If the problem is recurring, the information may become the basis for a justification for replacing the tool with a more reliable model.

**Cache Maintenance**

- Once Logistics Specialists assemble and package tools and equipment into a standing US&R task force cache, they will need to design and implement a periodic program of equipment maintenance and rotation of stock.
  - Only through such a program can a large cache kept operationally ready for immediate deployment.
- The first requirement for an equipment maintenance and stock rotation program is a secure cache storage area, ideally with an adjoining shop/work space.
  - For US&R task forces that store their cache at their respective POD, adjacent work space may be available for periodic use by discussing the issue with POD officials.
  - If these arrangements cannot be made, the task force may have to transport its cache to space available to the sponsoring agency for each maintenance interval.

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| EQUIPMENT MAINTENANCE   |       |
| ■ Cache Maintenance   |       |
| • A periodic program of equipment maintenance and rotation of stock will keep the cache operationally ready.                        |       |
| • The first requirement is a secure cache storage area, with an shop/work space.  |       |
| • For caches stored at the POD, adjacent work space may be available for use by discussing the issue with POD officials.            |       |
| • If not, the task force may have to transport its cache to space available to the sponsoring agency for each maintenance interval. |       |

**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**Cache Maintenance (continued)**

- The second requirement for an equipment maintenance and stock rotation program is complete cache inventory.
  - The inventory should be a manual T-card system, backed up by a computer database. The system should be designed to have separate entry for every tool and piece of equipment included in the cache.
  - In the case of multiples of the same tool, each should be identified with a unique number or other designation. The maintenance and serving of a tool should follow the same tracking process as when it is deployed operationally.
  - Do not forget to include items that will be procured when the task force is mobilized. That way, the inventory is current even when these last-minute additions are procured.
  
- The required intervals for tool operation and service will be indicated in the operator's manual, produced by the manufacturer and included with the tool at time of purchase.
  - If sufficient information is included in the manual, contact the manufacturer directly. Do not assume that, for example, one brand of hydraulic rescues tool uses the same fluid as another.
  - Important items to look for in the operator's manual are:
    - Break in procedures.
    - Ignition services.
    - Regular adjustments, and at what interval.
    - Oil change intervals.
    - Can procedures be done in-house, or be sent out.

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| <br><small>LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES</small><br><br><b>EQUIPMENT MAINTENANCE</b><br><br>■ Cache Inventory   |                      |
| • The inventory should be a manual T-card system, backed up by computer database.  |                      |
| • For multiples of the same tool, each should be identified with a unique number or other designation.   |                      |
| • Do not forget to include items that will be procured when the task force is mobilized.   |                      |
| • The required intervals for tool operation and service will be indicated in the operator's manual, produced by the manufacturer and included with the tool at time of purchase. |                      |
| <small>VIEW GRAPH VI G - 8</small>   |                      |

**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**Cache Maintenance (continued)**

- The original operator's manual should be removed from the tool box at the time of receipt. The original manual should be filed in a master file, while photocopies of the manual can be kept with the tool in the cache box and in a shop manual kept in the cache shop/work space.
  - ensure that you also have a copy of the operator's manual for cache items that will be provided by another jurisdiction which is a member of the task force, etc.
  - compile a list of tools with similar service intervals so work can be done at once.
- Logistics Specialists need to enlist the help of qualified task force personnel during the maintenance process. Hands-on time keeps the personnel familiar with the tools. Logistics Specialists can also use the time to review correct operating procedures for each tool. At all times, the Logistics Specialist is in charge of operating and servicing the tools.
- Tool use during training exercises can count for a scheduled operation interval. Just be sure that the maintenance system ensures that follow-up tool servicing is completed. Moreover, take care that tools for which that you have multiples are rotated through training exercises.
- A typical minimum operation and service schedule for hydraulic tools and tools with internal combustion engines is one year. Sophisticated high-tech tools, such as communication ropes and fiber optic search equipment, should be operated and serviced every six months, as a minimum.
- Electrical equipment does not have to be operated and serviced annually. In the case of this and similar equipment that does not have to be operated often, Logistics Specialists should perform visual and performance checks as suggested by the manufacturer.
- Logistics Specialists need to establish minimum numbers of spare parts for tools and equipment to always have on hand in the cache shop/work space. When spare parts are used during servicing intervals, an automatic reorder procedure needs to be in place.

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| EQUIPMENT MAINTENANCE  |   |
| ■ Cache Inventory  |   |
|  | • The operator's manual should be filed in a master file, photocopies can be kept with the tool and in a shop manual kept in the cache shop/work space. |
| • Tool use during training exercises can count for a scheduled operation interval.     |   |
| • A minimum service schedule for hydraulic tools or tools with IC engines is one year. |   |
| • Electrical equipment does not have to be operated and serviced annually.             |   |
| • Log Spclsts must establish minimum numbers of spare parts for tools.                 |   |
| VIEW GRAPH VI G - 9  |   |

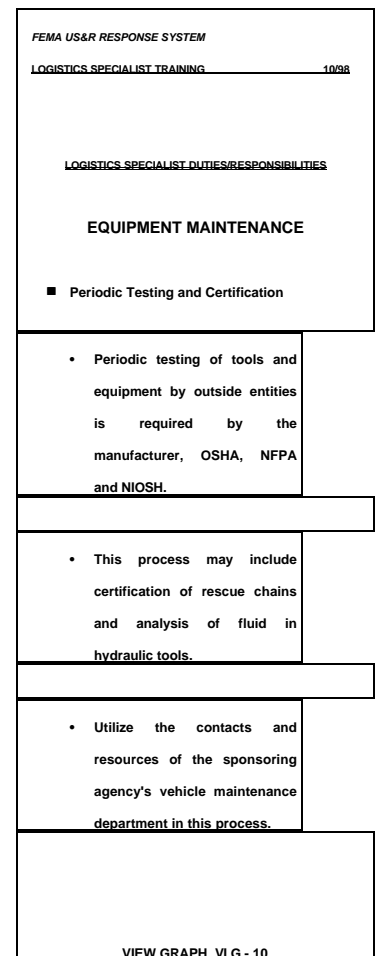
**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**Periodic Testing and Certification**

- Logistics Specialists must plan for periodic testing and certification of tools and equipment by outside entities when this is required by the manufacturer, OSHA, NFPA and NIOSH.
- This process may include certification of rescue chains and analysis of fluid in hydraulic tools.
- Utilize the contacts and resources of the sponsoring agency's vehicle maintenance department in this process.
- Hazardous materials specialists will provide information regarding periodic calibration requirements of atmospheric monitors. They also may be able to perform the procedure themselves in-house.
- Repackaging of serviced tools and equipment into the cache
  - The Logistics Specialist must follow the manufacturer's procedures for repackaging a tool or equipment after it has been serviced.
  - In many cases, this involves the purging of a fuel from an internal combustion engine. Because the fuel is a hazardous material, make sure your purging process is consistent with DOD and commercial carrier requirements for transport.
  - Remove dry cell batteries from equipment so that they do not corrode contacts.

**Tool and Equipment Evaluation**

- Ongoing tool and equipment evaluation is an important role of the US&R task force Logistics Specialist, and much of the basis for such evaluation comes from operating and service records.
- Recent experience during task force training exercises has resulted in the characterization of several rescue tools on the FEMA US&R Task Force Equipment List as "inadequate" for US&R work.



**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**Tool and Equipment Evaluation (continued)**

- Once task force personnel have been trained in the safe operation of a cache tool, Logistics Specialists should listen to the feedback regarding the tool's operational performance.
- Logistics Specialists should also make notes for later discussion about effective tools that break down constantly, perform erratically, or are configured so that routine maintenance is difficult without special tools or facilities.
- This type of information should then be compiled by the Logistics Specialist and communicated to the FEMA US&R Logistics Subcommittee by the US&R Task Force Leader.

**Rotation of Stock**

- US&R task force Logistics Specialists need to identify those items in their cache that have a limited shelf life and thus need to be rotated at a given interval.
- Examples of cache items with a limited shelf life are:
  - Alkaline batteries - one year.
  - MREs (meals, ready to eat) - 4+years.
  - IV fluids/controlled drugs in the medical cache varies.
  - Water
  - The shelf life of the cache item must follow the manufacturer's recommendations.
  - The manufacturer's recommended shelf life can be shortened by environmental extremes. As a result, Logistics Specialists must ensure that temperatures in the cache storage facility do not exceed storage guidelines as indicated by the manufacturer. If the guidelines are exceeded, these items may have to be stored elsewhere.
  - Each group of items with limited shelf life should be marked by date or batch number. Individual entries for these items in the inventory will include this marking.
  - The Logistics Specialists need to devise a system for use of items nearing their expiration date and for subsequent resupply of a fresh batch of the items.

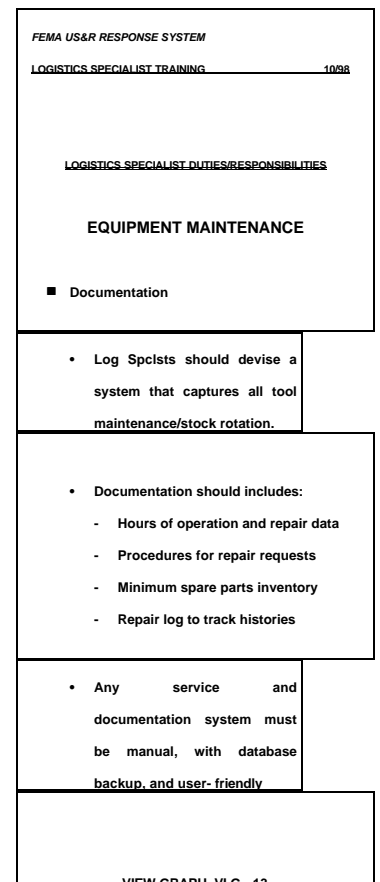
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| FEMA US&R RESPONSE SYSTEM<br>LOGISTICS SPECIALIST TRAINING 10/98  |                         |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES<br><br>EQUIPMENT MAINTENANCE                               |                         |
| ■ Tool and Equipment Evaluation   |                         |
| • Tool evaluation is important and much information comes from operating and service records.           |                         |
| ■ Rotation of Stock<br>VIEW GRAPH VI G - 11   |                         |
| • Logistics Specialists should listen to the feedback regarding the tool's operational performance.     |                         |
| • Notes should be made about effective tools that break down constantly or perform erratically.         |                         |
| LOGISTICS SPECIALIST DUTIES/RESPONSIBILITIES<br><br>EQUIPMENT MAINTENANCE                               |                         |
| ■ Rotation of Stock<br>VIEW GRAPH VI G - 11   |                         |
| • This information should be  | Logistics Subcommittee. |
| • Items in the cache that have a limited shelf life must be identified and rotated at a given interval. |                         |
| • Examples of cache items with a limited shelf life are:  |                         |
| - Alkaline batteries - one year.  |                         |
| - MREs - 4+years.   |                         |
| - IV fluids/controlled drugs  |                         |
| - Water   |                         |
| • The shelf life of the cache item must follow the manufacturer's                                       | recommendations.        |



**VI. OVERHEAD  
G. EQUIPMENT MAINTENANCE**

**Documentation**

- Logistics Specialists need to devise a documentation system which captures all phases of tool maintenance and stock rotation. The operation, servicing and reorder elements of the system should form a part of the tracking function of the cache inventory.
- Hours of operation and repair procedure data can be noted in individual tool entries in the cache inventory, backed up by written entries in use and repair logs.
- Logistics Specialists need to produce written procedures for repair requests. The requests must include feedback to the originator, with complete information about the circumstances of the tool or equipment breakdown.
- The minimum spare part inventory must be maintained by an automatic reorder procedure when a spare part is removed from the inventory.
- The repair log must provide a way to track the repair history of a particular tool over time. This is valuable information for tool evaluation.
- Do not forget to include in your use and repair log all the tool and equipment items that will be pulled off units, be provided by another jurisdiction which is part of the task force, or be purchased at the last minute from a vendor when the task force mobilizes.
- Any service and rotation documentation system must be manual, with a database backup, and be user-friendly.



**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**CACHE EQUIPMENT TROUBLESHOOTING AND MAINTENANCE**

**Stanley Power Equipment**

- General information and safety precautions
  - Do not attempt to locate hydraulic leaks by feeling around hoses and fittings with bare hands, as pin-hole leaks can penetrate the skin.
  - The fitting on the right-hand side (near the fuel tank) is the pressure (fluid out) fitting.
  - The system electrical needs are for a 12V system.
  - Water flow for the chain saw is one-to-three gallons-per-minute.
  
- Before starting the unit:
  - Check levels of fuel, oil and hydraulic fluid.
  - The tank sight must be dark, indicating the hydraulic fluid level is correct.
  - Make sure that all hoses are connected for correct flow direction to and from the tool attachment to be used.
  - The temperature of the fluid must be 50 degrees F minimum to operate. Colder fluid temperatures reduce the pressure in the hoses. In a colder climate, keeping the unit covered when not in use results in a faster warm-up.
  
- Maintenance and handling:
  - Always remove the faspin from the 5,8 gallon position before shutting down the engine.
  - Foam at the hydraulic tank indicates air in the lines. Tighten all suction line fittings and clamps.
  - Remove water that is in the system by removing the fitting from the pressure side (near the fuel tank) and pump fluid into a five-gallon container. Allow the water to settle to the bottom, and then carefully pour the fluid back into the tank, making sure the water is not returned to the tank.
  - Change the filter after 200 hours of operation.
  - The fuel tank capacity is five gallons.
  - The hydraulic fluid reservoir holds 2.7 gallons.

**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**CACHE EQUIPMENT TROUBLESHOOTING AND MAINTENANCE**  
**Stanley Power Equipment (continued)**

- Adjustments
  - Readjust the chain after the first 30 minutes of operation.
  - Follow owner's manual regarding the spark plug gap.
  
- Parts List:
  - Hydraulic fluid: Baldwin PT-289
  - O-ring: (3) 1/8 x 3 and 3/8 x 1/8
  - O-ring: 3/4 x 7/8 x 1/16
  - O-ring: .924 x 1.156 x .116
  - Accumulator tester, charger kit
  - Nitrogen bottle
  - flowmeter and pressure tester
  - 15-inch bar with 3/8" chain with 32 diamond segments
  - air filter:
  - spark plug:
  
- Compatibility Chart and Recommendations:
  - Hydraulic fluid viscosity index: 140
  - Engine oil: 10W30 or 30-weight detergent oil
  - Use unleaded gasoline with 85 octane, minimum
  - DR-19 shank 7/8" x 3-1/2"
  - 1-1/8" hex or 1-1/4" hex shank
  - Cutoff wheel size: 14" x 1"
  
- Stanley Cutoff Saw
  - Never store the tool with wheel mounted on the saw.
  - Wheels will be 14" in diameter with a 1-inch arbor; the blades are 5/32" thick.
  - Check the safety catch to see that it operates freely.
  - Check that the handle is securely fastened.
  - Inspect the wheel guard for cracks.
  - Check that the locking mechanism operates.
  - Check that the bushing does not exceed the thickness of the wheel.
  - Thin organic bond wheels will produce a low drumming tone if physically sound; a dead or flat sound if they are cracked.

**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**CACHE EQUIPMENT TROUBLESHOOTING AND MAINTENANCE**  
**Stanley Power Equipment (continued)**

- BR-89 Stanley Breaker
  - Hydraulic flow: 7 to 9 gallons per minute
  - Pressure: 1,500 to 2,000 psi
  - Relief valve set to open at 2,100 to 2,250 psi.
  - Accumulator charge 800 psi, Nitrogen.
  - Wipe all hose couplings with a clean, lint-free cloth before making connections.
  - Uncoupled hoses left in the sun will make it difficult to connect them; refer to the owner's manual regarding how to release the pressure.
  - Charge the accumulator to 800 psi. However, it may be necessary to step it up to 875 psi to overcome the pressure drop created when charging the system.

**Breathing Air Compressor**

- General Information and Safety Precautions
  - Release pressure on lines by opening condensation drain valves. This makes starting easier.
  - When filling bottles, open filling valve. After filling, close the bottle first, then close the filling valve. This method automatically depressurizes the valve connection.
  - Operate the unit out of doors.
  - Check safety valve operation by closing the fill valve, raise the pressure to the final pressure. Compare blow-off pressure of safety valve using pressure gauge on filling valve. Replace safety valve of final pressure as soon as blow-off pressure is too high or too low.
- Before starting:
  - Check the oil pressure of the engine.
  - Check compressor oil level; fill only with compressor oil.
  - Remove the telescopic tube from its storage spot in the belt guard. Assemble it and plug it into the intake port.

**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**CACHE EQUIPMENT TROUBLESHOOTING AND MAINTENANCE**  
**Breathing Air Compressor (continued)**

- Maintenance and Handling:
  - Drain condensation from the unit every 15 minutes during filling operations.
  - Overhaul the valve after 500 hours.
  - A petroleum-based oil must be used for the first 25 hours of operation of the unit to ensure that o-rings seat properly.
  - Change the compressor oil after 25 operating hours.
  - Change the intake filter cartridge and compressor oil after 125 operating hours.
  - The service life of the cartridge is 35 hours.
  - The engine oil should be of the high-detergent type.
  - Change engine oil after every 20 hours of operation.
  - Change the air cleaner after every 50 hours of operation.
  - Clean out the sediment cup after every 100 hours of operation.
  - Adjust the spark plug after every 100 hours of operation; gap it to .031.
  - Adjust the valve clearance, per owner's manual, after every 300 hours of operation.
  
- Parts List:
  - Compressor gasket o-ring and seals kit
  - Inlet filter element
  - Purification cartridge
  - Compressor oil, petroleum, synthetic
  - V-belt
  
- Compatibility Chart and Recommendations
  - on compressor: none.
  - Honda engine

**VI. OVERHEAD**  
**G. EQUIPMENT MAINTENANCE**

**CACHE EQUIPMENT TROUBLESHOOTING AND MAINTENANCE**

**Generators**

- General Information and Safety Precautions
  - Do not use a generator unless it is grounded.
  - All tools and appliances which have three-prong plus will be used only with extension cords and electrical receptacles with three holes.
  - Generator performance drops 1 per cent for every ten degrees above 60 degrees F and 3.5 per cent for every thousand feet above sea level.
  - If the generator is set up for emergency standby service, install a manual transfer switch to prevent power feedback.
  
- Grounding Procedures
  - Use a number 8 wire to connect the terminal to the ground wire between the lock washer and the wing nut. Connect the other end of the wire securely to a suitable ground source.
  - The ground source rod must have less than 25 ohms resistance.
  - A ground fault interrupter (GFI) will not work on generators that do not have the neutral wire grounded to the frame.