NDIA 10th Annual Expeditionary Warfare Conference

Seabasing Logistics CONOPs

Presented by
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Director, Strategic Mobility and Combat Logistics

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Presentation Overview

• Purpose
• Assumptions
• Architecture
• Analysis
• Preliminary Conclusions
• What’s Left
Obtain agreement on MPF(F) Logistics CONOPs balancing capability, cost, and risk.

**Working Group**

**OPNAV N42 & MCCDC Lead**

**Modeling Support**
- CNA
- SRA
- MCCDC

**Members**
- OPNAV
- HQMC
- DLA
- TRANSCOM
- NAVSUP
- CFFC
- HQMC (I&L)
- NWDC
- ARMY
- J-4/J-8 (invited)

**Connector Support**
- NAVSEA
- NSWC
- PMS 325
Assumptions

- 10 DOS is minimum threshold for MPG forces ashore and afloat
- 2200nm to the Sea Base from the Advanced Base
- T-AKE speed of advance of 20 kts
- D-Day, day of MPF(F) assault ashore, occurs at C+15
- Advance Bases can trans-ship dry cargo from strategic sealift onto T-AKEs
- CLF T-AKEs not used to resupply MPG
- MPF(F) T-AKEs not used to support CSG, ESG, or SAGs
Assumptions (cont.)

• T-AKEs are spread loaded
• T-AKEs limited to 12 hours operations/day
• Helos will be available for inter-ship VERTREP
• Heavy UNREP doubles xfer rate of current connected unrep (potential for 4x)
• MV-22 capable of ship to shore VERTREP off T-AKE
• LMSRs and Big Decks (vice T-AKEs) carry Class IX for their maintenance shops (DOS tbd)
• Ammo for fixed-wing ACE aircraft not stored on MPF(F) LHA/Ds
## Cargo Capacities and Daily Consumption Rates

### Cargo Capacities

<table>
<thead>
<tr>
<th>#</th>
<th>Cargo Fuel (bbls)</th>
<th>Stores (stons)</th>
<th>Ammo (stons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LHA (R)</td>
<td>2</td>
<td>26,000</td>
<td>410</td>
</tr>
<tr>
<td>LHD</td>
<td>1</td>
<td>15,000</td>
<td>410</td>
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<tr>
<td>LMSR</td>
<td>3</td>
<td>9,057</td>
<td>880</td>
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<tr>
<td>T-AKE</td>
<td>3</td>
<td>23,450</td>
<td>1,360</td>
</tr>
<tr>
<td>MLP</td>
<td>3</td>
<td>26,863</td>
<td>460</td>
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</table>

### Sustain Daily Consumption

<table>
<thead>
<tr>
<th></th>
<th>Class I Stores (stons)</th>
<th>Class III JP5 (bbls)</th>
<th>Class III DFM (bbls)</th>
<th>Class V Ordnance (stons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPG</td>
<td>45</td>
<td>5,069</td>
<td>7,056</td>
<td>30</td>
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<tr>
<td>USMC Ashore</td>
<td>20</td>
<td>896</td>
<td>0</td>
<td>112</td>
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<tr>
<td>Army Infantry</td>
<td>14</td>
<td>198</td>
<td>0</td>
<td>30</td>
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<tr>
<td>Army Stryker</td>
<td>16</td>
<td>258</td>
<td>0</td>
<td>75</td>
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<tr>
<td>Army Heavy</td>
<td>12</td>
<td>590</td>
<td>0</td>
<td>250</td>
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</table>

### Ship Capacities

- Daily MEB sustainment (dry-wet :1/3-2/3) takes ~ 100 MV-22 equivalent external lifts
- Each T-AKE carries a minimum 1050-2500 st Class I/V (5-12 MPG + USMC Ashore DOS per T-AKE)
- MPG + MEB Ashore + Army Infantry Brigade = 251 st /day sustained dry
Seabasing Log ConOps

Scope

Supply
- Inter-Theater Re-supply
- Intra-Theater Re-supply
- Intra-Sea Base Re-supply
- Tactical Re-supply

Demand

Sustainment

CONUS / OCONUS Depots
- Container ships
- Tankers

Advanced Base
- Tankers
- Shuttle rotation Stores

Objective
- MPS(F)
- LMSRs
- T-AKEs
- CLF T-AO
- MPS(F)
- MLPs
- LHDs
- LHA(R)

Scope
- Liquid Product
- Dry Product
- Mixed Product

RSLS
- Non-self-deploying aircraft & Material
MPF(F) Squadron
Container Ships Resupply T-AKEs Architecture

CONUS / OCONUS Depots

Advanced Base

CLF T-AO

MPS(F) T-AKEs

RSLS

Non-self-deploying aircraft & Material

MPS(F) LMSRs

MLPs

LHDs

LHA(R)

Objective

Container ships

Tankers

Stores

Air Movement

Surface Movement

Air Movement

Air Movement

Surface & Air Movement

Liquid Product

Dry Product

Mixed Product
Analysis Variables

- Initial Days of Supply on MPG at D-Day
- T-AKEs resupply via shuttle rotation or container-ships at Sea Base
- Percent of total dry goods sent ashore by ship-type (forces inter-ship transfer)
- Heavy/conventional unrep capability
- Number (1 or 2) of T-AKEs in shuttle rotation
- Number of cargo receive rigs (1 or 2) on LHA/D and LMSR
- Forces supported ashore (quantity and type, e.g. 1 MEB and 1 Army Infantry Brigade)
### Preliminary Analysis Results for MPG Sustaining 1 MEB (Dry Stores)

<table>
<thead>
<tr>
<th>DOS</th>
<th>Unrep Rig</th>
<th>Max Ships Away</th>
<th>Cargo Receive Stations on Big Decks/LMSRs</th>
<th>T-AKE Rcv</th>
<th>Adequate Unrep resources</th>
<th>Ability to maintain 10 DOS in MPG</th>
<th>Restrictions on Cargo Sent Ashore From Platform</th>
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**Notes:**
- DOS, Hvy UNREP, 2 Rcv Sta not TEU is key.
- Similar results when add 1 Army Light Brigade.

**Legend:**
- Unexecutable
- Operational Rest.
- Meets Obj.

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MPF(F) Logistics CONOPs
Preliminary Conclusions for 1 MEB

• MPG can maintain threshold of 10 DOS for MEB w/ 3 T-AKEs
• <41 DOS would demand additional prepo ship
• MPG has theoretical Class I/V capacity > 100 DOS
• TEU xfer-at-sea not required
• MPG resupply via a T-AKE shuttle rotation effective – Best to keep minimum of 2 on station
• LHA/D single conventional cargo receive rig inadequate
• Heavy Unrep on MPF(F) ships (except legacy MPS) throughput enabler
What’s left to do

• Ship-to-shore integration
• Supporting the 2\textsuperscript{nd} brigade
• POL to the sea base
• Refined allocation of supply classes among different MPG classes (including Class IV, VIII, IX, etc.)
Questions?
## Number of Daily Re-Supply Lifts

---notional MV-22 external lifts---

<table>
<thead>
<tr>
<th></th>
<th>Weight per lift</th>
<th>Surge Day</th>
<th>Sustain Day</th>
<th>Weight per lift</th>
<th>Surge Day</th>
<th>Sustain Day</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ordnance:</strong></td>
<td>4.0 stons</td>
<td>36</td>
<td>28</td>
<td>5.0 stons</td>
<td>29</td>
<td>23</td>
</tr>
<tr>
<td><strong>Stores:</strong></td>
<td>3.0 stons</td>
<td>9 – 15</td>
<td>9 – 15</td>
<td>5.0 stons</td>
<td>5 – 9</td>
<td>5 – 9</td>
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<tr>
<td><strong>Fuel:</strong></td>
<td>3.9 stons</td>
<td>50</td>
<td>40</td>
<td>5.0 stons</td>
<td>39</td>
<td>31</td>
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<tr>
<td><strong>Water:</strong></td>
<td>4.2 stons</td>
<td>25 – 42</td>
<td>25 – 42</td>
<td>5.0 stons</td>
<td>21 – 35</td>
<td>21 – 35</td>
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<tr>
<td><strong>Total:</strong></td>
<td></td>
<td>120 – 143</td>
<td>102 – 125</td>
<td></td>
<td>94 – 112</td>
<td>80 – 98</td>
</tr>
</tbody>
</table>

Using max theoretical lift weights for MV-22 lift

Source: CNA

Theoretically smallest possible number of lifts
Time to Deliver 98 External Lifts Ashore

110 nm drop

7.5 lifts per aircraft

1 LHA/LHD

2 LHA/LHD

CH-53 carries the equivalent of 2 MV-22 lifts

Source: CNA