

ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-ADMN-2001

TASK BEHAVIOR: Manage unit training

DATE OF LEARNING ANALYSIS: 20140509

Performance Step: 1. Determine mission requirements.

- Knowledge /Skills:
- (e) 1. KHT/BAT identify individual MOS tasks
 - (e) 2. KHT/BAT identify collective MOS tasks
 - (e) 3. KHT/BAT utilize T&R Manual
 - (d) 4. KHT/BAT identify a Mission Essential Task (MET)
 - (g) 5. BAT define sustainment training
 - (TPD) 6. BAT define train-up training
 - (TPD) 7. BAT define cross training
 - (g) 8. BAT define Managed On-the-Job Training (MOJT)
 - (p) 9. BAT describe an individual training evaluation program
 - (a) 10. HKO training madates from higher
 - (a) 11. HKO training responsibilities
 - (a) 12. HKO Marine Corps philosophy of training
 - (a) 13. HKO commander's responsibilities for training Marines
 - (a) 14. HKO Marine Corps' principles of training
 - (c) 15. BAT utilize the MCRP 3-0A & MCRP 3-0B
 - (e) 16. KHT/BAT identify characteristics of METL(s)
 - (e) 17. KHT/BAT identify components of METL(s)
 - (d) 18. HKO METL development

Performance Step: 2. Determine current unit capabilities.

- Knowledge /Skills:
- (f) 1. KHT/BAT analyze unit mission requirements
 - (f) 2. BAT determine unit-training goals
 - (f,q) 3. BAT analyze the current unit training status
 - (h) 4. BAT inventory available training resources
 - (h) 5. BAT analyze impact of external influences

Performance Step: 3. Identify training shortfalls and strengths of unit.

- Knowledge /Skills:
- (del) 1. BAT evaluate pretest results
 - (h) 2. BAT identify internal resources



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

- (h) 3. BAT identify internal resource shortfalls
- (h) 4. BAT identify external resources
- (h) 5. BAT identify eternal influences that negatively affect training goals
- (j) 6. BAT evaluate unit SOPs for gaps
- (i) 7. KHT/BAT research authoritative material (i.e.MCOs, MCRPs, MCWPs, FMs, TMs, etc...) to fill gaps in SOPs
- (i) 8. BAT gather input for SMEs
- (p) 9. KHT/BAT evaluate the conduct of training
- (p) 10. KHT/BAT conduct post training evaluations to identify improvement or shortfalls
- (del) 11. KHT/BAT conduct an Operational Risk Assessment (ORA) on specified training to be implemented
- (o) 12. HKO formal schools for career progression
- (o) 13. HKO formal schools for MOS skills progression
- (o) 14. HKO formal schools for specialized skills
- (p) 15. BAT identify training problems

Performance Step: 4. Determine specific training objectives to correct shortfalls in accordance with the T&R Manual and METs.

- Knowledge /Skills:
- (k,l) 1. BAT identify individuals to be trained
 - (del) 2. KHT/BAT identify individual tasks
 - (k,l) 3. BAT identify units to be trained
 - (k,l) 4. KHT/BAT identify collective tasks
 - (i,k) 5. BAT prioritize training events
 - (a) 6. KHT/BAT train for proficiency
 - (i,k) 7. BAT chain training events
 - (a) 8. KHT/BAT use performance-oriented training
 - (a) 9. KHT/BAT use mission-oriented training
 - (c) 10. HKO standards for unit training
 - (c) 11. HKO standards for formal school training
 - (c) 12. HKO individual training standards
 - (c) 13. HKO collective training standards
 - (j) 14. HKO unit annual training requirements
 - (j) 15. HKO ancillary training requirements
 - (j) 16. HKO formal training requirements



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LEARNING ANALYSIS WORKSHEET (LAW)

(a) 17. KHT/BAT use standards-based training

Performance Step: 5. Develop logical sequence for training.

- Knowledge /Skills:
- (del) 1. BAT sequence training events
 - (del) 2. BAT chain training events
 - (j) 3. KHT/BAT organize training from individual to collective tasks as required
 - (j) 4. BAT determine if the training is progressive in nature (crawl, walk, run)
 - (j) 5. BAT select training settings, methods, and media to support training
 - (i) 6. KHT/BAT assist in long-range training planning
 - (j) 7. BAT evaluate time required to complete required training
 - (h) 8. BAT determine required resources to conduct training (trainers, facilities, ranges, vehicles, Class IV & V, etc...)
 - (m) 9. BAT phase in resource requirements to support training
 - (i,k,l) 10. KHT/BAT develop a training plan
 - (b) 11. HKO systems approach to training (SAT)
 - (b) 12. Know the phases of system approach to training
 - (g) 13. KHT identify characteristics of training plans
 - (g) 14. HKO types of training plans
 - (l) 15. KHT/BAT develop a short-range training schedule
 - (k) 16. KHT/BAT develop a mid-range training schedule

Performance Step: 6. Brief commander on training plan, as required.

- Knowledge /Skills:
- (del) 1. KHT/BAT conduct a military brief

Performance Step: 7. Prepare a training schedule.

- Knowledge /Skills:
- (f) 1. BAT analyze a TEEP/TIP
 - (del) 2. BAT develop an outline of training activities
 - (f,i,k,l) 3. BAT determine the time allotted to conduct training
 - (f,i,k,l) 4. BAT determine time requirements to complete tasks
 - (n) 5. KHT/BAT coordinate resource support to conduct training
 - (m) 6. BAT identify the parts of a daily training schedule
 - (m) 7. BAT identify the parts of a weekly training schedule
 - (h) 8. HKO Operational Risk Management (ORM)
 - (m) 9. BAT identify the entries required to complete a training schedule (daily/weekly)

Performance Step: 8. Issue order.



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LEARNING ANALYSIS WORKSHEET (LAW)

- Knowledge /Skills: (del) 1. KHT/BAT conduct a military brief
(del) 2. BAT conduct training as planned

Performance Step: 9. Coordinate logistical support.

- Knowledge /Skills: (n) 1. HKO unit training packages
(del) 2. KHT/BAT complete a Training Support Request (TSR)
(n) 3. KHT/BAT determine support required
(n) 4. KHT/BAT submit logistical support requests to appropriate staff sections
(n) 5. BAT coordinate with external units (i.e. range control, ASP, etc...)
(n) 6. KHT/BAT identify training package(s) discrepancies
(n) 7. BAT follow-up on TSR as required by SOPs

Performance Step: 10. Submit required reports.

- Knowledge /Skills: (q) 1. KHT/BAT discuss training conducted
(p) 2. KHT identify proper training
(q) 3. KHT/BAT brief on training shortfalls
(p) 4. HKO performance evaluations
(p) 5. HKO evaluation methods
(p,q) 6. KHT/BAT report evaluations
(q) 7. KHT input training data into data base systems
(q) 8. KHT/BAT track training requirements



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-ADMN-2002

TASK BEHAVIOR: Deliver a military brief

DATE OF LEARNING ANALYSIS: 20131017

Performance Step: 1. Review the operations order and commander's intent.

- Knowledge /Skills:
- (a) 1. KHT/BAT identify the commander's guidance
 - (a) 2. KHT/BAT identify the commander's intent
 - (b) 3. BAT analyze METT-T

Performance Step: 2. Review the engineer situation.

- Knowledge /Skills:
- (b) 1. BAT identify impact of METT-T analysis on engineer operations
 - (b) 2. BAT conduct engineer analysis of available intelligence
 - (b) 3. BAT determine additional intelligence required
 - (b) 4. BAT identify engineer personnel readiness
 - (b) 5. BAT identify engineer equipment readiness
 - (b) 6. BAT identify current engineer operations
 - (b) 7. BAT identify future engineer operations
 - (b) 8. BAT identify Bulk III assets
 - (b) 9. BAT identify Bulk IV assets
 - (b) 10. BAT identify Bulk V assets
 - (b) 11. BAT identify engineer operations
 - (b) 12. BAT determine classes of supply to execute engineer operations
 - (f) 13. BAT identify critical engineer specific shortfalls
 - (f) 14. BAT identify engineer specific contributions to the MAGTF

Performance Step: 3. Develop a briefing outline for the engineer situation.

- Knowledge /Skills:
- (a) 1. BAT identify types of military briefs
 - (a) 2. BAT select appropriate type of military brief as situation indicates
 - (b) 3. BAT analyze topic
 - (b) 4. BAT analyze target audience
 - (b) 5. BAT research topic
 - (d) 6. BAT write an outline
 - (c) 7. BAT organize the brief
 - (d) 8. BAT prepare a briefing packet



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LEARNING ANALYSIS WORKSHEET (LAW)

- (d) 9. KHT rehearse for a brief
- (e) 10. BAT employ visual aids
- (e) 11. BAT deliver a brief
- (e) 12. BAT employ effective briefing techniques
- (f) 13. BAT research engineer specific problems hendering MAGTF support
- (f) 14. BAT outline engineer specific contributions that are needed for future MAGTF support

Performance Step: 4. Brief engineer situation to the commander.

Knowledge /Skills:

- (e) 1. KHT/BAT advise the commander on Requests for Information (RFI)
- (del) 2. BAT analyze METT-T
- (del) 3. BAT analyze intel reports
- (e) 4. KHT/BAT advise the commander on recommended engineer support
- (del) 5. BAT develop general engineering plan
- (del) 6. BAT develop a survivability plan
- (del) 7. BAT develop a gap crossing plan
- (del) 8. BAT develop a countermobility plan
- (del) 9. BAT develop a mobility plan
- (e) 10. KHT/BAT advise the commander on effects of terrain and weather
- (del) 11. BAT determine the effects of terrain and weather on general engineering operations
- (del) 12. BAT determine the effects of terrain and weather on the survivability operations
- (del) 13. BAT determine the effects of terrain and weather on gap crossing operations
- (del) 14. BAT determine the effects of terrain and weather on countermobility operations
- (del) 15. BAT determine the effects of terrain and weather on mobility operations
- (del) 16. BAT develop an engineer estimate of supportability
- (del) 17. BAT identify non-organic engineer support
- (del) 18. KHT/BAT identify logistical requirements to S-4/G-4
- (del) 19. BAT calculate logistical requirements
- (del) 20. BAT identify logistical shortfalls
- (e) 21. KHT/BAT employ effective briefing techniques
- (e) 22. BAT deliver a brief
- (e) 23. BAT employ visual aids



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LEARNING ANALYSIS WORKSHEET (LAW)

- (e) 24. BAT create a engineer overlays and products
- (g) 25. BAT outline engineer specific shortfalls to the commander or supporting establishment
- (g) 26. BAT provide correspondence that outlines engineer specific support to the commander(s)



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-EOPS-2001

TASK BEHAVIOR: Establish operations center

DATE OF LEARNING ANALYSIS: 20130509

Performance Step: 1. Review the mission and commander's intent.

- Knowledge /Skills:
- (a) 1. KHT identify the three types of COC
 - (e) 2. KHT configure a COC
 - (b) 3. KHT identify the function of a COC
 - (c) 4. KHT identify the internal staffing requirements of a COC
 - (c) 5. KHT determine the responsibilities of each section within the COC
 - (a) 6. KHT explain displacement procedures
 - (c) 7. KHT maintain appropriate status boards
 - (c) 8. KHT complete required reports

Performance Step: 2. Determine personnel requirements.

- Knowledge /Skills:
- (b,c) 1. KHT identify correct personnel mix based on type of COC being utilized
 - (c) 2. KHT define Engineer Operations Chief specific responsibilities within the COC
 - (f) 3. KHT identify necessary security measures/posture to determine number of Marines for security

Performance Step: 3. Establish communication plan within the operations center.

- Knowledge /Skills:
- (d) 1. KHT determine internal communication requirements
 - (d) 2. KHT determine external communication requirements
 - (d) 3. KHT determine number of nets required based on mission
 - (d) 4. KHT incorporate various technology tools (i.e. software programs, BFT, EnFire/ARK, SIPR, NIPR, etc) available
 - (d) 5. KHT handle all message traffic coming into or out of the COC

Performance Step: 4. Coordinate for physical security.

- Knowledge /Skills:
- (f) 1. KHT assess threat levels
 - (f) 2. KHT coordinate with HQ commandant on security issues
 - (e) 3. KHT layout the COC
 - (f) 4. KHT control access to COC
 - (f) 5. KHT establish guard procedures



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LEARNING ANALYSIS WORKSHEET (LAW)

Performance Step: 5. Assess cover and concealment requirements.

- Knowledge /Skills:
- (e) 1. KHT employ tactical control measures
 - (e) 2. KHT conduct map or photo reconnaissance to select sites
 - (e) 3. KHT determine number of components (i.e. tents, vehicles, etc) the COC requires to determine the overall footprint
 - (del) 4. KHT employ light discipline requirements
 - (del) 5. KHT employ noise discipline requirements
 - (del) 6. KHT camouflage

Performance Step: 6. Establish security plan.

- Knowledge /Skills:
- (f) 1. KHT establish physical security of COC

Performance Step: 7. Ensure site isolation from major enemy avenues of approach.

- Knowledge /Skills:
- (e) 1. KHT conduct map and photo reconnaissance
 - (e) 2. KHT conduct IPB to determine enemy capabilities/tendencies (most likely COA)
 - (e) 3. KHT conduct IPB to determine enemy capabilities/tendencies (most dangerous COA)

Performance Step: 8. Ensure set up of elemental shelter.

- Knowledge /Skills:
- (a) 1. KHT select the appropriate type of COC to employ
 - (del) 2. KHT follow unit SOP



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-EOPS-2002

TASK BEHAVIOR: Manage engineer forms/reports

DATE OF LEARNING ANALYSIS: 20120919

Performance Step: 1. Receive form(s)/report(s).

- Knowledge /Skills:
- (a) 1. KHT/BAT identify form DA 1711-R (Engineer Reconnaissance Report)
 - (a) 2. KHT/BAT identify form DA 1247 (Route Classification Form)
 - (a) 3. KHT/BAT identify form DA 1248 (Road Reconnaissance Report)
 - (a) 4. KHT/BAT identify form DA 1249 (Bridge Reconnaissance Report)
 - (a) 5. KHT/BAT identify form DA 1250 (Tunnel Reconnaissance Report)
 - (a) 6. KHT/BAT identify form DA 1251 (Ford Reconnaissance Report)
 - (a) 7. KHT/BAT identify form DA 1252 (Ferry Reconnaissance Report)
 - (a) 8. KHT/BAT identify form DA 7398 (River Reconnaissance Report)
 - (a) 9. KHT/BAT identify engineer daily reports
 - (a) 10. KHT/BAT identify engineer weekly reports
 - (a) 11. KHT/BAT identify additional reports for urban infrastructure as required
 - (a) 12. KHT/BAT identify a map overlay with proper military/engineer reconnaissance symbols
 - (del) 13. KHT/BAT identify readiness reports

Performance Step: 2. Review the appropriate section(s) of the references.

- Knowledge /Skills:
- (del) 1. HKO military publications system
 - (del) 2. BAT identify applicable publications
 - (del) 3. BAT identify applicable engineer references

Performance Step: 3. Examine form(s)/report(s) for deficiencies.

- Knowledge /Skills:
- (b) 1. HKO reconnaissance requirements that must be achieved
 - (a) 2. KHT/BAT identify the appropriate form or report
 - (b) 3. KHT/BAT identify incomplete entries on a form or report
 - (b) 4. BAT ensure that the form or report is legible
 - (a) 5. BAT identify required documents that need to be attached to the form or report
 - (b) 6. BAT review drawings or graphics to ensure they are complete and appropriate
 - (b) 7. BAT verify bridge classification computations per appropriate references



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LEARNING ANALYSIS WORKSHEET (LAW)

i.e. GTA 05-07-013, TM for standard bridges, etc...

- (b) 8. KHT/BAT calculate work estimates and verify for validity and accuracy
- (b) 9. BAT verify road classification formula is on Road Reconnaissance Report (DA 1248)
- (b) 10. BAT verify route classification formula is on Reconnaissance Overlay in the information key

Performance Step: 4. List all deficiencies.

- Knowledge /Skills:
- (b) 1. HKO reconnaissance requirements that must be achieved
 - (a) 2. KHT/BAT identify the appropriate form or report
 - (b) 3. KHT/BAT identify incomplete entries on a form or report
 - (b) 4. BAT list deficiencies that the reporting unit must correct

Performance Step: 5. Return form(s)/report(s) to originator for corrections if necessary.

- Knowledge /Skills:
- (c) 1. KHT/BAT identify reporting unit
 - (c) 2. KHT/BAT identify POC at reporting unit
 - (c) 3. BAT return form or report to reporting unit with list of deficiencies
 - (c) 4. BAT identify date and time that report must be corrected and returned

Performance Step: 6. Prepare evaluation of form(s)/report(s) as required.

- Knowledge /Skills:
- (del) 1. BAT identify specific intelligence requirements for the mission
 - (del) 2. BAT analyze reconnaissance forms and reports to determine specific data that will have an effect to the units mission
 - (del) 3. BAT produce an intelligence product that is usable for the commander
 - (b) 4. BAT determine the form or reports pertinence, reliability, and accuracy

Performance Step: 7. File and Submit form(s)/report(s) to higher headquarters as required.

- Knowledge /Skills:
- (b) 1. KHT/BAT identify the classification of the form or report
 - (d) 2. KHT/BAT identify the importance and time-sensitivity of the form or report for dissemination
 - (d) 3. HKO unit SOP for controlling forms and reports
 - (d) 4. KHT/BAT enter information to an accessible data base as required
 - (d) 5. KHT track forms and reports
 - (d) 6. KHT/BAT develop a file system to maintain forms and reports IAW the assigned classification
 - (d) 7. BAT coordinate with HAS units to disseminate information on forms and reports



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LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-EOPS-2003

TASK BEHAVIOR: Analyze engineer form/report(s)

DATE OF LEARNING ANALYSIS: 20140109

Performance Step: 1. Examine engineer form/report(s).

- Knowledge /Skills:
- (del) 1. HKO report classification
 - (TPD) 2. KHT/BAT identify report(s)
 - (TPD) 3. KHT/BAT identify form(s)
 - (del) 4. KHT read report(s)
 - (del) 5. KHT read form(s)

Performance Step: 2. Determine impact on operations.

- Knowledge /Skills:
- (a) 1. HKO current mission directive(s)
 - (a) 2. HKO current operations
 - (b) 3. HKO future operations
 - (b) 4. HKO commander's critical information requirements (CCIRs)
 - (d) 5. HKO exceptional information
 - (d) 6. HKO perceptual information
 - (d) 7. KHT/BAT develop an engineer assessment
 - (d) 8. KHT/BAT develop a statement of supportability
 - (a) 9. HKO current TO/TE
 - (b) 10. HKO future TO/TE

Performance Step: 3. Prepare appropriate evaluation.

- Knowledge /Skills:
- (c) 1. KHT develop intelligence products
 - (c) 2. KHT/BAT develop report(s) finding
 - (c) 3. BAT identify specific intelligence requirements for the mission

Performance Step: 4. Report findings.

- Knowledge /Skills:
- (d) 1. KHT/BAT submit finding(s) to appropriate staff sections
 - (del) 2. KHT/BAT brief the commander
 - (del) 3. HKO unit's information management plan



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-EOPS-2007

TASK BEHAVIOR: Estimate requirements for engineer projects

DATE OF LEARNING ANALYSIS: 20120103

Performance Step: 1. Review mission.

- Knowledge /Skills: (del) 1. KHT analyze job directive
(del) 2. KHT conduct site survey
(del) 3. KHT conduct preliminary planning

Performance Step: 2. Prepare materials estimates/materials takeoff list.

- Knowledge /Skills: (del) 1. KHT formulate a Bill of Materials (BOM)
(del) 2. KHT complete a BOM

Performance Step: 3. Prepare a Bill of Materials (BOM).

- Knowledge /Skills: (del) 1. KHT formulate a BOM

Performance Step: 4. Prepare manpower estimates.

- Knowledge /Skills: (del) 1. KHT assign personnel based on mission and gear available

Performance Step: 5. Prepare equipment estimates.

- Knowledge /Skills: (a) 1. KHT employ scrapers
(a) 2. KHT calculate scraper production
(a) 3. BAT calculate scraper production
(b) 4. KHT employ dozers
(b) 5. KHT calculate dozer production
(b) 6. BAT calculate dozer production
(c) 7. KHT employ graders
(c) 8. KHT calculate grader production
(c) 9. BAT calculate grader production
(d) 10. KHT employ scooploaders
(d) 11. KHT calculate scooploader production
(d) 12. BAT calculate scooploader production
(e) 13. KHT employ excavators
(e) 14. KHT calculate excavator production
(e) 15. BAT calculate excavator production



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- (f) 16. KHT employ compactors
- (f) 17. KHT calculate compactor production
- (f) 18. BAT calculate compactor production
- (g) 19. KHT employ dump trucks
- (g) 20. KHT calculate dump truck production
- (g) 21. BAT calculate dump truck production



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-EOPS-2011

TASK BEHAVIOR: Establish project/operation schedules

DATE OF LEARNING ANALYSIS: 20120321

Performance Step: 1. Review the mission.

- Knowledge /Skills:
- (a) 1. KHT analyze a job directive
 - (a) 2. KHT conduct preliminary planning
 - (a) 3. KHT conduct site reconnaissance
 - (a) 4. KHT develop checklists for site reconnaissance
 - (a) 5. HKO DOD construction data base systems
 - (a) 6. HKO the Theater Construction Management System (TCMS)

Performance Step: 2. Determine activities/tasks necessary to complete the project.

- Knowledge /Skills:
- (a) 1. KHT brainstorm

Performance Step: 3. Arrange activities/tasks in logical sequence.

- Knowledge /Skills:
- (b) 1. KHT/BAT construct an IPB list
 - (b) 2. KHT/BAT develop a logic diagram

Performance Step: 4. Complete activity estimate sheets.

- Knowledge /Skills:
- (c) 1. KHT/BAT identify project number
 - (c) 2. KHT/BAT identify activity number
 - (c) 3. KHT/BAT develop activity description
 - (c) 4. KHT/BAT calculate materials take off
 - (c) 5. KHT/BAT calculate equipment and manpower
 - (c) 6. KHT/BAT graphically show activity

Performance Step: 5. Identify critical tasks.

- Knowledge /Skills:
- (b) 1. KHT develop a logic diagram
 - (d) 2. KHT/BAT identify a critical path
 - (b) 3. KHT construct an IPB list

Performance Step: 6. Graphically depict schedule.

- Knowledge /Skills:
- (d) 1. KHT develop an activity on the node logic diagram
 - (d) 2. KHT construct an early start schedule
 - (c) 3. KHT calculate activity durations



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LEARNING ANALYSIS WORKSHEET (LAW)

- (c) 4. KHT sum resources
- (d) 5. KHT conduct time analysis
- (d) 6. KHT solve for float time
- (f) 7. KHT employ lag time
- (f) 8. KHT task organize workforce

Performance Step: 7. Update schedule throughout duration of project/operation.

- Knowledge /Skills:
- (f) 1. KHT make spot adjustments to work rates/processes
 - (e) 2. KHT perform resource constraining
 - (e) 3. KHT perform resource leveling



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-EOPS-2012TASK BEHAVIOR: Arrange external support for engineer projects/operationsDATE OF LEARNING ANALYSIS: 20140517Performance Step: 1. Review the operations order.

- Knowledge /Skills:
- (del) 1. KHT/BAT conduct a METT-T analysis
 - (c) 2. HKO engineer operations (joint operations)
 - (c) 3. HKO engineer support throughout the range of military operations (ROMO)

Performance Step: 2. Identify tasks/missions beyond organic capabilities.

- Knowledge /Skills:
- (b) 1. HKO unified combatant command(s) structure
 - (a) 2. HKO Marine Corps component command
 - (b) 3. HKO functional component commands (joint)
 - (a) 4. HKO Marine Corps subordinate force commands
 - (a) 5. HKO Marine Corps component staff manning
 - (del) 6. KHT conduct a METT-T analysis
 - (e) 7. HKO engineer unit limitations
 - (f) 8. HKO Army engineer units at or below brigade combat team (BCT) level
 - (g) 9. HKO Navy engineer organizations/responsibilities
 - (h) 10. HKO Air Force engineer organizations/responsibilities
 - (i) 11. HKO Host Nations (HN) organizations/responsibilities
 - (d) 12. KHT identify engineer unit capabilities
 - (d) 13. KHT identify engineer unit structure
 - (a) 14. HKO Marine Corps component support functions
 - (e) 15. BAT identify engineer unit Mission Essential Tasks (METs)
 - (e) 16. BAT identify engineer unit mission
 - (d) 17. KHT determine combat engineering functions in a joint operating environment
 - (d) 18. KHT determine general engineering functions in a joint operating environment
 - (d) 19. HKO geospatial engineering functions in a joint operating environment
 - (e) 20. HKO protection support responsibilities in joint operations
 - (e) 21. HKO command and control support responsibilities in joint operations



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LEARNING ANALYSIS WORKSHEET (LAW)

- (e) 22. HKO intelligence support responsibilities in joint operations
- (e) 23. HKO sustainment support responsibilities in joint operations
- (e) 24. HKO fires support responsibilities in joint operations
- (e) 25. HKO movement and maneuver support responsibilities in joint operations
- (f) 26. HKO Army engineer units above brigade combat team (BCT) level
- (f) 27. HKO Army forward engineer support teams (FEST/Prime Power)
- (f) 28. HKO Army Corps of Engineers (USACE) responsibilities
- (g) 29. HKO Naval Construction Force responsibilities
- (g) 30. HKO Naval Facilities Engineering Command (NAVFAC) responsibilities
- (h) 31. HKO Air Force Prime Base Engineer Emergency Force (Prime BEEF) responsibilities
- (h) 32. HKO Air Force Rapid Engineer Deployable Heavy Operational Repair Squadron Engineer (RED HORSE) responsibilities
- (h) 33. HKO Air Force Center for Engineering and the Environment (AFCEE) responsibilities
- (i) 34. HKO multi-national partners engineer force(s) responsibilities
- (i) 35. HKO US Agencies/civilian contract support responsibilities
- (i) 36. HKO other engineer/contractual support agencies
- (o) 37. HKO engineer staff functions to support B2C2WG cells
- (o) 38. BAT state engineer staff responsibilities that support the joint force commander
- (n) 39. HKO other engineer forces C2 capabilities to support joint task force requirements
- (p) 40. BAT state the three levels of engineer planning supporting the range of military operations
- (p) 41. BAT state engineer considerations during the joint operations planning process
- (p) 42. HKO strategic level planning (force planning)
- (p) 43. HKO operational level planning (area of responsibility/concepts of operations)
- (p) 44. HKO tactical level planning
- (q) 45. BAT identify general planning considerations (engineer specific) in planning joint operations
- (r) 46. BAT identify functional planning considerations (engineer specific) in planning joint operations
- (q) 47. HKO geospatial planning
- (q) 48. HKO engineer reconnaissance requirements for planning



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LEARNING ANALYSIS WORKSHEET (LAW)

- (s) 49. BAT identify detailed planning considerations (engineer specific) in planning joint operations
- (u) 50. HKO engineer support requirements for Homeland Security
- (u) 51. BAT state responsibilities to Homeland Security (civil support requirements)

Performance Step: 3. Determine sources of support.

- Knowledge /Skills:
- (d) 1. KHT/BAT identify specific engineer unit capabilities by MAGTF element (i.e. Division, Wing, MLG, NCF)
 - (e) 2. KHT/BAT identify engineer support from other services (Army/Airforce)
 - (i) 3. KHT/BAT identify Host Nation engineer support
 - (a) 4. HKO Marine Corps component support functions
 - (d) 5. KHT/BAT determine engineer functions needed in a joint operating environment
 - (d) 6. BAT determine engineer activities in a joint operating environment
 - (a) 7. BAT identify engineer units in the MAGTF
 - (f) 8. KHT determine Army engineer support required
 - (g) 9. KHT determine Naval engineer support required
 - (h) 10. KHT determine Air Force engineer support required
 - (i) 11. KHT determine US Government agencies support required
 - (i) 12. HKO civilian contractors required to support operations
 - (i) 13. HKO military engineers (multi-national forces) support required
 - (t) 14. HKO contract agencies/support available for joint level planning
 - (d) 15. HKO reach-back capabilities to support joint operations/planning

Performance Step: 4. Ensure required support is coordinated/provided.

- Knowledge /Skills:
- (e) 1. KHT determine support required
 - (b) 2. KHT identify adjacent engineer support available
 - (i) 3. KHT determine support from host nation available
 - (j) 4. HKO command engineer staff responsibilities in joint operations
 - (j) 5. BAT identify the command engineer staff functions for joint operations
 - (k) 6. HKO responsibilities for subordinate joint engineer staff
 - (s) 7. KHT submit logistical support requests to appropriate staff sections
 - (k) 8. BAT identify functions of subordinate joint engineer staff
 - (l) 9. HKO command relationships (service component) under joint force commander



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

- (m) 10. HKO functional component command relationships supporting the joint force commander
- (m) 11. BAT state engineer responsibilities to JFC under functional component command
- (n) 12. BAT state requirements for engineers under subordinate joint task force
- (n) 13. HKO requirements in establishing a joint task force (engineer)
- (n) 14. HKO requirements in establishing a joint task force
- (l) 15. HKO a subordinate joint task force established by joint force commanders in contingency operations
- (n) 16. HKO other engineer forces C2 capabilities



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-MOBL-2008

TASK BEHAVIOR: Plan engineer aspects of gap crossing operations

DATE OF LEARNING ANALYSIS: 20120920

Performance Step: 1. Analyze the mission.

- Knowledge /Skills:
- (del) 1. KHT/BAT analyze METT-TSL
 - (a) 2. KHT/BAT identify the three categories of gap crossing operations
 - (c) 3. BAT recommend appropriate crossing means
 - (e) 4. BAT identify potential crossing sites
 - (g) 5. KHT/BAT identify the four phases and associate engineer tasks of gap crossing operations
 - (b) 6. KHT/BAT describe the impact of surprise on gap crossing operations
 - (b) 7. KHT/BAT describe the impact of preparation on gap crossing operations
 - (b) 8. KHT/BAT describe the impact of flexible planning on gap crossing operations
 - (b) 9. KHT/BAT describe the impact of traffic control on gap crossing operations
 - (b) 10. KHT/BAT describe the impact of T/O on gap crossing operations
 - (b) 11. KHT/BAT describe the impact of speed in exploitation on gap crossing operations

Performance Step: 2. Conduct Intelligence Preparation of the Battlespace (IPB).

- Knowledge /Skills:
- (del) 1. KHT/BAT define the limits of the battlespace
 - (del) 2. KHT/BAT identify significant features of the battlespace
 - (d) 3. KHT/BAT identify the primary strategies (3) enemy may employ in defense of the obstacle
 - (d) 4. KHT/BAT identify the impact threat significant features of the battlespace have in determining the enemy's most probable course of action (MLCOA/MDCOA)

Performance Step: 3. Identify Requests for Information (RFI).

- Knowledge /Skills:
- (e) 1. KHT/BAT identify sources of information
 - (d) 2. KHT/BAT identify critical information on the obstacle and surrounding terrain
 - (del) 3. KHT/BAT coordinate with the S-2/G-2 staff

Performance Step: 4. Plan/conduct reconnaissance.

- Knowledge /Skills:
- (d) 1. KHT/BAT identify critical information requirements of the obstacle



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

- (d) 2. KHT/BAT identify critical information requirements of the terrain
- (e) 3. KHT/BAT identify possible sources of information

Performance Step: 5. Determine support requirements.

- Knowledge /Skills:
- (del) 1. KHT/BAT identify fire support required for offensive operations
 - (del) 2. KHT/BAT identify logistical support required for military bridging operations

Performance Step: 6. Coordinate with supported unit commanders.

- Knowledge /Skills:
- (f) 1. KHT/BAT task organize assets for crossing operations
 - (f) 2. KHT/BAT identify the associated tasks of each element with a crossing force during gap crossing operations
 - (del) 3. KHT/BAT identify points of coordination to be addressed by the support force commander and supported forces commanders

Performance Step: 7. Complete an overlay with engineer related tactical control measures.

- Knowledge /Skills:
- (g) 1. KHT/BAT identify exit bank objective
 - (g) 2. KHT/BAT identify intermediate objective
 - (g) 3. KHT/BAT identify bridgehead line
 - (h) 4. KHT/BAT identify release line
 - (h) 5. KHT/BAT identify release point
 - (h) 6. KHT/BAT identify engineer regulation point
 - (h) 7. KHT/BAT identify crossing sites
 - (h) 8. KHT/BAT identify traffic control point
 - (h) 9. KHT/BAT identify staging areas
 - (h) 10. KHT/BAT identify call-forward areas
 - (h) 11. KHT/BAT identify holding areas
 - (h) 12. KHT/BAT identify assembly area
 - (h) 13. KHT/BAT identify engineer equipment park
 - (del) 14. KHT/BAT depict required elements on a military overlay

Performance Step: 8. Prepare order/appropriate appendix to operations order.

- Knowledge /Skills:
- (del) 1. KHT/BAT identify operation order format
 - (del) 2. KHT/BAT prepare an engineer appendix



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-MOBL-2009

TASK BEHAVIOR: Design a non-standard bridge

DATE OF LEARNING ANALYSIS: 20100715

Performance Step: 1. Review engineer reconnaissance reports.

- Knowledge /Skills:
- (del) 1. KHT review recon information
 - (del) 2. BAT review recon information
 - (del) 3. KHT identify limiting factors for roads

Performance Step: 2. Conduct site reconnaissance.

- Knowledge /Skills:
- (del) 1. KHT conduct engineer reconnaissance
 - (del) 2. KHT determine soil type
 - (del) 3. BAT determine soil type

Performance Step: 3. Determine the bridge type based on gap size and MLC.

- Knowledge /Skills:
- (b) 1. KHT analyze the mission to determine military load classification
 - (b) 2. BAT analyze the mission to determine military load classification
 - (b) 3. KHT analyze terrain data to determine appropriate bridge sites
 - (b) 4. BAT analyze terrain data to determine appropriate bridge sites
 - (del) 5. KHT employ the military load classification system
 - (a) 6. KHT identify the substructure components of a nonstandard bridge
 - (c) 7. BAT identify the substructure components of a nonstandard bridge
 - (a) 8. KHT explain the function of a nonstandard bridge substructure components
 - (a) 9. KHT identify the superstructure components of a nonstandard bridge
 - (c) 10. BAT identify the superstructure components of a nonstandard bridge
 - (a) 11. KHT explain the function of a nonstandard bridge superstructure components

Performance Step: 4. Design the superstructure.

- Knowledge /Skills:
- (a) 1. KHT explain the function of superstructure components
 - (b) 2. KHT employ design charts from MCRP 3-17.1B
 - (b) 3. BAT employ design charts from MCRP 3-17.1B
 - (b) 4. KHT employ design tables from MCRP 3-17.1B
 - (b) 5. BAT employ design tables from MCRP 3-17.1B
 - (del) 6. KHT solve mathematical equations



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

Performance Step: 5. Design the substructure, if required.

- Knowledge /Skills:
- (a) 1. KHT explain the function of substructure components
 - (b) 2. KHT employ design charts from MCRP 3-17.1B
 - (b) 3. BAT employ design charts from MCRP 3-17.1B
 - (b) 4. KHT employ design tables from MCRP 3-17.1B
 - (b) 5. BAT employ design tables from MCRP 3-17.1B
 - (b) 6. KHT determine type of intermediate support(s) needed
 - (del) 7. KHT solve mathematical equations

Performance Step: 6. Design the abutments, if required.

- Knowledge /Skills:
- (del) 1. KHT design civilian type abutments
 - (del) 2. KHT design pile type abutments

Performance Step: 7. Calculate the bill of materials.

- Knowledge /Skills:
- (del) 1. KHT calculate board feet
 - (del) 2. BAT calculate board feet
 - (del) 3. KHT calculate components
 - (del) 4. KHT calculate fasteners
 - (del) 5. KHT calculate a material take-off sheet

Performance Step: 8. Determine logistical support requirements.

- Knowledge /Skills:
- (del) 1. DELETE - Has nothing to do with designing a nonstandard bridge

Performance Step: 9. Illustrate final design.

- Knowledge /Skills:
- (del) 1. KHT sketch
 - (del) 2. KHT use CADD
 - (del) 3. KHT produce civil engineer-type drawings



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-MOBL-2020

TASK BEHAVIOR: Direct explosive hazards reduction operations

DATE OF LEARNING ANALYSIS: 20130913

Performance Step: 1. Review mission.

- Knowledge /Skills:
- (del) 1. KHT analyze METT-T
 - (a) 2. BAT determine friendly mobility requirements
 - (del) 3. BAT conduct map study
 - (del) 4. KHT identify key terrain
 - (b) 5. HKO route sweep operations
 - (b) 6. HKO route clearance operations
 - (b) 7. HKO demolition operations
 - (b) 8. HKO destruction of Captured Enemy Ammunition (CEA)
 - (c) 9. BAT identify Improvised Explosive Devices (IED) that present a mobility threat
 - (b) 10. HKO breaching operations
 - (c) 11. BAT interface with EOD for latest enemy TTPs
 - (c) 12. BAT identify potential bypasses
 - (c) 13. BAT identify existing obstacles
 - (c) 14. BAT identify decision points and named areas of interest
 - (c) 15. BAT construct a MCOO (Modified Combined Obstacle Overlay)
 - (b) 16. HKO EH reduction

Performance Step: 2. Task organize personnel.

- Knowledge /Skills:
- (d) 1. KHT identify breaching organization
 - (d) 2. KHT explain breaching fundamentals
 - (b) 3. HKO engineer capabilities
 - (d) 4. HKO engineer organizations
 - (d) 5. KHT identify types of teams

Performance Step: 3. Task organize equipment.

- Knowledge /Skills:
- (d) 1. KHT identify specific equipment required for each team
 - (d) 2. KHT identify breaching organization
 - (d) 3. KHT explain breaching fundamentals



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

- (d) 4. HKO engineer equipment operations
- (b) 5. HKO route sweep operations
- (b) 6. HKO complex obstacle breaching operations
- (b) 7. HKO demolition operations
- (f,g) 8. HKO EH reduction (route)
- (f,g) 9. HKO EH reduction (area)

Performance Step: 4. Identify explosive hazards.

- Knowledge /Skills:
- (e) 1. HKO identification of Explosive Hazards (EH)
 - (c) 2. BAT identify explosive hazard markers and indicators
 - (e) 3. BAT identify components of Improvised Explosive Devices (IEDs)
 - (e) 4. KHT/BAT identify booby traps
 - (e) 5. KHT/BAT identify thrown munitions
 - (e) 6. KHT/BAT identify projected munitions
 - (e) 7. KHT/BAT identify dropped munitions
 - (e) 8. KHT/BAT identify placed munitions
 - (e) 9. KHT/BAT identify HME

Performance Step: 5. Conduct coordination with higher and adjacent units.

- Knowledge /Skills:
- (f) 1. BAT submit required reports
 - (a) 2. BAT identify the commanders priorities to be supported in the concept of operations
 - (c) 3. BAT identify resources available on the battlefield
 - (c) 4. KHT/BAT identify significant features on the battle space
 - (h) 5. KHT/BAT brief commander
 - (d) 6. KHT/BAT determine support required
 - (h) 7. BAT describe the impact of engineer operation
 - (d) 8. BAT allocate personnel and equipment to accomplish the mission
 - (d) 9. BAT determine availability of supporting fires
 - (d) 10. KHT/BAT recommend location of fires

Performance Step: 6. Plan for destruction of explosive hazards within capabilities

- Knowledge /Skills:
- (f) 1. KHT/BAT define the Leader's Decision Consideration (EH Decision Matrix)
 - (a) 2. Know the commander's intent
 - (d,f) 3. HKO how to execute the 5 Cs



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

- (a) 4. Know mission parameters
- (e,f) 5. BAT identify the explosive hazard
- (c) 6. KHT/BAT determine bypass feasibility
- (d) 7. KHT/BAT determine what support is available
- (a) 8. KHT determine OP-tempo vs forensic requirements
- (f) 9. KHT/BAT determine if you can safely reduce hazard
- (f) 10. KHT/BAT identify requirements needed for protective measures
- (f) 11. KHT/BAT identify what is needed to protect nearby structures
- (f) 12. KHT/BAT identify structure/facility protection requirements
- (f) 13. KHT/BAT identify additional protection needed for personnel
- (d) 14. KHT/BAT determine the amount of Class V for single item destruction
- (d) 15. KHT/BAT determine the amount of Class V for multi-item destruction
- (d) 16. KHT/BAT determine the required tools and equipment
- (d) 17. KHT/BAT calculate the NEW
- (f) 18. HKO proper charge placement
- (f) 19. BAT determine blast and fragmentation radius for all personnel and equipment
- (f) 20. HKO misfire procedures
- (f) 21. KHT identify engineer post-blast analysis procedures
- (g) 22. KHT/BAT develop an engineer concept of operations
- (g) 23. KHT/BAT develop engineer portion of an operation order/plan
- (h) 24. BAT brief commander

Performance Step: 7. Report results to higher headquarters

Knowledge /Skills:

- (f) 1. KHT complete a situation report
- (f) 2. KHT complete a progress report
- (f) 3. KHT complete a mine incident report
- (f) 4. KHT complete a spot report
- (f) 5. KHT conduct post-operation procedures
- (f) 6. KHT complete an obstacle report
- (f) 7. KHT complete and route status report
- (f) 8. KHT complete an IED nine line



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-PLAN-2001

TASK BEHAVIOR: Participate in the Marine Corps Planning Process (MCP)

DATE OF LEARNING ANALYSIS: 20130719

Performance Step: 1. Assist in problem framing.

- Knowledge /Skills:
- (a) 1. KHT/BAT analyze METT-T from a engineer's perspective
 - (a) 2. KHT/BAT conduct Intelligence Preparation of the Battlefield (IPB)
 - (a) 3. KHT/BAT define the battlefield environment
 - (a) 4. KHT/BAT describe battlefield effects
 - (a) 5. KHT/BAT analyze the threat
 - (a) 6. BAT determine enemy courses of action
 - (a) 7. BAT identify mobility corridors
 - (a) 8. BAT identify restrictive terrain
 - (a) 9. BAT identify severely restrictive terrain
 - (del) 10. BAT identify fields of fire
 - (a) 11. KHT/BAT identify Requests for Information (RFI) to the S-2/G-2
 - (a) 12. BAT identify existing intelligence
 - (a) 13. BAT analyze existing intelligence
 - (a) 14. BAT identify additional intel required
 - (a) 15. KHT/BAT submit RFIs
 - (del) 16. KHT/BAT conduct engineer reconnaissance as required
 - (a) 17. BAT conduct map reconnaissance
 - (a) 18. BAT interpret existing intel reports
 - (a) 19. BAT determine whether engineer reconnaissance is required
 - (del) 20. BAT select TO/TE for reconnaissance mission
 - (del) 21. BAT issue orders
 - (del) 22. BAT execute an engineer recon mission
 - (del) 23. BAT submit required reports
 - (a,b) 24. KHT/BAT identify units requiring engineering support
 - (a) 25. KHT/BAT determine commander's intent
 - (a,b) 26. BAT identify support relationships
 - (a,b) 27. KHT/BAT determine specialized engineer mission
 - (a) 28. KHT/BAT determine implied engineer mission



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

- (a) 29. KHT/BAT determine the commander's end state
- (a,b) 30. KHT/BAT determine mobility requirements for the supported unit
- (a) 31. KHT/BAT identify available engineer resources within the Area of Responsibility
- (a) 32. KHT/BAT identify TO/TE
- (a) 33. KHT analyze the scheme of maneuver
- (del) 34. KHT select breach sites

Performance Step: 2. Assist in course(s) of action developement.

- Knowledge /Skills:
- (b,c) 1. KHT/BAT prepare engineer estimate of supportability
 - (b) 2. BAT determine engineer platoon capabilities
 - (del) 3. BAT employ project management tool
 - (b) 4. BAT determine engineer mission requirements
 - (del) 5. BAT identify logistical requirements to the S-4
 - (del) 6. BAT determine priority of engineer requirements
 - (b) 7. KHT/BAT develop an engineer mission
 - (b) 8. KHT/BAT develop engineer concept of operations
 - (a) 9. KHT/BAT identify engineer tasks
 - (a) 10. KHT/BAT identify support requirements of engineer tasks
 - (b) 11. KHT/BAT identify the parts of a course of action
 - (b) 12. KHT/BAT identify the course of action (COA) which best utilizes engineer assets in support of the commander's intent
 - (del) 13. KHT employ SOSRR
 - (del) 14. KHT employ MAGTF breaching fundamentals
 - (del) 15. KHT employ supporting arms

Performance Step: 3. Assist in war gaming course(s) of action.

- Knowledge /Skills:
- (c) 1. KHT/BAT analyze threat engineer equipment capabilities
 - (c) 2. KHT/BAT identify threat engineer doctrine
 - (a) 3. KHT/BAT Identify the effects of terrain and weather on threat operations
 - (c) 4. KHT/BAT identify means of defeating threat capabilities
 - (c) 5. BAT analyze courses of action

Performance Step: 4. Assist in comparison and recommendation of course(s) of action.

- Knowledge /Skills:
- (a,b) 1. KHT/BAT identify external support required
 - (d) 2. BAT create concept of operations



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

- (d) 3. KHT/BAT determine command relationships
- (d) 4. KHT/BAT determine support relationships
- (d) 5. KHT/BAT revise engineer estimate/statement of supportability
- (del) 6. KHT/BAT conduct a military brief

Performance Step: 5. Assist in development of appropriate staff products, operation plans, orders, annexes, and appendices.

- Knowledge /Skills:
- (del) 1. KHT/BAT employ project management tool
 - (e) 2. KHT/BAT fill out appropriate engineer reports
 - (e) 3. BAT develop an engineer concept of operations
 - (b) 4. BAT determine protection requirements of given TO/TE
 - (del) 5. BAT determine engineer priorities
 - (del) 6. KHT/BAT task organize personnel
 - (del) 7. KHT/BAT task organize equipment
 - (d,e) 8. KHT/BAT determine command relationships
 - (d,e) 9. KHT/BAT determine support relationships
 - (a,e) 10. KHT/BAT develop mission statement
 - (b) 11. KHT/BAT identify external support required
 - (del) 12. KHT/BAT coordinate external support required
 - (e) 13. KHT/BAT identify operation order
 - (e) 14. KHT/BAT create an operation order
 - (e) 15. KHT/BAT identify an engineer annex or appendix to an operation order
 - (e) 16. KHT/BAT develop an engineer annex or appendix to an operation order
 - (e) 17. BAT identify required reports
 - (e) 18. KHT/BAT develop required reports
 - (e) 19. KHT/BAT submit reports
 - (e) 20. KHT/BAT develop overlays

Performance Step: 6. Assist in transition by compiling the components of an operations order for distribution to subordinate units.

- Knowledge /Skills:
- (f) 1. BAT issue an operation order
 - (f) 2. KHT identify different types of transition drills
 - (f) 3. KHT participate in transition drills
 - (del) 4. BAT conduct a military brief



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

TASK: 1371-PLAN-2002

TASK BEHAVIOR: Plan a base camp

DATE OF LEARNING ANALYSIS: 20120713

Performance Step: 1. Analyze mission.

Knowledge /Skills: (del) 1. KHT/BAT analyze METT-T

Performance Step: 2. Identify Requests for Information (RFI).

Knowledge /Skills: (del) 1. BAT determine information requirements
(del) 2. KHT/BAT identify staff appropriate sections
(del) 3. KHT/BAT submit request RFIs

Performance Step: 3. Conduct reconnaissance.

Knowledge /Skills: (del) 1. KHT/BAT read a map
(del) 2. KHT/BAT develop overlays
(del) 3. BAT identify features of engineer interest
(del) 4. BAT conduct site reconnaissance

Performance Step: 4. Determine location.

Knowledge /Skills: (a) 1. KHT/BAT determine footprint of base camp
(a) 2. KHT/BAT determine spatial requirements
(a) 3. KHT/BAT conduct map reconnaissance
(a) 4. HKO combat outpost requirements
(a) 5. HKO forward operating base requirements
(a) 6. HKO satellite operations

Performance Step: 5. Plan road network.

Knowledge /Skills: (del) 1. KHT/BAT determine soil type
(del) 2. KHT/BAT determine drainage requirements
(f) 3. KHT/BAT compute Average Daily Traffic (ADT)
(f) 4. KHT/BAT establish geometric controls
(f) 5. KHT/BAT determine structural design
(del) 6. KHT/BAT compute earthwork volumes
(f) 7. KHT/BAT develop a maintenance repair plan
(f) 8. KHT/BAT determine class of road needed



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

- (f) 9. KHT/BAT design road network to interior facilities/locations
- (f) 10. HKO approach/egress to base camp

Performance Step: 6. Select facilities required to support the base camp.

- Knowledge /Skills:
- (c,g) 1. KHT/BAT locate heads
 - (c,g) 2. KHT/BAT locate messing facilities
 - (c,g) 3. KHT/BAT locate hygiene facilities
 - (c) 4. KHT/BAT locate ammunition supply points
 - (c) 5. KHT/BAT locate landing zones
 - (c,g) 6. KHT/BAT locate medical facilities
 - (c,g) 7. KHT/BAT locate billeting facilities
 - (c) 8. KHT/BAT locate fuel points
 - (c) 9. KHT/BAT determine COC spatial requirements
 - (c) 10. KHT/BAT locate COC
 - (c) 11. KHT/BAT determine tantage required
 - (c) 12. KHT/BAT locate other commodities (Supply, Class IV lot, HE/MT lot, Hazmat, Comm, etc.)
 - (c,f) 13. KHT/BAT locate roads
 - (b) 14. KHT/BAT identify what type of temporary facilities are required
 - (b) 15. KHT/BAT analyze Commander's Intent/Concept of Operations
 - (b) 16. KHT/BAT determine temporary facility requirements to meet operational requirements listed in the commander's Intent/Concept of Operations

Performance Step: 7. Determine utility requirements.

- Knowledge /Skills:
- (h) 1. BAT determine priorities for electrical power
 - (h) 2. BAT determine hours of operation for various commodities
 - (del) 3. BAT task organize personnel and equipment for the employment of the Mobile Electric Power Distribution System (MEPDIST)
 - (h) 4. KHT determine water consumption based on environmental and manning factors
 - (h) 5. KHT review a plan for production, purification storage and distribution of water
 - (h) 6. KHT determine task organization of personnel and equipment to operate water points and distribution system
 - (h) 7. KHT review a distribution diagram
 - (g) 8. BAT determine field sanitation requirements
 - (h) 9. BAT estimate demand load



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

- (h) 10. KHT establish criteria for generator placement
- (h) 11. KHT select generator sites
- (h) 12. KHT select generators based on priorities
- (h) 13. KHT determine proper mix of MEP equipment based on priorities for power and operational tempo
- (h) 14. KHT identify components of MEPDIST
- (h) 15. KHT determine what 1100 MOSs are required to set up, operate and maintain MEPDIST system
- (g,h) 16. KHT identify hygiene equipment capabilities
- (h) 17. KHT utilities requirements for a FOB (FARP, COP)

Performance Step: 8. Determine fuel requirements.

- Knowledge /Skills:
- (i) 1. KHT/BAT calculate fuel consumption of equipment
 - (i) 2. BAT calculate daily fuel requirements
 - (i) 3. BAT identify fuel types required for specific equipment
 - (i) 4. BAT identify fuel storage capabilities
 - (i) 5. KHT/BAT identify fuel equipment
 - (i) 6. KHT/BAT identify fuel storage and distribution requirements

Performance Step: 9. Determine drainage requirements.

- Knowledge /Skills:
- (del) 1. KHT/BAT develop a drainage plan
 - (c,g) 2. BAT develop seepage pit/leach fields based upon hygiene and sanitation requirements

Performance Step: 10. Develop obstacle/barrier plan as required.

- Knowledge /Skills:
- (del) 1. BAT conduct countermobility planning
 - (j) 2. KHT/BAT design entry access point

Performance Step: 11. Develop survivability plan as required.

- Knowledge /Skills:
- (j) 1. BAT conduct survivability planning
 - (j) 2. BAT develop force protection initiatives

Performance Step: 12. Determine bill of materials (BOM).

- Knowledge /Skills:
- (del) 1. KHT/BAT calculate Class IV materials estimations
 - (del) 2. KHT/BAT identify the required information to submit for a BOM
 - (del) 3. BAT identify sources of Class IV material available

Performance Step: 13. Determine camp layout.



ENGINEER OPERATIONS CHIEF (WORKING)

LEARNING ANALYSIS WORKSHEET (LAW)

- Knowledge /Skills:
- (c,g) 1. KHT/BAT determine spatial offsets for heads
 - (g) 2. KHT/BAT determine spatial offsets for messing facilities
 - (c,g) 3. KHT/BAT determine spatial offsets for hygiene facilities
 - (c) 4. KHT/BAT determine spatial offsets for ammunition supply points
 - (c) 5. KHT/BAT determine spatial offsets for landing zones
 - (g) 6. KHT/BAT determine spatial offsets for medical facilities
 - (g) 7. KHT/BAT determine spatial offsets for billeting facilities
 - (c) 8. KHT/BAT determine spatial offsets for fuel points
 - (g) 9. KHT/BAT determine spatial offsets for staff functional areas/structures
 - (g) 10. KHT/BAT determine spatial offsets for equipment/work areas

Performance Step: 14. Determine task organization of personnel and equipment.

- Knowledge /Skills:
- (e) 1. KHT/BAT conduct CPM planning
 - (e) 2. BAT determine personnel and equipment required
 - (e) 3. BAT determine personnel and equipment available

Performance Step: 15. Determine logistical support requirements.

- Knowledge /Skills:
- (del) 1. KHT determine sources of support
 - (d) 2. KHT/BAT coordinate Host Nation support
 - (d) 3. KHT/BAT coordinate purple (joint) support
 - (d) 4. HKO which US agencies are available for support
 - (d) 5. HKO what kind of support US agencies can provide
 - (d) 6. HKO what types of support DOD contractors can provide
 - (d) 7. HKO the Maritime Prepositioned Ship embark manifest

Performance Step: 16. Establish a project schedule.

- Knowledge /Skills:
- (d) 1. KHT/BAT establish a BOM for Class IV materials
 - (e) 2. KHT/BAT calculate production estimation
 - (e) 3. KHT/BAT adjust for attachments/detachments
 - (e) 4. KHT/BAT conduct CPM planning

Performance Step: 17. Illustrate final design.

- Knowledge /Skills:
- (c) 1. BAT develop a scale drawing

