

CHAPTER 3

CONVENTIONAL AMMUNITION INDUSTRIAL PREPAREDNESS PLANNING
AND MOBILIZATION PRODUCTION REQUIREMENTS

A. GENERAL POLICIES AND PROCEDURES FOR INDUSTRIAL PREPAREDNESS PLANNING

1. Purpose and Scope. The purpose of the joint policies and procedures is to provide the principles of **IPP** and the aggregation of mobilization production requirements for conventional ammunition. Industrial preparedness planning and aggregation of the mobilization production needs of all DoD Components for conventional ammunition assigned to the SMCA shall be integrated with the overall acquisition strategy of conventional ammunition programs. The Secretary of Defense outlines the goals and objectives of the industrial preparedness program through material support planning guidance and other related DoD policy guidance. Users of this chapter shall support the goal and objectives of the Secretary of Defense in all actions they initiate in regard to industrial preparedness planning.

2. Responsibilities of the Military Services. The Military Services shall:

a. Provide time-phased mobilization production requirements to the SMCA based on force structure, weapons systems, **common** scenario, and mobilization day (M-day). Data to be provided include (see section M. this chapter):

- (1) Monthly mobilization production requirement at **D+6**.
- (2) Monthly consumption rates, months 1 through 6.
- (3) Asset posture.
- (4) Identification of SMCA items that require surge
planning.
- (5) A prioritized critical items list as determined by
using Service.
- (6) Requirements for other contingencies as they become
known.

b. Coordinate with the SMCA to ensure that adequate TDPs/ADLs are **available** for meaningful **IPP**.

c. Ensure that Service procedures for item selection and **requirements** determination are performed consistently.

d. Coordinate with **SMCA** IPP planners to ensure that production base planning is accomplished early in the life cycle of items still in R&D and not yet transitioned.

e. Provide Service requirements for data **common** components of threat-oriented and other **non-SMCA** items so they can be reviewed jointly with other mobilization needs.

3. **SMCA Responsibilities**: The SMCA shall:

a. Aggregate DoD Component mobilization requirements as described in section M. of this chapter.

b. Establish and maintain production capability under current DoD Instructions to supplement private capacity enough to support demand rates. Justify exceptions on a case-by-case basis.

c. Fund for base retention costs, including layaway and maintenance. Relate these costs to the levels of readiness needed for surge or full mobilization.

d. Ensure that all SMCA mobilization production requirements are planned against the production base. Before making major changes in requirements or production base capability, promptly notify the concerned Services(s).

e. Ensure full munitions support for the Military Services and selected allied forces in case of mobilization or surge by:

- (1) Establishing and maintaining a conventional **ammunition** production base that meets assigned peacetime, surge, and mobilization needs.

(2) Establishing and maintaining enough storage and handling capability to meet assigned mobilization requirements.

f. Improve planning with contractors, including separate funding and planning to the second and third tiers when necessary. Develop industrial preparedness plans for surge and mobilization by one of several methods:

(1) Using the DO Form 1519, "DoD Industrial Preparedness Program Production Planning Schedule," under which the contractor takes part voluntarily.

(2) Using **DID** process. This method may be used when required and "available funding will permit.

(3) Using contract clauses or similar methods. These methods may be used when funding is available.

g. Retain conventional ammunition capacity in the highest possible state of readiness commensurate within DoD policy and the economic tradeoff between maintenance and item inventory.

h. When appropriate, recommend that peacetime contracts be negotiated with planned producers for acquisition of planned items under FAR Section 6.302-3 to encourage more active and effective industry participation in IPP.

i. Provide data back to the Military Services concerning the status of IPP for SMCA items by means of the **SMCA** PBP and other reports. Such data and report shall be based on an all-up-round analysis.

4. Industrial Preparedness Planning Concepts

a. The SMCA IPP planners need enough information from the **Services** to accomplish meaningful planning of the industrial base to support any national emergency on M-day. To fill this need, the **Services shall** provide valid near-year information and realistic out-year projections to the **SMCA**. This information will be used to determine production capacity required and to establish and maintain the production base or dispose of capacity no longer required.

b. Industrial preparedness planning shall be limited to military end items or components essential to operational effectiveness under combat or combat training conditions, or to the safety and survival of personnel, and meet at least one of the following criteria:

(1) Require a long lead-time.

(2) Require development of, or additional, capacity to meet emergency production needs.

(3) Require continuous surveillance to ensure preservation of an adequate base to support emergency production needs.

(4) **Require** critical **skills** or specialized production equipment.

c. Items shall not be selected for planning if they:

(1) Are **solely** for comfort, convenience, or morale.

(2) Will become obsolete within 12 months.

(3) Can normally be acquired from commercial sources in enough quantities to meet the anticipated needs.

d. The following assumptions will be used for planning the industrial base under total mobilization conditions:

(1) Industrial M-day will be assumed to occur on the first day of the FY being planned.

(a) Necessary funds will be made available for all approved post M-day actions.

(b) In a national emergency, assume environmental restraints.

(2) The existing provisions of the Defense Production Act will be strictly enforced and used to direct increased output of current production and to resolve/alleviate material conflicts between civilian and military production through use of the DPAS regulation.

(3) Distribution from the strategic stockpile will be available based upon sufficient justification and DoD and Federal priorities.

(4) Production equipment, identified and available in the unassigned DoD industrial reserve, will be provided to the requiring activity for installation based on priority of need.

(5) The US industrial base is assumed to be undamaged.

(6) Foreign producers (other than Canadian) will not be considered-as a source of supply.

(7) FMS items under US control **will be** diverted to US forces.

e. If the **SMCA** determines that an item does not require formal detail planning **due to** asset posture, insignificant quantities or commercial availability, the requiring service will be advised prior to finalization of planning.

f. The Services and the **SMCA** shall plan for **transitioning** of items according to Chapter 2 and subsection A.5. of this Chapter.

g. Special actions may be needed to qualify or preserve industrial preparedness and surge capability for items from foreign sources. **In** cases where dependency on foreign sources exist, the **SMCA** and the Services shall take alternative industrial preparedness measures

as appropriate, including the qualifying of standby domestic production capability.

h. The true production capability of planned mobilization producers must be ascertained by the SMCA. To do so, the SMCA CRIB review teams make on-site reviews of selected industrial base activities.

(1) A schedule of visits to planned mobilization producers shall be prepared and provided annually by the industrial preparedness activities of the **SMCA**. Changes and results from the survey are then used to update the SMCA PBP within the **AIRMS** and subsequently support the ASAPP.

(2) The SMCA CRIB team coordinates the on-site review with the **ASPP0**. The ASPP0 is the DoD designee within **DLA** responsible for performing industrial preparedness planning in plants under his or her cognizance.

(3) The ASPP0 becomes a member of the team and, as such, should **advise** the team leader of any shortfalls experienced by the contractors prior to the inspections of their plants.

(4) After review and evaluation, the **SMCA** CRIB team shall determine the reliability of the overall planned producer's production capability.

(5) In case of capacity differences or shortages to meet total Service requirements, the findings shall be reviewed by the SMCA IPP activity for resolution and corrective action.

(6) The SMCA **shall** provide the highest caliber of industrial expertise consisting of design, production, and scheduling **experience**.

5. Transition Planning For Industrial Preparedness Planning

This section describes industrial preparedness planning relationships between the Services and the **SMCA**. For general transition policies and procedures, refer to Chapter 2.

a. Policies and Procedures for Transition IPP

(1) The Military Services and the SMCA are jointly responsible for establishing policy guidance, monitoring the transition process for IPP, and resolving transition IPP issues.

(2) The developing **Military** Service and the SMCA shall accomplish transition IPP and implementation as prescribed in this and other chapters and implementing directives or regulations.

(3) The developing Military Service shall inform the SMCA, of the decision to initiate the validation phase, of any conventional ammunition program that will or may be transitioned to the SMCA. This will permit advance evaluation for the best use of the conventional ammunition industrial base and enhance IPP. Before transition, the developing Military Service should provide necessary program documentation to the SMCA for IPP.

(4) After the decision to enter full-scale development, key actions should occur as specified in Table 3-1.

(5) The SMCA will provide IPP presentation on the TPTG for all items that require IPP.

b. Transition Data Requirements for IPP. The following information is required during the transition period to support IPP:

(1) Whether the item will require mobilization planning.

(2) A component breakout, including strategic and critical materials contained therein (see section L.).

(3) Item(s) it will replace and when replaced item(s) will be phased out of the system.

(4) Equipment and facilities the SMCA will be required to provide to support LRIP, full-scale production, FYDP, and mobilization requirements.

(5) Transition, LRIP, and approval for production dates.

(6) An acquisition plan outlining how R&D, IPF, and production will be accomplished.

(7) Plans and phasing for PEP, MM&T, and IPF, as required.

(8) Equipment and facilities that will be provided for the R&D effort and that will transition to the SMCA.

(9) R&D producers and their present and potential manufacturing capabilities.

(10) Acquisition schedules.

B. MOBILIZATION

1. Planning for Mobilization

Table 3-1. Key Transition Events for IPP.

<u>EVENTS</u>	<u>DEVELOPING SERVICE ACTION</u>	<u>SMCA ACTION</u>
Annual ly	Advise the SMCA of items planned to enter full-scale engineering development.	Determine impact on mobilization base and requirements for IPP . Provide results to Defense Supply.
Full-Scale Development Decision	Provide updated information to SMCA .	Reevaluate impact on mobilization base and requirements for IPP. Provide results to developing service and discuss impact.
Full-Scale Development Decision (+90 days)	TPTG .	Provide inputs to draft to TPTG.
Full-Scale Development Decision (+210 days)	Draft a written transition plan.	Provide inputs to draft transition plan.
Full-Scale Production Decision (-24 months)	SMCA and Developing Service exchange LRIP data.	Provide IPF support as possible based on data exchange. Review industrial preparedness program planning and discuss impact with developing Service.
Full-Scale Production Decision	Provide updated project information.	Determine impact on TP and coordinate with developing Service.
Transition Date (T0) (-60 days)	Transition agreement prepared listing.	Participate to determine IPP data adequacy, residual data items.
TD	Provide final transition data, as agreed to in transition agreement.	Assume responsibilities per transition agreement.

a. In planning the **commercial** and government industrial production base support mobilization production requirements, the SMCA **shall**:

(1) Provide the most current **TDP/ADL** to each planned producer.

(2) Identify the plan balanced production of base components to meet end item delivery schedules.

(3) Ensure the most efficient assignment of existing capacity to meet mobilization requirements.

(4) Ensure post M-day allocation of enough production capacity to meet the monthly mobilization consumption rate. If production capacity is lacking, identify and analyze all required industrial preparedness measures on the basis of economic trade-off. Coordinate with the participating Services in determining the priority of resource application.

(5) Establish PEPs as required to provide critical production equipment and tooling for mobilization production requirements. Fund to maintain the production base in the highest possible state of readiness commensurate with other DoD guidance and the results of economic trade-off analyses.

b. The Military Services shall provide the SMCA mobilization production requirements according to section M. of this Chapter.

2. Integrating IPP with Current Procurement. To ensure maximum coordination between the planning process and current procurement plans, integration must take place early in the procurement plans. Planners **shall** make optimum use of the FARs and DoD 4005.3-M to keep the production base in a high state of readiness while meeting planning requirements and objectives. The DID is a contractual document that may be included in solicitations and contracts for selected systems and items designated for the **IPP**. The acquisition activity may conduct industrial preparedness planning by direct discussion with a selected prime contractor. The appropriate ASPRO will be notified of the "direct planning" choice and invited to participate. In certain instances, the acquisition activity may award a special study contract to a contractor to accomplish planning. ASPPOS will be kept informed of all special studies that may affect their function. Whichever of these planning alternatives is used by the acquisition activity, close coordination must be accomplished between the IP planner, the procurement planner, and the ASPPO.

c. SURGE .

1. Surge Planning and Contracting Policies

a. The SMCA shall establish and support an industrial base to respond to surge situations such as:

(1) Emergency requirements to fill shortfalls in the current inventory at a faster rate than established in the POM/FYDP due to a new threat determination.

(2) Loss of on-hand stocks due to a natural disaster or covert action.

(3) An unforeseen contingency requiring additional expenditure of items, causing a dangerous draw-down of stocks.

(4) Support of FMS and/or NATO requirements under support agreements causing draw-down from war reserve stocks and reducing operational readiness.

b. Surge Planning:

(1) May include critical end items given on the IPPL.

(2) Could contain other principal items, components, and secondary and maintenance items needed by the using Service.

(3) May include items transitioned to the SMCA but not yet placed on IPPL.

(4) May require surging of a number of items concurrently.

(5) Does not require declaration of a national emergency to initiate surge production.

(6) May require formal planning annually, as well as when significant changes occur in capacity.

(7) May require modified DD 1519 planning.

(8) Is based on total system, and end item analysis planning.

(9) Utilizes sectoral studies.

(10) Is coordinated and integrated with mobilization planning as well as current and planned acquisition of systems and items.

(11) In the absence of a known requirement, surge becomes related to existing capability. For planning purposes, the following surge definitions will be used:

(a) Surge Definition. The accelerated production, maintenance, and repair of selected items, and the expansion of logistic support services to meet contingencies short of a declared national emergency using existing facilities and equipment. Only existing peacetime program priorities will be available to obtain materials, components, and other industrial resources necessary to support accelerated program requirements; however, increased emphasis may be placed on use of these existing authorities and priorities.

(b) Surge Capability. The maximum sustained output that can be achieved by the addition of one work shift over current production:

Example:	<u>Current Base</u>		<u>Surge Base</u>
	Cold	Go to	1-8-5
	1-8-5	Go to	2-8-5
	2-8-5	Go to	3-8-5

c. The following assumptions shall be applied in developing surge plans:

(1) The production base has been established and is assumed to be undamaged.

(2) Surge planning is for support of conflicts short of general war or stock shortages, but may evolve into a mobilization situation.

(3) Surge day (S-day) could occur any time.

(4) The Defense Priorities and Allocation System will be in effect. Establish **lead** time assumptions on this basis.

(5) National material stockpiles will not be a source of Supply.

(6) Multiple shift production may be used.

(7) GFP authorized to support current production will continue to be available for use to support surge production.

(8) Consideration will be given to surging one item at the expense of another where alternate capability exists, based on priorities.

(9) Period of time to continue operations under surge conditions will be determined on a case-by-case basis.

2. Surge Planning Implementation Support. SMCA IPP procedures for supporting surge shall include:

a. Dialogues with industry to generate improved confidence and enthusiastic participation in surge planning and surge contracting.

b. Require the producer/planned producer to describe how production, including that of subcontractors, will be accelerated.

c. The identification of current and potential constraints on ability to sustain high volume, surge production. This process will include consideration of the effect on surge capacity of single source vendors projected material shortages, long lead-time items, projected critical skill shortages, limiting processes, and other factors that may require action or priority consideration by the **SMCA**.

d. The identification by each planned surge producer of other Government agencies, commercial and foreign customers, for which an item on the surge item list, or a similar item, is produced.

e. Identification by each planned surge producer of plans for overcoming limits of manpower, including technical skills, in *moving* from current production levels to surge production.

f. In all subcontracts, by the prime planned surge producer, the requirements for surge planning, extending down through the lowest practical level of subcontractors.

g. Requiring each planned surge producer to revise the surge **production** plan to accommodate a change in conditions that affects the capacity to accelerate according to an existing contract or plan.

h. Determining the ability of each planned surge producer to accelerate to a maximum single shift production level, to a premium time effort, and to **multishift** operation.

i. Coordination with acquisition agencies to ensure that the above **information** is included as a DID on **DD** Form 1423, "Contract Data Requirements List," and include the following:

(1) The producer will indicate the cost for the data item as part of proposal submittal for the surge end item.

(2) The contracting officer will review the data item cost in relation to the surge end item cost.

(3) The contract will allow the contracting officer to implement the producer's plan to one of the levels included in the plan.

(4) Additional costs, not included in the plan, will be negotiated as soon as possible after work has begun.

D. SMCA PRODUCTION BASE PLAN

PBP Policy:

1. The SMCA PBP shall be published each year in lieu of other specific guidance from the Department of Defense.

2. Major changes in the status of production facilities and lines will be coordinated with the Military Services to ensure effective and economic utilization and disposition action.

a. Utilization means optimizing consolidation of requirements, work loading of facilities and lines, and economical use of production resources.

b. Disposition means disestablishment, transfer, or reutilization of production facilities and lines, and economical use of production resources.

3. The SMCA shall disseminate proposed actions for production facilities disposal to permit Service review before action is taken.

4. The SMCA PBP will be developed using the AIRMS. This near-year plan will provide the mobilization production buildup schedules and capability allocations for all planned SMCA end items, separate issue items, and base components. Primary pacers, peacetime acquisition, and assets will be considered in this document.

5. The AIRMS will be used to develop SMCA production base out-year studies (PBOS) as required.

6. Mobilization production requirements shall be provided as described in Section M of this Chapter.

E. PRODUCTION BASE MODERNIZATION AND EXPANSION

1. M&E Policies and Responsibilities

a. Modernization and expansion programs and projects shall comply with the latest annual DoD guidance.

b. The SMCA is responsible for the acquisition, operation, layaway, maintenance, modernization and expansion, prove out and **excessing** of the conventional ammunition production base.

c. Based on Defense guidance, including current base sizing guidance, the SMCA is responsible for modernization and expansion of the production base. This is accomplished by the combined efforts of HQ, **AMCCOM**, **AMSMC-IR** (R), and **AMSMC-PBJ** (D). The PBMA is responsible for developing and executing the modernization and expansion program to ensure modern cost-effective production processes and facilities and include them in the conventional ammunition production base.

d. The **SMCA** shall participate with the Military Services, **PBMA**, development **commands**, and project managers during the **RDT&E** of **ammunition** to ensure the manufacturing methods and technology and facilities are available when items transition to the **SMCA**.

e. The SMCA shall participate with Military Services and project managers during the **RDT&E** of **ammunition** for the purpose of ensuring proper priorities and integration among the selection of **IPF**, conducting the **LRIP**, and operating the production base under the management of the **SMCA**.

f. Priorities that apply to the current production base modernization programs of the Military Services, supplied annually as part of DoD **guidance**, are subject to change. These priorities are **also** subject to modifications in individual cases when compelling reasons dictate modernization of a particular production facility. These variances **shall** be fully documented and supported as part of the program budget processes of the individual Services.

g. Omnibus engineering funds are provided by **SMCA/PBMA** to plants, other Government agencies, and developing Services to accomplish prerequisite design work for future year projects before approval and availability of formal project funds. Developing Service requirements for new or additional SMCA facilities needing design through omnibus funds should be identified to the **SMCA/PBMA** early enough to permit complete design in accordance with Congressional design deadlines.

2. Manufacturing Technology. The cost-effective state-of-the-art manufacturing technology should be incorporated in Government-funded modernization and expansion projects. Before each modernization and expansion project is submitted for funding approval, the Service proposing the modernization will review all pertinent manufacturing technology projects of the Joint Services to determine any new technologies being used that could contribute to the project and prevent duplication. The **MM&T** program must be in synchronization with **M&E** program. Additional discussion of manufacturing technology is provided in Section G.

3. Planning Objectives. Modernized noncontinuous production lines for LAP of **fuzes**, primers, propelling charges, and projectiles for metal parts, and for small caliber ammunition **should** be planned for maximum

sustained production at an efficiency of 70 percent. Continuous chemical production lines should be planned for 90 percent efficiency. See Table 3-2 for display of planning objectives. Concurrent with planning and executing Government funded modernization and expansion, provisions must be made to budget for process prove out in order to evaluate and verify production rates, quality, and reliability of processes, facilities, and equipment.

4. Planning, Programming, and Budgeting Procedures for Modernization and Expansion

a. Modernization and Expansion. The planning process formally begins with a planning and programming guidance briefing at PBMA during October.

b. DoD Guidance. The Department of Defense releases its draft guidance for the PBS program in late February. After **comments** are resolved, the final guidance is released in late March.

c. SMCA Budget/Prebudget Guidance Letter. The SMCA shall prepare and release a budget/prebudget guidance "call" letter to all DoD munitions activities, outlining the procedures and schedules for submitting and reviewing project exhibits (**P-25s**).

<u>PLANNING OBJECTIVES FOR MAXIMUM MOBILIZATION SUSTAINED PRODUCTION</u>		
(Hrs/Wk equal scheduled PDN Hrs/Wk, effective PDN Hours equal actual PDN Hrs/Wk efficiency ratio of actual to scheduled Hrs/Wk)		
<u>Manufacturing Category</u>	<u>Hours/Week</u>	<u>Effective Production Hours</u>
LAP	120	84
Metal Parts	120	84
Small Caliber	120	84
Continuous Chemical Production	168	151
Note: Following production line prove out, demonstrated rates will be used for planning. The projected rate, based on statistical analysis of the prove out data, should be used.		

Table 3-2

d. Draft P-25s Due. The **P-25s**, prepared by the Army Ammunition Plants (AAPs), ARDC, the Military Services, and the PBMA, are forwarded to the SMCA and distributed to the PBMA, Industrial Base Engineering Activity (IBEA), Army Materials and Mechanics Research Center (AMMRC),

and other Services for review. Each agency reviews the P-25s and submits comments to the responsible PBMA engineer and the SMCA.

e. Budget Submission. Between the April working reviews and early **June**, the PBMA project engineers prepare the revised **P-25s** and submit them to the **SMCA** for inclusion in the total PBS program.

f. Congressional Approval. Congress reviews the **SMCA M&E** budget as part of the PBS program under the PAA appropriation. The House and Senate Armed Services and Appropriations Committees may question the budget submission. These questions are sent to the SMCA and coordinated with the PBMA for resolution. When Congress finally approves the budget, funds are released so that the final phase of the project may begin. (Note that similar procedures apply to **MM&T** project exhibits **((P-16s))**).

F. PRODUCTION BASE CONFIGURATION PLANNING

1. Applicability of Policies and Procedures

a. These policies apply to SMCA production base configuration **planning policies** (site selection and transition phasing of old versus new items) for conventional ammunition.

b. These procedures apply to IPFs and modernization and expansion projects using the SMCA production base. The production base includes Army GOGO facilities; Army GOCO facilities; COCO facilities; and SMCA PEPs.

2. Responsibilities for Production Base Configuration Planning The following is a general explanation of SMCA production base configuration planning responsibilities. More detailed discussions of these responsibilities follow in later paragraphs or sections.

a. The developing Service is responsible for the R&D program of new **ammunition** items before they are transitioned to the SMCA. In configuration planning, the developing Service shall coordinate with the SMCA in selecting IPF sites. If the SMCA production base is to be used, the developing Service shall also coordinate with the SMCA in developing and providing technical data in support of site selection.

b. The SMCA PBMA is responsible for managing the modernization and expansion program and for ensuring adequate facilities and equipment are programmed to support ammunition production for peacetime and mobilization.

c. **AMCCOM** has the SMCA responsibility for configuring the production base to satisfy production and mobilization requirements.

3. IPF

a. The developing Service shall coordinate with the SMCA to provide maximum opportunity for use of the existing production and mobilization base as the IPF. Planning for IPF must be included in transition planning.

b. When required, funding will be programmed and budgeted by the SMCA for IPF projects on those programs to be transitioned to the SMCA and for which facilities are to be established.

c. The SMCA shall plan for use of the IPF as part of the full-scale production base to preclude or minimize production breaks.

d. Figure 3-1 shows the flow for the IPF site selection process.

4. Site Selection Procedures for Other Modernization and Expansion Projects

a. ~~The SMCA~~ is responsible for full-scale production of an item. **Consequently**, the SMCA is to meet peacetime, surge and mobilization requirements. As a part of these responsibilities, the **SMCA** makes site selections for follow-on modernization and expansion projects (that is, beyond IPF) to best configure the production base to meet those production requirements.

b. To accomplish these site selections, the **SMCA** conducts the actual site selection study and selects the site. If applicable, the SMCA will convene and chair a site selection committee to assist in evaluating candidate sites. The developer and commodity project manager will provide support, as applicable. Figure 3-1 shows the flow of the modernization and expansion site selection process.

5. Site Selection Data Elements

a. Site selection data elements are technical data on a specific facilities project to use in selecting a site for that project. Site selection studies cannot be made by the SMCA without site selection data elements. The site selection data elements are representative data element requirements and may be adjusted based on **common** agreement between the developing Service and the **SMCA**. They are used to initially screen the production base to determine the candidate sites. They are then used to aid in preparing the economic and technical proposals of each candidate site.

b. The preparation of site selection data elements on product and process for IPF projects is the responsibility of the developing Service.

c. Figure 3-2 shows the site selection data elements.

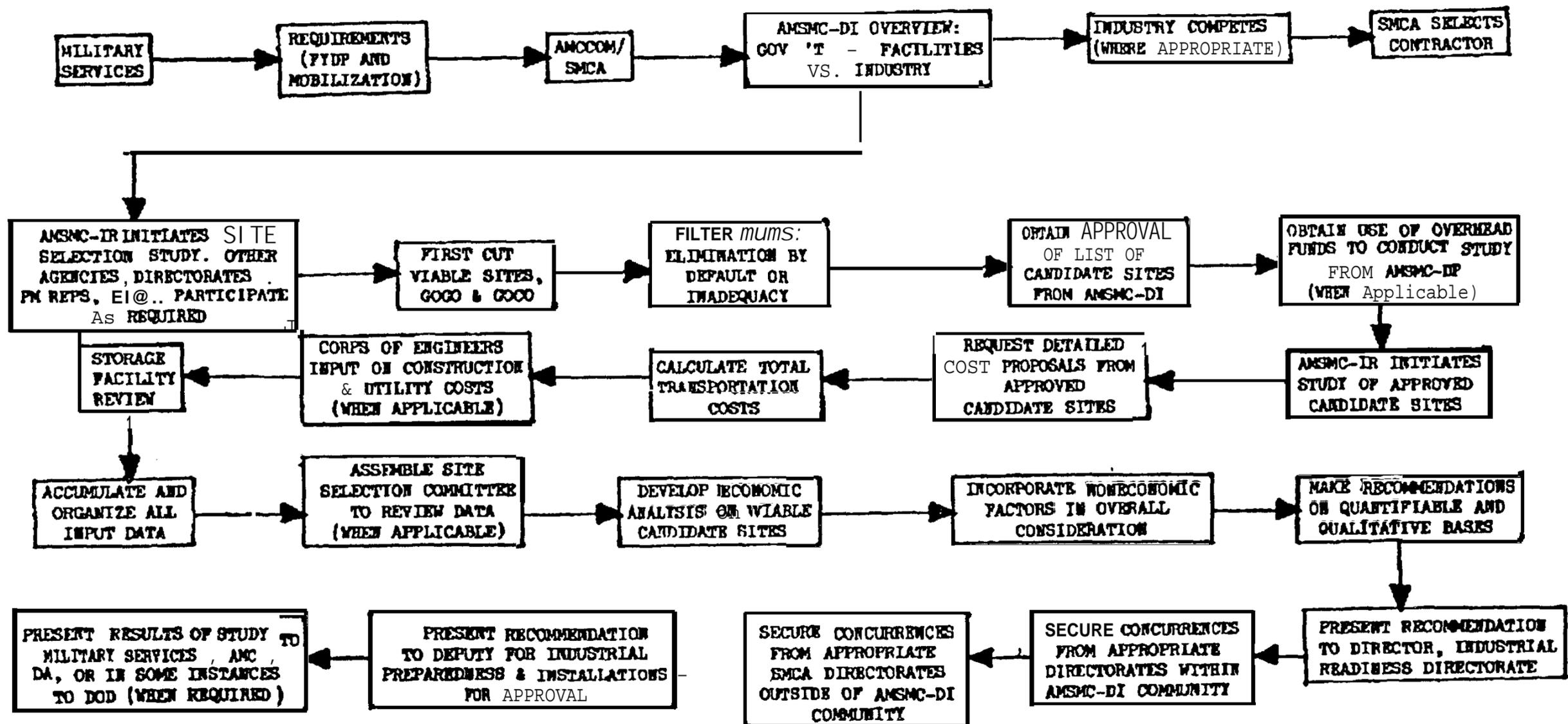


Fig. 3-1. IFF & MDD/EXP Site Selection Process Flow

1. Description of Item

This includes:

- a. Reference to TDP or adequate technical description.
- b. Approved for Services use status (source and date).
- c. Requirements (Mobilization & FYDP per source and dates).
- d. Related and item weapon system use.
- e. Raw material source.

2. Related Projects (Number, Status and Brief Description)

- a. **MM&T** (include required completion date, relationship to facility project, and retrofit capability).
- b. **IPF/Expansion.**
- c. Other (include required support-type facilities).
- d. Omnibus engineering.

3. Project Description

This includes:

- a. Outline of process (with optimum sizing for technology).
- b. Planned production capability: Previous total plus this project's capability.
- c. Estimated cost (include source of estimate, FY basis of \$).
- d. Approximate space required (include storage space for materials, components, and end items, as required; indicate whether inert or energetic storage and what quantity-distance requirements exist).
- e. Equipment (type and size - stratify into the following categories: **process**, material handling, production support, plant support).
- f. Utility requirement - other than energy (include water, steam, sewage when significant).
- g* Environmental requirements.

Figure 3-2. Site Selection Data Elements

- h. Manpower requirements (numbers and skill categories).
 - i. Special safety features (**toxics**, nuclear, Occupational Safety and Health Administration (**OSHA**), Radiological and Radioactive, etc.).
 - j. Transportation requirements: end item, component, and raw material description, cubes, and tonnages.
 - k. Energy requirements (primary and alternative types).
 - l. Special waste disposal requirements (landfills, radioactive waste, etc.).
 - m. Security requirements (special requirements dictated by **chemical-biological** products, radioactive materials, susceptibility to sabotage, etc.).
 - n. Seismic requirements (sensitive of process to earth tremors; special **precautions** due to process).
 - o. Special site requirements (need for bedrock for machine foundations; **freedom** from sub-freezing weather, etc.).
 - p. **Specific** building requirements (include process and nonprocess areas.)
4. Specific Project Requirements (include any specific requirements relating to site selection that are peculiar to individual projects).

Figure 3-2. Site Selection Data Elements (Continued).

6. Cost Estimating Procedures. The cost estimating procedures used by the SMCA in site selection studies shall be as prescribed in AMCCOM Regulation 37-25, Uniform Site Selection Cost Estimating Procedures. Cost estimates shall be based on out-of-pocket, recurring, and nonrecurring costs directly attributable to the project being studied.

7. Other Considerations in Site Selection

a. Although economic factors receive a greater emphasis because of their readily quantifiable nature, there are other factors which, for various reasons, must be considered in choosing the best site for a **project**. The weight placed on these factors is up to the decision maker and can be of **such significance** as to override-economics.

(1) Management and operational elements include such qualitative factors as expertise; past technical performance; availability of work force, utilities, and transportation; configuration of the base (such as centralization versus dispersion of similar capabilities); horizontal and vertical completing; and precluding or minimizing production breaks.

(2) Environmental considerations include potential or present pollution, seismic risk, archaeological interference, endangered plants or animals, and socioeconomic impact. Environmental Impact Assessments or Statements (EIA/EIS) shall be conducted as required.

(3) Normally, economic factors are given greater weight when labor intensive processes are used.

b. Each project may have its own peculiar set of non-economic factors. Even those factors which are similar between two or more projects may be weighted differently for each project. The above factors are not all-inclusive and can be added to, or deleted from, as appropriate.

G. MM&T

1. Policies. Manufacturing technology efforts will be pursued to ensure that the SMCA production base incorporates state-of-the-art changes that enhance the achievement of efficient, economic, and responsive operations.

2. Procedures

a. Each Service is responsible for the necessary engineering to develop's producible end item, component, or system consistent with DoD Directives and appropriate to the level-off hardware acquisition rate programed in the FYDP. During RDT&E, this engineering will consist of both PEP and an associated "system unique" MM&T program (if required).

R&D managers must ensure that their programs incorporate component end item manufacturing process descriptions to allow for quantity and quality production at a reasonable cost. Adequate lead-time must be established when providing process descriptions to the SMCA for facility acquisition.

b. Funding of PEP and associated **MM&T** projects will be accomplished according to the following guidelines:

(1) Developing Service

(a) PEP and associated "system unique" **MM&T** projects for items still in development will be planned, programmed and budgeted for by the developing Services.

(b) The developing Services may elect to fund "system unique" **MM&T** projects prior to transition with procurement funds.

(2) SMCA. The SMCA will only fund **MM&T** projects that are:

(a) Initiated after transition.

(b) Initiated prior to transition when the **MM&T** project has "general" application to existing manufacturing processes used by the SMCA for items scheduled for transition. **MM&T** projects initiated after transition should consist of efforts required to capitalize on emerging technology.

(3) Early interface between the SMCA and the developing Service will ensure that **all** necessary **MM&T** projects are planned, budgeted, and implemented in a timely manner.

c. Introduction of improved processes to optimize production at **SMCA facilities** for the post-transition period **will** be considered by the **SMCA** for budgetary actions consistent with long-range mobilization or *more* intensive production situations. Prioritization, budgeting, and funding will be established based on the series of project reviews established for that purpose. Schedules, requirements, input, and other information will be coordinated between SMCA elements and the Military Service.

d. Additionally, the Military Services will participate, through the Manufacturing Technology Advisory Group (**MTAG**), in developing **MM&T** requirements and in formulating plans for executing and implementing **MM&T** projects that have multi-Service applications, both to avoid unwarranted duplication of effort and to maximize the benefits and/or savings available from such projects. Annually, the MTAG Munitions Subcommittee will publish a report for the annual DoD MTAG conference containing the Services' munitions/munitions-related **MM&T** efforts to include **MM&T** on **non-SMCA** items. This report will utilize the

AMC **MTMIS** for input and will be coordinated with applicable JOCG elements.

e. The **Commander, PBMA**, will personally certify (and maintain such certification on file) that **MM&T** projects for munitions items not yet transitioned to the **SMCA**, have general application to the conventional **ammunition** production base. These projects will be proposed by the Services or the PBMA staff.

3. Derivation of Manufacturing Technology Engineering. The supporting manufacturing technology engineering is derived in three ways:

a. Purchase of state-of-the-art, off-the-shelf equipment of designs from private industry wherein the engineering was privately financed and is amortized in the **selling price**.

b. Adaptation of **commercial** processes and equipment when the adaptation is financed by the Government and the balance of the design by industry is in the off-the-shelf **case**.

c. Development of process and equipment by the Government or **commercial** manufacturing technology organization.

4. Relationship of Manufacturing Technology Engineering to the Modernization and Expansion Program

a. The manufacturing technology engineering program is the keystone of an M&E program because it develops the new production processes and equipment that will replace antiquated or hazardous operations. It increases production efficiency, improves occupational working conditions, enhances productivity, reduces air and water **pollution**, or provides significant cost reduction. **As** a matter of policy, the Services will not build a new copy of an old design when better and more economic processes are proven and available.

b. The manufacturing technology engineering program, **coordinated** with SMCA M&E plans, is essential to achieve the **full** benefits of modernization and expansion. Effort spent today in advancing manufacturing methods and processes may often pay for **itself** many **times** over in the future through more economic and timely production of ammunition and other intangible benefits.

H. THE ARMAMENT INDUSTRIAL READINESS MANAGEMENT SYSTEM (AIRMS)

1. Responsibilities

a. The **Commander, HQ, AMCCOM**, shall exercise system management of **AIRMS** through the **AMCCOM** Director of Industrial Readiness.

b. Military Service points of contact for IPP shall advise and assist HQ, **AMCCOM**, in establishing and maintaining an effective interface between applicable ADP systems of their Service and AIRMS.

c. **Input** formats shall be **developed by** the SMCA and coordinated with the **principal** members before **implementation**.

2. AIRMS Objectives. The following are AIRMS objectives:

a. Integrate **SMCA** industrial readiness information management actions.

b. Apply advance technology to HQ, **AMMCOM**, industrial readiness information management.

c. Accelerate availability of a total system for SMCA industrial readiness management.

3. The AIRMS Concept. The AIRMS is based on the premise that it will:

a. Satisfy the total SMCA and Army industrial readiness mission of HQ, **AMCCOM**.

b. Be based on the concept of automated storage and retrieval of readiness data and information.

c. Be designed in a series of subsystems employing the System 2000 **Data** Base Management System, when appropriate. The subsystem structure is designed to facilitate modular development and maintenance of AIRMS and to expedite enhancement of industrial readiness management.

d. Be designed to satisfy industrial readiness operating functions; provide a study capability to meet continuing requirements for evaluation of the impact of proposed changes in logistics policies, plans, programs, and procedures; predict and assess significant **industrial** readiness trends; forecast future industrial readiness requirements, and support the ASAPP, **DSACS**, and other systems required by higher headquarters.

4. Description of AIRMS Subsystem

a. Equipment Subsystem. This subsystem is also known as the plant equipment package management information system. It provides an inventory type data base on the status of Government-owned production equipment in the SMCA PEPs. Included is a complementary data base on equipment voids.

b. Reactivation Network Subsystem. These networks describe in detail **all** the actions and resources needed to reactivate laid-away

production lines in the Army Ammunition Plants (AAPs). This subsystem helps identify constraints to reactivation to allow planning of corrective actions.

c. Industrial Preparedness Measures Subsystem. The subsystem provides a repository of information on Industrial Preparedness Measures (IPMs) needed to meet mobilization or surge, or FYDP for a given item or facility.

d. SMCA PBP/PBOS Subsystem. This subsystem generates the PBP/PBOS (Section D.). It compares mobilization requirements to the capabilities of the SMCA production base. A special application of the **PBP/PBOS subsystem**, identifies constraining components for each month of production build-up, starting with M-day. This application allows the SMCA to model IPMs to evaluate their impact on the capability of the base.

e. Priorities Subsystem. This subsystem allows study of entire armament systems (ammunition and weapons) to determine their comparative readiness and sustainability.

f. Industrial Base Investment (IBI) Subsystem. This subsystem will provide support to the ICAPP by providing a repository of data related to ramp years and the POM. The ramp years are the 3 years leading into the POM period. These are the prior year, the current year, and the budget year. The POM is the 5 fiscal years that follow the ramp.

5. Procedures. The SMCA shall develop and disseminate procedures for using **AIRMS**.

I. PRECISION COMPONENTS FOR MECHANICAL TIME DEVICES

1. -Background

a. On **19** August 1971, the Deputy Secretary of Defense, in a Decision Memorandum, determined that future defense requirements for precision components for mechanical time devices, including gears, pinions, posts, and plates must be procured from domestic or Canadian manufacturing sources to the maximum extent practicable to preserve the domestic mobilization base for such components. As a result of this policy decision, policies and procedures, along with a contract clause, were developed and incorporated in the FAR. Initially, an Industrial Preparedness Precision Component Subgroup was established and subsequently disestablished. Currently a precision component working **committee** exists that reports to the Joint Ordnance Subgroup for ordnance industrial preparedness planning and performs the following:

(1) Coordinates conventional ammunition industrial preparedness and acquisition programs for preserving the domestic

mobilization base for mechanical time **fuzes, safing,** and arming devices, boosters, and similar items using precision cut pinions and gears.

(2) Establishes and protects a balanced 1-8-5 work loading shift for domestic base producers of precision cut pinions and gears when possible.

(3) Develops complementary delivery schedules for continuous operation so as to retain critical skills.

(4) Prepares an annual program plan for work loading domestic precision component producers and issues quarterly status reports based on the plan.

(5) . Conducts triennial reviews and updates the JOCG Precision Component Report reflecting changes in the precision component base, mobilization requirements, peacetime acquisition programs, changes in the state-of-the-art affecting the base, and evaluating the need for continued protection of the domestic production base.

b. Joint Precision Component Studies (triennial reviews) were conducted by the JCAP Precision Component Subgroup in 1978 and 1981 to assess the current state of the domestic precision component production and to recommend future actions.

2. Precision Component Policies. In line with the approved Joint Precision Component Study, dated December 1984 (draft), the following policies shall apply:

a. The Military Services shall continue to protect the domestic **mechanical** time base according to the FAR Supplement 8.74.

b. The Military Services shall require prime contractors to coordinate **all** acquisitions for machined, cut, and bobbed pinions, gears, posts, and like items with the DoD Precision Components Work Loading Control Center, HQ, **AMCCOM**, to ensure placement of orders with approved domestic sources.

c. The Military Services shall support the continuing efforts of the DoD **Precision** Components Work Loading Control Center.

d. The Military Services shall maintain policies to minimize the use of machined, cut, and bobbed pinions, **gears,** and posts based on foreign technology for mechanical time devices-and to convert from reliance on foreign technology to US technology for such components and related processes.

e. The DoD Precision Components Work Loading Control Center shall determine precision component production base requirements.

3. Industrial Readiness Procedures for Precision Components

a. Precision component procedures shall be implemented as spelled out in the FAR.

b. The Services shall coordinate procurements of mechanical time devices with the DoD Precision Components Work Loading Control Center.

c. Technology, such as the gearless safe and arm and the hydrostatic extrusion process, shall be developed and incorporated in fuze designs to reduce the reliance on foreign technology.

cf. The DoD Precision Components Work Loading Control Center shall:

(1) Ensure equitable distribution of procurements to maintain and expand critical skills and to partially use surplus capacity when it exists.

(2) Ensure the maintenance of a single shift (1-8-5) surge production capability to the extent practical.

(3) Publish a semi-annual Coordinated Precision Component Plan and Report, including status reports of all precision component related projects and production trends, as well as problems within the electronics industry pertinent to fuzing.

J. SUPPORT OF PRODUCERS

1. Product Engineering Support

a. Each Military Service has established an In-Service Engineering Activity (ISEA) to:

(1) Act as the focal point for providing TDPs required by the SMCA to perform its mission.

(2) Execute the configuration management of items transitioned to full scale procurement and production.

b. As requested by the SMCA, ISEAS will provide or arrange with their appropriate Service development command or centers to provide product engineering support to producers, within developing Service priorities, for items for which their Service is the design agency.

2. Process Engineering Support. As requested by the SMCA, the PBMA will provide process engineering support to producers in establishing, accelerating or expanding production methods, procedures, and processes.

K. INTERNATIONAL COOPERATIVE ARMS INITIATIVES

1. Background

a. An intensive study of the US industrial base, hereafter called the Production Base Study, was conducted with relationship to the International Cooperative Arms Initiatives. This study was prompted by the growing concerns that those initiatives were creating potentially adverse impacts on the warm industrial base. It was felt that continued unrestrained and uncoordinated initiatives **to** authorize foreign **coun-**tries' rights to produce or co-produce items of US military **material** vital to the defense posture of the United States, could **possibly** degrade the US capability to respond to emergencies.

b. The Production Base Study identifies items vital to the defense posture of the US and **recommends**, on a case-by-case basis, restriction of co-production, licensed production, export, and transfer of critical technology. The PBS is updated continuously and reviewed quarterly. This document is used by all levels of the Department of Defense in making decisions in these areas.

2. Policy on International Cooperative Arms Initiatives. No agreements or commitments **shall** be made with other countries or any company representing another country for sales (export), licensed production, co-production, or transfer of critical technology by the Military Services during the development phase or before transition to the SMCA without prior coordination with the **SMCA**. This includes activities by development **commands** and project and program managers within the Military Services. Coordination will be with the **Commander, HQ, AMCCOM**.

L. POLICIES AND PROCEDURES FOR STRATEGIC AND CRITICAL MATERIALS

This section describes the responsibilities of the developing Service and the **SMCA** for considering and dealing with the impacts of strategic and critical materials in industrial preparedness planning.

1. Defining Strategic and Critical Materials

a. Strategic materials are those in which the US is **foreign-dependent**. That is, there is no known readily available, or adequate US or Canadian source. Some materials in this category have DoD stockpile goals.

b. Critical materials fall under two separate categories, depending on whether they are considered from the contractor's point of view, or that of the Government.

(1) From the Government's viewpoint, critical materials are, those the Government knows to be **of constrained availability** for any

reason. Examples of reasons include inadequate supply, inadequate processing capability, or long lead-times.

(2) From the contractor's viewpoint, critical materials are those not previously recognized by the Government as critical, but which have been determined by the contractor to be inadequately available for any reason.

2. Responsibilities of the Developing Service. During development, identify strategic and critical materials, evaluate and develop alternate **materials, and** identify initial sources. Assess the appropriateness of material substitutions, scrap reclamation, manufacturing technology, and long lead funding. Include the appropriate provision in development and contracting documents to meet the objectives of reducing dependency on strategic and critical materials. Identify strategic and critical materials in transition planning documents.

3. Responsibilities of the SMCA. Recognize requirements for strategic and critical materials, start long-range planning for sources, **recommend** alternate material development, and **recommend** development of alternate designs to identify strategic and critical materials on a continuing basis and develop and implement plans to remedy shortages of strategic-and critical materials.

M. MOBILIZATION REQUIREMENTS AGGREGATION

This section describes how to screen and aggregate mobilization requirements for industrial preparedness planning. It applies to all DoD Components having **SMCA** assigned conventional **ammunition** mobilization requirements.

1. General Information

a. Mobilization requirements for SMCA items are the key factor **in** meaningful IPP of the conventional ammunition industrial base.

b. It is essential that mobilization requirements are determined in a logical, consistent manner for near-year and out-year planning. These determinations by the DoD Component must be based on actual near-year and projected out-year M-day mission, phased force structure and weapons system availability.

c. Mobilization requirements and subsequent IPP will be limited to end items and components that are essential to operational effectiveness under combat conditions.

d. Near-year requirements should include only those SMCA items that have been **type** classified and in LRIP, or will be during the planning year.

e. Out-year projections may include SMCA items not yet type classified but which are reasonably expected to be within the POM period.

2. Mobilization Requirement Concepts

a. The concept on which **SMCA** mobilization planning is accomplished is that:

(1) All SMCA items meeting the standards and **criteria** of **Section A** will be considered by the using Military Service.

(2) Quantities required, as determined by the using Service, are accurate and support the combat needs of the Service.

(3) Industrial base management for conventional **ammunition** will be accomplished by the SMCA **based** on the above data **provided** by the Military Services and according to other DoD guidance.

b. Critical Item List (**CIL**) concepts are:

(1) Each Military Service will provide a **prioritized** listing of **SMCA** items determined by the Service to be in a critical logistic posture to support operations in a national emergency.

(2) A composite **CIL** will be maintained by the **SMCA**.

3. Mobilization Requirement Procedures

a. Procedures for submitting of IPP Mobilization Requirements to the SMCA are as follows:

(1) The DoD Components and agencies should provide the SMCA mobilization requirements, and prioritized CIL to HQ, **AMCCOM, ATTN: Industrial Readiness Directorate (AMSMC-IR)**, Rock Island, IL 61299-6000, by 1 January annually for the following fiscal year planning period.

(2) Requirements are submitted on **DD Form 2361, "SMCA Mobilization Movement and Production Requirements"** (figure 3-3) or an automated printout displaying the same information. Local reproduction of **DD Form 2361** is authorized.

(3) Instructions for filling out the **DD Form 2361** are as follows:

(a) Block 1, Nomenclature. Enter complete nomenclature, including model identification numbers.

(b) Block 2, As of Date. Enter the current date of the data.

(c) Block 3, **DoDIC**, Self-explanatory.

(d) Block 4, NSN. Self-explanatory.

(e) Block 5, Military Service. Self-explanatory.

(f) Block 6, **ADL/TDP**. Enter number of adequate automated data list or technical data package.

(g) **Block 7**, Surge Item. Check if the item is likely to require surge production or not.

(h) Block 8, U/Measure. Enter the unit of measurement used in Blocks 9, 10, and 11 entries.

(i) Block 9 is broken down as follows:

1 **Block 9(1)**, Consumption Requirements. Enter anticipated monthly combat consumption for periods shown.

2 **Block 9(2)**, Retail Assets. Enter projected retail assets as of 1 October under QTY ON-HAND. Show how assets are applied against the monthly consumption requirement. Include quantities in substitute **DoDICs** identified in Block **11a** below.

3 **Block 9(.3)**, Wholesale Assets. Enter projected wholesale assets as of 1 October under QTY **ON-HAND**. Show how assets are applied against the monthly consumption requirement. Include quantities in substitute **DoDICs** identified in Block **11a** below.

4 **Block 9(4)**, Required Production. Enter production-requirements by month to fully satisfy the remainder of the **total** requirement. If no production is required during the period shown, provide the level off rate and the month when deliveries from production are needed in Block 11 below.

(j) **Block 10** is broken down as follows:

1 **Block 10(1)**, Near-Year 0+6 Monthly Rates. Enter the next **FY** and anticipated requirement quantity per month to support your Service in combat after 0+6 months.

2 **Block 10(2)**, Out-Year **D+6** Monthly Rates. Enter the POM ending **FY** and projected requirement quantity per month to support your Service in combat after 0+6 months.

(k) Block 11 is broken down as follows:

1 Block n(a), Remarks, Substitute **DoDICS**. Enter all the substitute **DoDICS** considered in constructing the data in Block 9. If none, enter none.

2 Block n(b), Other Remarks. Self-explanatory.

b. The major **HQ** responsible for submitting mobilization requirements are as follows:

(1) HQ, Commandant of the Marine Corps.

(2) HQ, Naval Sea Systems Command.

(3) HQ, **Naval** Air Systems Command.

(4) HQ, Ogden Air Logistics Center.

(5) The SMCA develops Army data. The source of the **D+6** Month rates used for the IPP must be approved by the DA for Army rates.

c. Additional information on mobilization requirements reporting:

(1) The "as of" date of **the report** is October 1 following the December 15 reporting date.

(2) The SMCA **shall** publish a **PBP/PBOS** annually.