SUBPOENA

ARMED SERVICES BOARD OF CONTRACT APPEALS

Skyline Six - Seventh Floor
5109 Leesburg Pike
Falls Church, VA 22041-3208
Telephone: (703) 681-8502

Appeal of --
Freedom, NY, Inc.
Under Contract No. _____

ASBCA No. 43965

To: Office of the Secretary of Defense
3300 Defense Pentagon
Washington, D.C. 20301-3300

YOU ARE HEREBY COMMANDED to appear at _____ (Room number) _____ (Building)

_____ (Street number), _____ (City) (State)

at _____ o'clock ____ on the _____ day of _____, 2000

To ~~testify and~~ produce the following two documents: (1) Richard L. Cromley, "Minimum Sustaining Rate for MRE Producers," Operations Research and Economic Analysis Office, Office of Planning and Resource Management, Defense Personnel Support Center, Defense Logistics Agency, June 1992; and (2) Nancy Chester and Carmen Viola, "Maximum Production Capacity Study for MRE Assemblers and Retorters," Industrial Base Program, Defense Personnel Support Center, Defense Logistics Agency, June 1992.

and to stay there until given permission to leave.

* Strike the words "and bring with you" unless the subpoena is to require the production of documents or tangible things, in which case the documents and things should be designated in the blank space provided for that purpose. If testimony by an organization representative or designee is requested, describe with reasonable particularity the matters on which examination is requested.

Your appearance as ordered by this subpoena will entitle you to receive the fees and mileage provided by 28 U.S.C. § 1821 or other applicable law.

Upon written request to this Board by you or by a party to this appeal, which request should be made within 10 days after service but in any event not later than the time specified in the subpoena for attendance, the Board may (i) quash or modify the subpoena if it is unreasonable and oppressive or for other good cause shown, or (ii) require the person in whose behalf the subpoena was issued to advance the reasonable cost of producing subpoenaed books, papers, documents, or tangible things.

This subpoena is issued at the request of appellant represented by:

Bruce M. Luchansky, Esq., Kollman & Sheehan, P.A., Sun Life Building, 20 S Charles Street, 8th Floor,
(Name, address, telephone number of requesting party's attorney or other representative)

Baltimore, MD 21201 Phone: (410) 727-[illegible]

12 May 2000 (Date)

DAVID W. JAMES, JR. Administrative Judge

RETURN OF SERVICE

Summoned the above-named witness by delivering a copy and tendering the fees to the witness for one day's attendance and mileage allowed by law, on the _____ day of _____, _____ at _____

Dated _____

Subscribed and sworn to before me, a _____, this _____ day of _____, _____.

July 1996

LAW OFFICES
KOLLMAN & SHEEHAN, P.A.
SUN LIFE BUILDING
20 SOUTH CHARLES STREET
BALTIMORE, MARYLAND 21201-3225
(410) 727-4300

TELECOPIER
(410) 727-4391
www.kollman-sheehan.com

DAVID M. SHEEHAN
FRANK L. KOLLMAN
PETER S. SAUCIER
FRANCIS R. LAWS
DARRELL R. VANDEUSEN
CLIFFORD B. GEIGER

BRUCE M. LUCHANSKY
RICHARD P. RIEMAN, JR.
RANDI KLEIN HYATT
DESMOND T. McILWAIN
DAVID WHITE *
JEFFREY A. TRUEMAN
SARA A. WARANCH

* ADMITTED IN DC & SC ONLY

May 19, 2000

UPS OVERNIGHT DELIVERY

Office of the Secretary of Defense
3300 Defense Pentagon
Washington, DC 20301-3300

RE: Appeal of Freedom NY, Inc.
ASBCA No.: 49365

Dear Sir:

Enclosed is a subpoena issued by the Armed Services Board of Contract Appeals which commands you to produce documents. Please call my Secretary, Jackie Hector, to confirm receipt of this subpoena. Return these documents to me at the above address no later than May 29, 2000.

Your prompt attention to this matter is appreciated

Very truly yours,

Bruce M. Luchansky /jh

Bruce M. Luchansky

BML jh

Enclosure

DEFENSE LOGISTICS AGENCY
DEFENSE SUPPLY CENTER PHILADELPHIA
700 ROBBINS AVENUE
PHILADELPHIA, PENNSYLVANIA 19111-5092

IN REPLY
REFER TO DSCP-GL (Guydon S. L. /215-737-8069)

Bruce Luchansky, Esq.
Killman & Sheehan, PA
Sun Life Building.
20 S. Charles Street, 8th Floor
Baltimore, MD 21201

June 6, 2000

RE: ASBCA Subpoena – Appeal of Freedom NY, Inc.

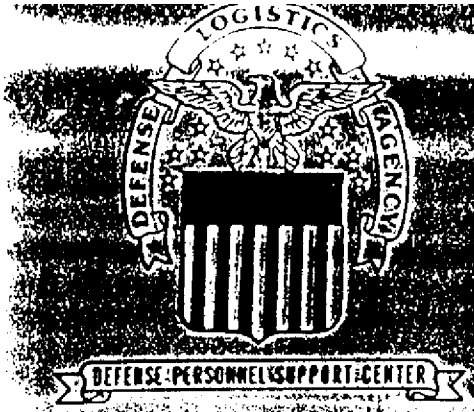
JUN 12 2000

Dear Mr. Luchansky:

Enclosed, in response to the above referenced subpoena, please find a redacted copy of "Minimum Sustaining Rate for MRE Producers". We do not have "Maximum Production Capacity Study for MRE Assemblers and Retorters".

Sincerely,
Sandra L. Guydon
Sandra L. Guydon
Assistant Counsel

Encl.



MINIMUM SUSTAINING RATE STUDY for MRE PRODUCERS

JUNE 1992

OPERATIONS RESEARCH AND ECONOMIC ANALYSIS OFFICE

OFFICE OF PLANNING & RESOURCE MANAGEMENT

DEFENSE PERSONNEL SUPPORT CENTER
2800 South 20th Street, Philadelphia, PA 19101-8419

Proprietary Information
Not for Public Release

MINIMUM SUSTAINING RATE STUDY
for
MEAL READY-TO-EAT PRODUCERS

MR. RICHARD L. CROMLEY

OPERATIONS RESEARCH AND ECONOMIC ANALYSIS OFFICE
OFFICE OF PLANNING AND RESOURCE MANAGEMENT
DEFENSE PERSONNEL SUPPORT CENTER

JUNE 1992

EXECUTIVE SUMMARY

At the request of the Directorate of Subsistence, this office conducted a Special Minimum Sustaining Rate (MSR) Study of the industrial base for Meal Ready-to-Eat (MRE) rations. The scope of the study included analysis of case assemblers and retort pouch producers as well as one firm that receives subcontracts for MRE baked and retort cookie and cake items. The MSR, as defined, is the lowest monthly rate at which a firm can economically retain its production capability and critical skills. A reasonable MSR is a function of the economics of production and return on investment. Special MSR studies are performed to develop accurate and valid minimum production rates for contractors to insure the industrial base is sustained.

The study was conducted by analyzing production, cost, and financial data and conducting site visits to each firm. The approach was to examine the relationship between output level, unit cost, and return on investment (ROI). The expected relationship between output level and unit cost is that unit cost will decrease rapidly at first as output levels increase then will decrease more slowly as output levels are further increased. At some point an "economic production rate" will be reached. It would be optimal for both the Government and the firm to produce at an economic rate because a lower per unit cost implies a lower price to the Government. It also implies that a firm is able to reach efficient production rates and fully utilize plant and equipment and thereby receive an adequate ROI.

Recommended MSRs are provided for each firm along with the cost and ROI models used to derive the MSRs. The models can be used to examine the impact of changes to assumptions or inputs as anticipated will be necessary in future years when the MSR may come into use. Recommendations for the use of the MSR, when combined with the maximum capacity for each firm, in selecting the future industrial base are also provided along with a model that allows for analysis of different procurement scenarios. It is recommended that firms with relatively low minimums and relatively high maximums be maintained in the industrial base since the cost of implementing MSRs, if needed, would be minimized. It is also desirable to have a combination of firms that are able to meet expected mobilization requirements while at the same time have the sum of these firms' MSRs be less than the expected peace time buy quantity. In this manner mobilization requirements can be met without invoking MSR or at least minimizing the quantity required to meet the MSRs in a given year.

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I. INTRODUCTION AND BACKGROUND.

A. Introduction.

At the request of the Industrial Preparedness Planning Program, Directorate of Subsistence (DPSC-H IOM dated December 20, 1991), this office conducted a Special Minimum Sustaining Rate (MSR) Study of the industrial base for Meal Ready-to-Eat (MRE) operational ration component items. The scope of the study included analysis of case assemblers and retort pouch contractors as well as one firm that receives subcontracts for MRE baked and retort cookie and cake items.

The MSR, as defined [1], is the lowest monthly rate at which the plant can economically retain its production capability and critical skills and is to be based on a single shift, eight hours a day, five days a week. A reasonable MSR is a function of the economics of production, return on investment, and technical capability in terms of machinery and skilled labor. Special MSR studies are performed to develop accurate and valid minimum production rates for contractors as part of industrial preparedness planning to insure the industrial base is sustained.

The study was conducted by requesting specific production, cost, and financial data from each firm. On-site visits were then made to each of the contractors' plants for the purpose of observing production facilities and equipment, validating and clarifying the information provided and discussing adjustments to the data that were necessary to perform the MSR analysis. These visits were made in conjunction with a team of DPSC and DCMD personnel who were conducting an analysis of the mobilization or maximum capacity of each of the facilities.

B. Background.

MREs are contracted for by the case. Each case has twelve individual MREs representing twelve different main entrees. Four of the entrees are provided by the assembler contractor (referred to as Contractor Furnished Material or CFM) and the other eight entrees are purchased separately by the Government (referred to as Government Furnished Material or GFM) from retort contractors and provided to the assembler. In addition to the eight GFM entrees, the Government purchases two retort pouches of potatoes au gratin per MRE case and provides these to the assembler contractors. Therefore, for each case purchased there is a requirement for four CFM retort pouches and ten GFM pouches.

The MRE industrial base analyzed consisted of nine firms: one firm capable of assembling MREs; two firms capable of assembling MREs and producing retort pouches; five firms capable of producing retort pouches only; and one firm capable of producing baked and retort cookie and cake components. Production for all of the firms except for two is primarily for MRE or other DPSC ration programs. The other two firms have substantial commercial production.

Representatives from all the firms analyzed attended two different meetings at DPSC prior to the study to discuss the data requirements and the methodology to be used in establishing the individual MSRs. The representatives agreed that the approach was valid and that they would cooperate in providing the data necessary to perform the analysis. It was further agreed that all data was extremely sensitive and proprietary and that precautions were necessary to protect the privacy of the data.

II. METHODOLOGY.

A. Approach.

The approach to establishing MSRs was to examine the relationship between annual output or production level to cost per unit and return on investment. Of particular importance is the range of output where the firm reaches a "reasonable rate of efficiency" or an "economic production rate" as discussed in the Defense Logistics Agency regulation and handbook [1,2] for conducting MSR studies. This can be considered the point where the change in the decrease in cost per unit is minimal as the output level further increases.

The expected relationship between output and unit cost is that unit cost will decrease rapidly at first as output levels increase then will decrease more slowly as output levels are further increased. Since direct costs such as labor and materials are generally constant as output levels change, the unit cost decrease is primarily due to the indirect costs (i.e., overhead and general and administrative costs) being allocated over more and more units as output increases. At some point an "economic production rate" will be reached. It would be optimal for both the Government and the firm to produce at an economic rate because a low per unit cost implies a low price to the Government and it implies that a firm is able to reach efficient production rates and more fully utilize plant and equipment.

Return on investment (ROI) measures the amount of earnings received for investment in plant, equipment, materials, inventory and cash used in the production of goods at a facility during a given time period. It is primarily a function of the extent the fixed assets (plant, equipment and infrastructure) are used. The measurement of ROI is calculated in the following manner based on the handbook for conducting MSR studies [1] and financial accounting principles [3]:

$$ROI = \frac{\text{Net Income + Interest Expense}}{\text{Average Assets}}$$

where $$\text{Average Assets} = \frac{\text{Beginning Assets + Ending Assets}}{2}$$

The expected relationship between output and ROI is that at very low levels of output ROI will be negative since there is not enough production to cover fixed costs and provide a positive net income. As output levels increase, fixed costs are allocated over more units, net income becomes positive and ROI therefore becomes positive. At very high levels of production, ROI becomes very high as the plant is fully utilized.

The task then is to estimate the relationship between output level and indirect unit cost and output level and ROI. This can be done by examining historical production, cost and financial data. A determination then has to be made as to what output level represents an economic production rate and at what output level a reasonable ROI is obtained.

B. Cost Models and Statistical Technique.

1. Indirect Cost Model.

Indirect costs consist of overhead (OH) and general and administrative (G&A) costs. Some overhead costs vary with output (e.g., utilities, repairs and maintenance) while others are fixed (e.g., building rental, supervisor salaries). General and administrative costs are typically fixed. A cost model was developed to estimate indirect cost per unit at various production levels. The general form of the model is as follows:

$$\frac{\text{Total Fixed OH + G\&A}}{\text{Units Produced}} + \frac{\text{Total Variable OH}}{\text{Units Produced}} = \text{Cost Per Unit}$$

Monthly output levels considered for the model ranged from 100,000 to 2,000,000 in increments of 100,000 units for assembly production. The output levels considered for retort production were 1,000,000 to 20,000,000 in increments of 1,000,000 except for the two firms who had substantial commercial sales where the range was 200,000 to 4,000,000 in increments of 200,000 since their MSRs were substantially lower than the other firms.

2. Estimation of Fixed OH and G&A Costs.

For an individual firm, the amount of total fixed costs allocated to future MRE production was based on observed levels of total fixed costs (adjusted for inflation) for the firm prior to Operation Desert Storm (ODS). Fixed cost levels during ODS were not considered reflective of normal peace time cost levels due to additional costs incurred as a result of the abnormally high output rates. Assumptions regarding the allocation of fixed costs to MRE production were made based on historical data relating to MRE output as a percentage of total output prior to ODS.

3. Estimation of Variable Overhead Costs.

Regression analysis was used to derive a cost relationship between variable overhead and output level based on the data provided by each firm. From this relationship, it was possible to estimate the variable overhead associated with various levels of output. There *is*, though, a minimum amount of variable overhead that will be incurred regardless of production output since some costs such as utilities and

repairs and maintenance for the plant and equipment are incurred even if there is no production for a given period. Estimates of minimum variable overhead were based on analysis of cost data and discussions with plant personnel. The variable OH to be used in the cost model (discussed in the following paragraph) is therefore the maximum of the estimate from the regression model and the estimate of minimum variable OH.

4. Estimation of Return On Investment.

Regression analysis was used to determine the relationship between output level and ROI. Total plant production per quarter was compared to the ROI for the same period. In order to obtain a single production number for each quarter, the output of different items (MRE assembly, MRE retort pouch, commercial products and other ration items) was converted into a generic or single output level using a concept of "equivalent" units. The conversion into equivalent units was done by using the method the firm uses to allocate indirect cost (e.g., direct labor).

An example of converting output of different products into a single generic output for a firm that assembles MREs and produces MRE retort pouches is as follows. Assume that direct labor cost for assembly is $1.50 per case and the direct labor cost for a retort pouch is $.10. Therefore it takes 15 times ($1.50/$.10) more effort to assemble a case than to produce a retort pouch. Retort pouch production can then be converted into equivalent assembled cases by dividing the number of pouches produced by 15.

In using the ROI model and the equivalent unit concept, assumptions need to be made about the expected output level of commercial and other Government products. Also, the factors to convert these products and MRE items into equivalent units need to be derived. For firms that assemble MRE cases and produce MRE retort pouches, an assumption about the output level of cases or pouches needs to be made in order to determine the impact of different output levels of the other product on unit cost and ROI.

C. Criterion for Determining Individual MSRs.

Once the results of the cost and ROI models were obtained, a determination of the output level where indirect cost per unit approaches an economical production rate and ROI reaches some acceptable level needed to be made. Regarding indirect cost per unit, an economical production rate is reached where the change in the decrease in cost per unit is minimal as the output level further increases. The observed cost per unit decreases were approximately 45% from the 1st output level to the 2nd level; the decrease from the 2nd to the 3rd level were approximately 30%; the decrease to the

4th level was approximately 20%; the decrease to the 5th level approximately 15%; the decrease to the 6th level was approximately 12%; and the decrease to the 7th level was approximately 10%. As can be seen, the decrease in cost per unit begins to flatten out in the range of the 6th to the 7th level or where the percent decrease in unit cost approaches 10% (refer to the graphs included for each firm in the appendix).

With respect to ROI, the 1991 edition of the Almanac of Business and Industrial Financial Ratios [4] indicated that the ROI for similar sized companies in the food processing industry ranged from 13%-14% per year. This could be considered a normal return. It would be expected, though, that an ROI target pertaining to a minimum sustaining rate production level would be less than the ROI during a normal year. Therefore the 13%-14% is the upper limit for setting a target ROI for a MSR. ROI should be nonnegative for a firm to stay in business therefore the lower limit is 0%. Alternative investments that are generally low risk such as Certificates of Deposit or Treasury Bills are currently yielding short term rates (six months or less) around 4% while longer term rates are currently around 7% (e.g., seven year Treasury Bills yielding 7.09%) [6]. Considering all the foregoing information, a target range for ROI for MSR purposes was set at 5%-6% per year.

In joining the results of the cost model and ROI model, generally the ROI model was relied on to provide the recommended production range for the MSR. This was done because the indirect cost per unit at the production level indicated by the ROI, is in all cases, only marginally greater than the costs at subsequent production levels.

III. RESULTS OF COST AND ROI MODELS.

The attached appendix contains cost and ROI models for each of the firms. Also included for each firm are graphs that depict the impact of production level on indirect unit cost and ROI. The models list the assumptions or inputs used (e.g., expected commercial production, percent allocated to MRE production) and the expected indirect cost per unit and the estimated ROI at respective production levels. Each of the models is available as a spreadsheet which can be used to examine the impact of changes to the assumptions or inputs.

It is stressed at this point that the outcomes pertaining to the recommended MSRs are dependent on the assumptions or inputs to the models. It is anticipated that at the time an MSR would be invoked, these assumptions may not hold true. In particular, the assumptions relating to the amount of expected commercial production or production of Government products other than MRE assembly or retort pouch items have a great impact on the MSR. If commercial production or production of other Government products increases (decreases) then the resulting MSRs will decrease (increase). At the time an MSR would come into use, the models should be examined to determine if changes to the assumptions are required, and if so, do these changes impact the outcome and change the MSR.

IV. RECOMMENDATIONS.

A. Recommended MSRs.

Based on the current assumptions or inputs used in the cost and ROI models, the MSRs listed in Table 1 are recommended. Following Table 1 are explanatory notes. It is noted that the MRE retort pouch MSRs can be fulfilled by both GFM and CFM production.

RECOMMENDED MSR
(Annual Output in Units)

	MRE ASSEMBLED CASES	MRE RETORT POUCHES
ASSEMBLERS		
CINPAC RAFCO SOPAKCO	[redacted]	[redacted]
RETORTERS		
AMERIQUAL LAND O FROST PILLSBURY SHELF STABLE STAR FOODS		[redacted]
OTHER	MRE CASES to GENERATE COOKIES/CAKES	
STERLING BAKERY	[redacted]	

CINPAC: The assumption is that CINPAC would receive both assembly and GFM retort awards. The firm would produce one CFM item and applesauce. If the GFM pouch quantity were increased, the [redacted] cases could be reduced at a rate of [redacted] pouches to a case.

RAFCO: The [redacted] is based on an assumption that [redacted] equivalent cases (commercial or other Government work) are produced per year.

SOPAKCO: The [redacted] cases is based on the Bennettsville processing plant doing [redacted] retort pouches (CFM and GFM) a year. If the [redacted] pouch quantity was increased, the case quantity could be reduced at a rate of [redacted] pouches to [redacted] case.

AMERIQUAL: The [redacted] pouches is based on an assumption that [redacted] equivalent pouches of commercial items are produced a year.

LAND O FROST: Due to the large volume of commercial work, this firm has an expected annual ROI that exceeds the target ROI without any MRE pouch production. The [redacted] is solely based on the relationship between indirect cost per unit and production quantity.

PILLSBURY: Though Pillsbury has substantial commercial business, their accounting system allowed for a complete break out of the cost and investment data related to the building where MRE pouches are produced. The MSR determination was based on the ROI and cost model outcomes.

SHELF STABLE: The [redacted] pouches is based on an assumption that [redacted] equivalent pouches of commercial items are produced in the year as well. The [redacted] would consist of CFM work provided by RAFCO (sister company) as well as direct GFM contracts.

STAR FOODS: The [redacted] pouches is based on an assumption that no commercial items are produced in the year.

STERLING BAKERY: Sterling produces a variety of MRE, Traypack and commercial cakes, cookies, brownies, bread and buns. Most of the MRE production is a result of subcontracts received from MRE assemblers. In order to develop a meaningful MSR, several assumptions and concepts have to be employed as discussed in the following paragraphs.

First, production of different items had to be converted into equivalent unit production based on the cost of direct labor to produce the item. All items were converted into production units equivalent to cookie production which is the item produced in the largest quantities and requires the smallest amount of direct labor. Refer to Sterling Foods, Table 3 in the appendix in the section for Sterling for a list of the product equivalencies.

Second, assumptions regarding the level of production of non-MRE items including traypack, cold weather rations, MRE bread and commercial production had to be made based on historical production levels of these items. For example, there are assumptions that 150K traypack cakes and 3.0M commercial cookies will be produced in a given year (refer to Table 3 in the appendix) and that Sterling will receive [redacted] of the quantity for MRE bread. Events affecting these assumptions, such as the loss of MRE bread or traypack cakes, will have a major effect on the MSR level pertaining to MRE items.

The last assumption is that Sterling will receive the subcontracts for MRE cake and cookie items from the assemblers. If the peace time requirements are extremely low, some assemblers have the capability to produce some of the cake items and will probably choose to produce them rather than subcontract to Sterling.

Given the foregoing assumptions, a model was developed to determine the number of MRE cases that would generate enough production (assuming Sterling received subcontracts) for the firm to meet the target ROI. Under these assumptions, Sterling would need to receive subcontracts for MRE cake and cookie items for [redacted] cases. Under the assumption that MRE bread is not produced, it would require [redacted] MRE cases to generate enough cake and cookie items for Sterling to meet the target ROI (refer to Sterling, Table 3A in the appendix).

B. Recommended Application of MSRs to Selection of Industrial Base.

The MSR for each firm can be combined with the maximum capacities of the firms (as estimated by DPSC-HPTR team [5]) to form a ratio of the maximum to the minimum. It is desirable to maintain firms in the industrial base that have relatively low minimums with relatively high maximums since the cost of implementing MSRs, if needed, would be minimized with those firms having low minimums while maintaining enough production capacity to meet mobilization needs.

To illustrate, Graph 1 depicts for each assembly firm the MSR (minimum), the mobilization capacity (maximum) and the ratio of the maximum to the minimum (refer to the right Y axis). As can be seen from the graph, Sopakco has the highest maximum but it also has the highest minimum whereas Rafco has a lower maximum but relatively lower minimum and therefore the ratio of the maximum to minimum is higher for Rafco than for Sopakco. Rafco can produce over [redacted] times more than its minimum whereas Sopakco can only produce around [redacted] times more than its minimum.

Graph 2 depicts the same for MRE retort producers. The graph indicates that there are significant differences in minimums, maximums and the ratios of maximum to minimum amongst the firms. For example, Shelf has the highest capacity but has a relatively high minimum being able to produce about [redacted] times more than its minimum. Though Land O Frost's capacity is exceeded by three other firms, it has an extremely low minimum and therefore has the highest ratio of maximum to minimum among the firms being able to produce about [redacted] times more than its minimum. Ameriqual has a relatively high minimum with a relatively low capacity being able to produce only about [redacted] times more than its minimum.

GRAPH 1

MRE INDUSTRY - ASSEMBLERS
COMPARISON OF MSR TO MAXIMUM CAPACITY

GRAPH 2

MRE INDUSTRY - RETORTERS
COMPARISON OF MSR TO MAXIMUM CAPACITY

Table 2 lists the minimums, maximums and ratios of minimum to maximum for all the firms. In summary, for assemblers, the firms are able to produce approximately [redacted] times more than their minimums. For retorters, the firms were able to produce fro[redacted]times more than their minimums with all firms but one being able to produce at leas[redacted]times more than their minimums.

C. Use of MSR and Maximum Capacities to Analyze Procurement and Mobilization Scenarios.

The MSR combined with the maximum capacity information can also be used to examine different scenarios in terms of future peace time procurement quantities, mobilization requirements and the number of assemblers and retorters required to meet mobilization requirements. It would be desirable to have a combination of firms that are able to meet expected mobilization requirements while at the same time have the sum of these firms' MSRs be less than the expected peace time buy quantities. In this manner mobilization requirements can be met without invoking MSR or at least minimizing quantities required to meet MSR.

Table 2 depicts a spreadsheet model developed to test various combinations of assemblers and retorters to determine if the combination could meet an assumed mobilization requirement. The model also determines if the sum of the selected firms' individual MSRs is less than an assumed peace time buy quantity. In other words, the model allows testing of the impact of excluding one or more firms from the industrial base as well as testing assumptions regarding the mobilization requirements and peace time buy quantities. The table depicts one example of this type of analysis using the assumptions that the mobilization requirement is equal to 21.6 million (annual basis) and the peace time buy is equal to 2.2 million and that all firms are included in the industrial base. The results of this example show that though there is excess mobilization capacity for both assembly and retort production, the sum of the MSRs exceed the expected peace time buy quantity.

Graph 3 depicts the same type of analysis using different combinations of assemblers. The same assumptions regarding peace time buy and mobilization quantities are used. As can be seen from the graph, using all three assemblers results in excess mobilization capacity but the sum of the assemblers' MSRs exceed the expected peace time buy quantity. Using just assemblers 1 and 2, the mobilization capacity still exceeds the mobilization requirements and the sum of the two assemblers' MSRs still exceeds the expected peace time buy. If just assembler 1 was used, the mobilization capacity is considerably less than the requirements but the assembler's MSR is also significantly below the peace time buy quantity.

item - everything below line

ANNUAL MSR	ANNUAL MAX	RATIO MAX/MSR	IN BASE	CASES	CFM RETORTS (4 x Cs)	GFM RETORTS (10 x Cs)	CASES	RETORTS (14 x Cs)
			PROCUREMENT SCENARIO COMPARED TO MSR				MOBILIZATION SCENARIO COMPARED TO CAPACITIES	

MOB CAPACITY COMPARED TO MSR QUANTITY

(A1 = Assembler 1; A2 = Assembler 2; A3 = Assembler 3)

REFERENCES

1. Special Minimum Sustaining Rate Study (SMSRS), DLAH 4005.1, Defense Logistics Agency, Feb. 1986.

2. DLA Special Minimum Sustaining Rate Study (SMSRS), DLAR 4005.7, Defense Logistics Agency, Feb. 1986.

3. Granof, Michael H., Financial Accounting, Principles and Issues, 2nd Ed., p. 592-93, Prentice-Hall, Inc., Englewood Cliffs, NJ, Co. 1980.

4. Almanac of Business and Industrial Financial Ratios, 1991 Edition, Prentice-Hall, Inc., Englewood Cliffs, NJ. ISBN 0-13-026451-2.

5. Maximum Capacity Matrix, Revised 27 May 1992, DPSC-HPTR.

6. The New York Times, May 27, 1992, Vol. CXLI, No. 48,979.

APPENDIX

COST MODELS

MRE ASSEMBLERS/

RETORTERS

CINPAC

RAFCO

MRE RETORTERS

AMERIQUAL

LAND O FROST

SHELF STABLE