

AUDIT OF
ESTIMATING SYSTEM CONTROLS

| <u>CONTROL OBJECTIVES</u> | <u>CONTROL ACTIVITIES</u> | <u>AUDIT PROCEDURES</u> |
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| <p>1. <u>INTERNAL AUDITS</u> Management should periodically perform independent reviews of estimating policies and procedures to ensure that they comply with applicable Federal regulations, have been properly implemented, and are operating effectively.</p> | <p>Policies and procedures should require periodic reviews of the estimating system to ensure that:</p> <ul style="list-style-type: none"> • Policies and procedures are compliant with applicable Federal regulations. • Policies and procedures have been implemented and are working effectively. • Follow-up actions are taken on recommendations resulting from management reviews. | <p>a. Evaluate the contractor's policies and procedures to determine if they require periodic review of established policies and procedures to ensure that:</p> <ul style="list-style-type: none"> • Policies and procedures are compliant with applicable Federal regulations. • Policies and procedures have been implemented and are working effectively. • Follow-up actions are taken on recommendations resulting from management reviews. |
| | | <p>b. Evaluate the contractor's record of completed internal audits and current internal audit plan to determine if the Estimating System is being subject to periodic reviews in accordance with established policies and procedures.</p> |
| | | <p>c. Identify any reviews which may have an impact on this audit and evaluate the audit reports and supporting working papers to determine if any system deficiencies were noted and the extent to which we can rely on the work performed (see CAM 4-1000).</p> |
| <p>2. <u>SYSTEM DESCRIPTION</u> Establish and maintain an Estimating System description including policies, procedures, and operating instructions compliant with FAR and DFARS.</p> | <p>Establish clear responsibility for preparation, review, and approval of cost estimates.</p> | <p>a. Obtain organization charts and written policies, procedures, and directives describing the organization structure and responsibilities of the estimating group(s) and contributing departments.</p> |
| | | <p>b. Obtain flowcharts showing the flow of work</p> |

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| | | <p>in the estimating process and integration of data prepared by personnel responsible for various functions such as accounting, cost control, budgeting, planning, purchasing, production control, engineering, estimating, and sales. Key decision and review points, and time frame for the entire process should be identified by the contractor.</p> |
| | | <p>c. Determine if the following characteristics of an adequate system exist:</p> <ul style="list-style-type: none"> • Lines of authority, duties, and responsibilities which are clearly defined. • Coordination among various segments of the organization responsible for different parts of the estimate. <p>Designation of individuals authorized to approve requests for preparing estimates.</p> |
| | | <p>d. Interview selected employees involved in the proposal preparation process to determine if the actual responsibility for preparing, reviewing, and approving cost estimates is consistent with established policies and procedures.</p> |
| | <p>Establish and maintain a formal written statement of policies and procedures covering all significant estimating system process, activities, and functions.</p> | <p>e. Determine if written policies are established at a high enough organizational level to allow for proper implementation.</p> |
| | | <p>f. Determine if procedures are in writing and compatible with underlying policies.</p> |
| | | <p>g. Determine if:</p> |

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| | | <ul style="list-style-type: none"> • Policies, procedures, and other written instructions are disseminated to all employees responsible for putting the estimates together. • Revisions to policies, procedures, and instructions are timely as changes occur in the Estimating System. |
| | | h. Throughout the remainder of this examination, be alert for any areas in which established estimating policies and procedures are either inadequate or incomplete. |
| | <u>Integration with Other Management Systems</u> Provide for the integration of information from other management systems as appropriate. | a. Evaluate the contractor's policies and procedures to determine if they provide for the integration of information from other management systems as appropriate. |
| | | b. Selectively evaluate recent pricing proposals or other cost estimates to determine if information from other management systems was appropriately integrated into the cost estimates. |
| 3. <u>TRAINING</u> Assure that assigned personnel have sufficient training, experience, and guidance to perform estimating tasks in accordance with established procedures. | Provide training to employees (including technical employees) involved in the estimating process in the application of estimating techniques including appropriate proposal file documentation procedures. | a. Evaluate the contractor's policies and procedures to determine if they require periodic training of all employees involved in the estimating process, including, when appropriate, the use of statistical aids and advanced estimating techniques. |
| | Train selected estimating employees, where appropriate, in the use of statistical aids and advanced estimating techniques including appropriate proposal file documentation | b. Evaluate records of completed training, or other evidence, indicating that appropriate employees have been trained in accordance with established policies and procedures. |

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| | procedures. | |
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| <p>4. <u>COST ESTIMATE DEVELOPMENT</u> Ensure that cost estimates are developed using acceptable estimating methods and rationale and that supporting data is current, accurate, and complete.</p> | <p>Establish written guidelines governing the estimating methods and rationale to be used in developing cost estimates including:</p> <ul style="list-style-type: none"> • Differences in estimating methods for different types of proposals. • The clear identification of pricing policies for sensitive areas as identified by the Government and contractor. • The use of historical experience where appropriate, including the results of negotiations with subcontractors and suppliers as to price adjustments of initial bids or proposals. • The appropriate use of analytical techniques in developing and/or evaluating cost estimates. | <p>a. Evaluate the adequacy and appropriateness of the methods employed in preparing cost estimates for each proposal type. Consider the following:</p> <ul style="list-style-type: none"> • The nature of the products or services procured. • The degree of firmness of specifications. • The contractor's experience with the same or similar products or services. • The extent detailed cost data can be derived from the accounting system, adjunct statistical records, etc. • The relative dollar amount of the estimates. • Cost and time restrictions on preparation of the estimates. |
| | | <p>b. Evaluate the extent to which the contractor has identified the estimating practices for sensitive cost areas.</p> |
| | | <p>c. Determine if the contractor has procedures in place to ensure that practices used to estimate costs are consistent with accounting practices used in accumulating costs (CAS 401) and to ensure that estimated costs are consistently classified between direct and indirect (CAS 402).</p> |
| | | <p>d. Evaluate the extent to which estimating methods make use of historical data relating to entire products and individual tasks; and</p> |

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| | | indirect cost ratios and percentage factors applicable to a common base. |
| | | e. Determine if cost estimates based upon prior cost experience consider: <ul style="list-style-type: none"> • Differences in complexity, quantity, rate of production, state of development, etc., between items previously produced and those for which estimates are being developed. • Applicability of preproduction engineering, special tooling, plant rearrangement, and other nonrecurring costs. • Anticipated changes in production methods material usage, prices, wage rates, labor efficiency, production volume, plant capacity, and make-or-buy structure. |
| | | f. Evaluate the applicability of historical standard cost variance factors. (Where standards have been revised to represent expected actual cost, historical cost variances are not applicable). |
| | | g. Evaluate the appropriateness of escalation factors proposed and the methods used to apply them to the cost elements. |
| | | h. Evaluate the availability and use of incurred cost records in developing estimates if the contractor is given the authorization to proceed before a contract price is negotiated. |
| | | i. Evaluate the propriety of using company-wide forward pricing factors for preparing cost estimates. Are such factors current; based upon reliable cost data and procedures; and correctly |

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| | | applied? |
| | | j. Evaluate the reasonableness of formula pricing methods for spare parts to ensure that individual elements of costs are not duplicated in both base costs and loading factors. |
| | | k. If used by the contractor, evaluate the adequacy of catalog pricing and prepriced listing methods for developing reasonable prices for spare parts proposals. |
| | | l. Evaluate the adequacy of the contractor's methods for developing cost estimates for contract changes. <ul style="list-style-type: none"> • Do the estimates properly reflect the nature and scope of the change, and the status of the work in process at the time the change is issued? • Are the contractor's procedures for pricing deleted work correct? (Work deleted but not yet performed should be priced at estimated current cost). |
| | Provide standardized formats for proposals and the submission of supporting data. | m. Determine if proposals are submitted on the appropriate forms and if related support data contain enough detail to permit an adequate evaluation of cost estimates. Is the basis for each cost element disclosed? |
| | | n. When a certificate of current cost or pricing data is required, does the contractor adequately identify the cost or pricing data submitted? |
| | Require that appropriate cost/price analysis be performed for all subcontracts prior to certification of the prime contract price. | o. Evaluate the contractor's policies and procedures to determine if they establish responsibility for the review and analysis of |

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| | | subcontracts. |
| | | p. Selectively evaluate recent pricing proposals or other cost estimates to determine if cost/price analysis of subcontracts were performed as required by the policies and procedures. |
| | Provide for consistent application of estimating techniques through proper control and supervision of the estimating process. | q. Determine if controls are in place to ensure: <ul style="list-style-type: none"> • Timely submission of data at all phases of the proposal preparation process. • Uniformity of approach, detection of errors, and prevention of duplication. |
| | | r. Determine if the following characteristics of an adequate estimating system exist: <ul style="list-style-type: none"> • Adequate supervision in each area and at each level of the estimating process. • Managerial reviews at interim points and upon completion of the estimating process. • Management reviews covering the soundness of judgmental estimates, adherence to established policies and procedures, and compliance with pertinent regulations. • Estimators who summarize and document the conditions, assumptions, risks, etc. taken into consideration in developing estimates. |
| | | s. Determine whether proposed direct labor rates reflect the total hours employees are expected to work during the year as covered in CAM 9-505b, "Evaluation of Estimated Direct Labor Rates." |
| 5. <u>CONTRACT CERTIFICATION</u> To ensure that all cost or pricing data is current, accurate, and complete as of the date | Establish written procedures for updating cost or pricing data throughout the proposal evaluation | a. Evaluate the contractor's policies and procedures to determine whether they |

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| of agreement on price. | and negotiation process. | adequately provide for updating of cost or pricing data up to the point of agreement on price. |
| | | b. Selectively evaluate recent post-award audits to determine if they indicate that the contractor is not updating cost or pricing data as provided for in the policies and procedures. |