

**INSTRUCTIONS FOR
SELLER'S PREPARATION OF SUBMITTALS**

1. "Request for Engineering Change," Form 73848
2. "Request for Approval of Degradation of Specification Requirements,"
Form 73854
3. "Repair Approval Request" and "Approval Request," Form 73649.

**INSTRUCTIONS FOR PREPARING "REQUEST FOR ENGINEERING CHANGE"
FORM 73844**

1.0 INTRODUCTION

It is Bettis Laboratory policy to procure products in strict accordance with contract and purchase order requirements. However, Bettis will consider Seller requests for changes to contract technical requirements if acceptance of the REC is of sufficient benefit to the Government to offset all Government and Bettis effort involved in accomplishing the change.

2.0 SCOPE

These instructions establish definitions and courses of action available to the Seller for requesting approval of proposed changes to, or interpretation of, contract technical requirements.

3.0 DEFINITIONS

3.1 Contract Technical Requirements refer to specifications, drawings, and standards or other technical requirements invoked by the contract or purchase order.

3.2 Request for Engineering Change (REC) is a form initiated by the Seller which transmits a recommended change to contract technical requirements for the purpose of correcting a conflict or an error in the requirement or improving the equipment or methods of its manufacture. However, a REC is not required for correcting a design conflict or drawing error when the seller has not accepted responsibility for the design or drawing involved; such conflicts and errors shall be corrected using a REC or some other appropriate contractual procedure (e.g., drawing review). A REC shall be used to request a drawing change associated with preferable or improved manufacturing schemes even if the change is identified during the drawing review period. Changes to procedures, physical standards, documents, and drawings prepared by the Seller which do not change technical requirements contained in the contract shall not be submitted as RECs but shall be submitted for approval in the same manner (via Approval Requests) as the original submittal.

3.3 Product is purchased raw materials, assemblies, components, equipment, or services.

3.4 Effectivity is the identification by date, serial number, lot number, etc., as appropriate, of the components/materials to which the changed technical requirements apply.

4.0 CONTENT

RECs shall contain the following information:

4.1 Identification of the specification document and the requirement which is proposed to be changed.

4.2 Specific wording or drawing change proposed.

- 4.3 Detailed engineering basis of the proposed change which shall include a review of previous DSRs/RARs/RECs on the affected part or component to determine if there are any compounding effects of accepting the proposed change.
- 4.4 Identification of the benefit to the Government of accepting the proposed change. This may include submittals for the purpose of standardizing practices for several contracts to minimize the potential for malpractice.

5.0 BETTIS ACTIONS

- 5.1 If the REC has been properly prepared and is satisfactory with respect to the foregoing, Bettis will evaluate the REC to decide whether it is of sufficient benefit to the Government to offset all Government and Bettis Laboratory effort involved in accomplishing the change (such as engineering evaluation, specification change coordination among prime contractors, drawing and technical manual changes, quantity of repair parts, interchangeability studies). RECs are disapproved and returned to the Seller without further engineering evaluation if the benefit to the Government is insufficient, with reason(s) for return indicated.
- 5.2 A copy of the submittal indicating disposition of the REC will be returned to the Seller. The signature of a member of Bettis Procurement on the REC will constitute contractual authorization for disposition of that REC. It does not authorize any increase in the contract price or delay in delivery.

6.0 PREPARATION OF THE REC

The following instructions have been prepared for the guidance of Sellers in completing the REC. The numbers under the "Block No." refer to the numbers on the attached facsimile of Form 73848. All questions relative to the completion of this form should be referred to the Bettis Buyer.

NOTE: The information required by 4.0 above will be shown in Blocks 13, 15, and 16 (see attached form) or use attachments as required.

BLOCK NO.

- 1. NO.: The Seller shall enter the last six digits of the Bettis purchase order number plus a sequentially assigned numeric suffix. Example: The first "REC" issued on Purchase Order 2100407 would be 2100407-1; the second "REC" would be 2100407-2, etc. A resubmission of 2100407-2 would be identified as 2100407-2A.

- 2. TO:

Bettis Atomic Power Laboratory
Post Office Box 79
Pittsburgh, Pennsylvania 15122-0079
Attention: (Buyer's Name)

**BLOCK
NO.**

Note: If contract or purchase order is initiated at NRF Procurement, use:

Naval Reactors Facility
Post Office Box 2068
Idaho Falls, Idaho 83401
Attention: (Buyer's Name)

3. FROM: Enter Seller's name and address (and subtier Seller's name and address if the REC applies to a recommendation generated at a subtier).
4. DRAWING, SKETCH, OR DATA ATTACHED: Self-explanatory
5. DATE: Enter the date on which the form is prepared.
6. CONTRACT NO.: Enter the Bettis purchase order number.
7. SUBJECT AND IDENTITY OF ATTACHMENTS: Self-explanatory
8. DRAWING NUMBER AND REVISION: Enter the drawing and revision number, if applicable.
9. ITEM NUMBER: Self-explanatory
10. SPECIFICATION NUMBER AND REVISION: Enter the specification number and revision number, if applicable.
11. COMPONENT CODE: Leave Blank
12. NAME OF PART: Self-explanatory
13. BRIEF DESCRIPTION OF CHANGE: Self-explanatory
14. EFFECTIVITY (SER. NO. - DATE): See Paragraph 3.4.
15. DETAILED DESCRIPTION OF ABOVE CHANGE: Describe the proposed and present technical requirement(s). Attach additional sheets, supplemental drawings, or sketches, if required; each shall be clearly identified as applicable to the particular Request. State the proposed change(s) in concise and definitive language to facilitate revision of applicable contract technical documents. State clearly the existing contract technical requirement.
16. JUSTIFICATION AND BENEFIT TO THE GOVERNMENT FOR ACCEPTING THE PROPOSED CHANGE: Attach additional sheets as required to provide complete justification for change as noted below:

BLOCK
NO.

- a. Describe in detail the engineering basis for the change. Define completely the problem (such as repetitive non-conforming condition, failure or malfunction), or cost factors, or needed product improvement, the proposed change is intended to effect. Include calculations, fit-up of mating parts, effect on strength or other properties, and changes in operating characteristics, etc., as applicable. When the REC is directed toward providing a new capability, the improvements shall be described in specific numerical terms. A resume of any testing accomplished prior to the submission of the REC shall be included.
 - b. Benefit to the Government. Clearly describe a sufficient benefit to the Government for accepting the proposed change(s). This shall set forth, in detail, the effect on cost, delivery, or quality, ease of manufacture of product improvement or the proposed changes with sufficient supporting information to justify the conclusions.
17. EFFECT ON PRICE: Self-explanatory
 18. EFFECT ON DELIVERY: Self-explanatory
 19. ORIGINATOR'S SIGNATURE: The REC must be signed by the Seller's Engineering Manager or his superior. For reactor core contracts only, the Manager of Quality Assurance or his superior signs the REC initiated within the Quality Assurance area of cognizance. Any subsequent information submitted by the Seller in connection with the REC must also be signed at this level.
 20. DATE: Self-explanatory
 21. TITLE AND DEPARTMENT: See Block 19
 22. FOR CLASSIFICATION MARKINGS: Each REC will be classified in accordance with the policies and procedures established and approved by the Office of Nuclear and National Security Information, United States Department of Energy.

NOTES:

1. Unless otherwise specified in the purchase order, 2 black and white copies of any attachment are required.
2. See Attachment 1 to this form for specific checklist of requirements to be included with each REC submitted. Lack of this information will be cause for "rejection" of submittal.
3. Send REC to Bettis.

FORM 73844C

(THIS FORM TO BE TYPEWRITTEN)

TO		REQUEST FOR ENGINEERING CHANGE		DRAWING, SKETCH OR DATA ATTACHED?	
②				<input type="checkbox"/> YES <input type="checkbox"/> NO ④	
FROM:		DATE	SUBJECT AND IDENTITY OF ATTACHMENTS		
③		⑤	⑦		
		CONTRACT NO.			
		⑥			
DRAWING NO. & REVISION	(ITEM NO.)	SPECIFICATION NO. & REVISION	COMPONENT CODE		
⑧	⑨	⑩	⑪		
NAME OF PART	BRIEF DESCRIPTION OF CHANGE		EFFECTIVITY (SER. NO. - DATE)		
⑫	⑬		⑭		
DETAILED DESCRIPTION OF PROPOSED CHANGE					
⑮					

JUSTIFICATION AND BENEFIT TO THE GOVERNMENT FOR ACCEPTING THE PROPOSED CHANGE

⑯

EFFECT ON PRICE: IF NONE, SO STATE	EFFECT ON DELIVERY: IF NONE, SO STATE	
⑰	⑱	
ORIGINATOR'S SIGNATURE	DATE	TITLE & DEPARTMENT
⑲	⑳	㉑

FOR LABORATORY/CONTRACTING AGENCY USE ONLY

APPROVING AGENCIES	SIGNATURE & DATE		DISPOSITION			SIGNATURE & DATE		DISPOSITION		
	SETTLE		APPR.	COND. APPR.	DIS-APPR.			APPR.	COND. APPR.	DIS-APPR.

ACTION TAKEN HEREON DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PROVIDE A HIGH QUALITY PRODUCT AND ONE WHICH MEETS ALL CONTRACT REQUIREMENTS. NOR DOES IT AUTHORIZE ANY INCREASE IN THE CONTRACT PRICE OR DELAY IN DELIVERY.
EXTERNAL COMMENTS:

IF THE CONTRACTOR CONSIDERS THAT ANY COMMENTS MADE ABOVE AND/OR CONDITIONAL APPROVAL RESULT OR WILL RESULT IN A CONTRACT PRICE INCREASE OR DELAY IN DELIVERY, NO ACTION SHOULD BE TAKEN IN COMPLYING WITH THIS DOCUMENT AND THE CONTRACTOR'S PROPOSAL FOR ACCOMPLISHING THE WORK SHOULD BE SUBMITTED TO THE CONTRACTING OFFICER AS SOON AS POSSIBLE.
FOR CLASSIFICATION MARKINGS:

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PRIME DISPOSITIONING AUTHORITY					CONSULTING ACTIVITIES						
INTERNAL COMMENTS:						CHANGES IN OR ADDITIONS TO DCAS INSPECTION REQUIRED?	REVIEW REC FOR CHANGE TO CODE?				
						<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO				
						NR APPROVAL REQUIRED?	INCLUDE ON REC CONTROL?	PAGE ① OF _____			
						<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO				

INSTRUCTIONS FOR SELLER'S SUBMITTAL OF "DEGRADATION OF SPECIFICATION REQUIREMENTS", FORM 73854

1.0 INTRODUCTION

It is Bettis Laboratory policy to obtain products in strict accordance with contract and purchase order requirements. However, Bettis will consider Seller requests for Bettis acceptance of non-conforming product(s) if acceptance of the DSR is of sufficient benefit to the Government to offset all Government and Bettis effort involved in evaluating the technical acceptability of the non-conforming condition.

2.0 SCOPE

This instruction (1) defines the Seller's required action to provide information necessary for Bettis review of non-conforming product(s) and (2) specifies instructions relative to the preparation and transmittal of a Request for Approval of Degradation of Specification Requirements (DSR).

3.0 DEFINITIONS

3.1 Product is purchased raw materials, assemblies, components, equipment, or services.

3.2 Contract Technical Requirements include specifications, standards, and drawings (except for dimensions described in 3.2.4 below) or other technical requirements contained in the contract or purchase order and all the following Seller-originated documents when approval is required by the contract or purchase order.

3.2.1 Welding procedures

3.2.2 Quality Assurance Procedures

3.2.3 Process procedures

3.2.4 Drawings, except for dimensions which:

- a. are measured at an intermediate stage of manufacture, and
- b. will be changed by the manufacturer during subsequent operations, and
- c. will not result in a violation of final product dimensions.

3.3 Non-conforming Product(s) is any product that does not meet contract technical requirements.

3.4 Request for Approval of Degradation of Specification Requirements (DSR) is a form initiated by the Seller to describe a non-conforming condition and to request acceptance of an item which does not conform to contract technical requirements. DSRs are divided into two classes based upon their significance to the performance of the equipment as follows:

3.4.1 Class I DSRs are those which impair the performance, life, safety, interchangeability, maintainability, or reliability of the equipment.

The following are examples of Class I DSR conditions:

- Performance is impaired if the non-conforming condition degrades component performance below the minimum design specifications or approved relaxations to minimum design specifications.
- Performance is impaired if the non-conforming condition would have any effect on the operation of the reactor plant (e.g., would prevent a reactor plant from using the least restrictive operating curves or reactor plant operating limits developed for the project involved).
- Interchangeability is impaired if the as-delivered component is not suitable for installation in all the locations in which it could be installed if the deviation did not exist. This applies even when the prime contractor intends to have the delivered component installed in an acceptable location.
- Interchangeability is impaired if the delivered component would not be repairable using replacement parts which conform to the applicable component drawings.

3.4.2 Class II DSRs are those which do not impair the performance, life, safety, interchangeability, maintainability, or reliability of the equipment.

3.5 Conditional Approval is the term applied to DSR submittals which are dispositioned and returned to the Seller as approved subject to his compliance with certain further requirements.

3.6 A Repair DSR identifies a deviated component which can be repaired to improve the component but will not result in a component that will be in full conformance with all contract technical requirements.

3.7 A Provisional DSR identifies a deviated component which cannot be practicably repaired but which can be improved by special provisions such as alteration of a mating component or a selective placement of the non-conforming part in an assembly.

4.0 CONTENT

4.1 A Class I DSR shall contain the following information:

4.1.1 Identification of the non-conforming item (by serial number, if applicable), description of the non-conforming condition date non-conforming condition was discovered. The description shall ensure that dimension deviations and repaired areas are precisely located relative to permanent features on the component (axes, etc.) so as to ensure complete traceability after component delivery. Identification of the contract technical requirement violated and a list of previous DSRs submitted for the same non-conforming condition on other items in the same contract as well as other current contracts for the same type of equipment.

- 4.1.2 Seller's engineering basis for acceptance. This shall include the complete technical justification for acceptability of the non-conforming condition as well as a specific discussion documenting the results of a review of previous DSRs and RARs on the affected part or component or subcomponent to determine if there are any compounding effects of accepting deviated conditions. On items for which the engineering justification which can be provided by Seller is incomplete due to lack of access to design information, this should be explained. In any case, the seller shall identify the effects, if any, of the DSR on subsequent manufacturing steps.
 - 4.1.3 Cause of the non-conforming condition, and corrective action taken or that will be taken by the seller to prevent recurrence. Corrective action related to operator error shall identify the number of similar deviations that this operator has been responsible for, on this order, within the past six month period. If the corrective action has not yet been completed, a date should be identified for completion of the corrective action.
 - 4.1.4 Identification of the overriding benefit to the Government of accepting the non-conforming item rather than requiring repairs or replacement to be in full conformance with contract requirements.
 - 4.1.5 Statement regarding whether a change to contract technical requirements will be recommended to prevent recurrence. Any recommended change shall be submitted in the appropriate form (e.g., as a REC) with the necessary technical support.
- 4.2 A Class II DSR shall contain the following information:
- 4.2.1 Identification of the non-conforming item (by serial number, if applicable), description of the non-conforming condition and date non-conforming condition was discovered. The description shall ensure that dimension deviations and repaired areas are precisely located relative to permanent features on the component (axes, etc.) so as to ensure complete traceability after component delivery. Identification of the contract technical requirements violated, and a list of previous DSRs submitted for the same non-conforming condition on other items in the same contract as well as other current contracts for the same type of equipment.
 - 4.2.2 Seller's engineering basis for acceptance, including basis for classifying the DSR as Class II rather than Class I, and complete technical justification for acceptability of the non-conforming condition. This shall also include a specific discussion documenting the results of a review of other DSRs and RARs on the affected part or component to determine if there are any compounding effects of accepting deviated conditions. On items for which the engineering justification which can be provided by Seller is incomplete due to lack of access to design information, this should be explained. In any case, the Seller shall identify the effects, if any, of the DSR on subsequent manufacturing steps.

4.2.3 Cause of the non-conforming condition, and corrective action taken or that will be taken by the seller to prevent recurrence. Corrective action related to operator error shall identify the number of similar deviations that this operator has been responsible for, on this order, within the past six month period. If the corrective action has not yet been completed, a date should be identified for completion of the corrective action.

4.2.4 Identification of the benefit to the Government of accepting the non-conforming item rather than requiring repairs or replacement to be in full conformance with contract requirements.

4.2.5 Statement regarding whether a change to contract technical requirements will be recommended to prevent recurrence. Any recommended change should be submitted in the applicable form (e.g., as a REC) with the necessary technical support.

4.3 The Seller must make a determination whether the DSR is Class I or Class II using his best judgement based on the information available to him.

5.0 VENDOR SUBMITTAL ACTIONS

5.1 DSRs are to be submitted within fifteen calendar days after the non-conforming condition is discovered (exceptions: within thirty calendar days on subcontracted materials or within ten calendar days when resubmittal is required in accordance with subparagraph 5.4.2) or an explanation is to be submitted with the DSR explaining the circumstances which caused the delay. Bettis shall be formally notified of any DSR condition that exists which will not be submitted prior to expiration of the contractual submittal dates (15 or 30 days).

When a quantity of deviated material or parts have been fabricated before the deviation is first detected, a DSR should be submitted on the first component(s) discovered, and addenda submitted as additional components are determined to be rejectable for the same cause. In the original DSR the Seller shall identify the maximum quantity of product affected by the cause.

When it is uncertain under which existing contract a specific component or subcomponent will be delivered, the Seller may submit a DSR for the specific component against any or all existing contracts for the same type of equipment. In such a case, the Seller shall identify all the contracts for which approval is requested and shall identify the specific contract requirements violated on each contract.

5.2 Provisional DSRs shall clearly identify the additional action or control, such as identification of the revised technical requirement to be applied to the mating component and a description of the already deviated component. Any DSR submitted within the scope of this requirement shall be identified as a "Provisional DSR". In addition, the Seller is required to establish a system for the control of components and is required to tag affected components. DSRs of this type which are approved shall be used as the basis for acceptance of the components and shall be identified in appropriate records.

If, upon completion of the specified provisions by the Seller the material fails to conform to the requirements specified in the original DSR, the Seller shall submit a revision to the original DSR which must (a) reference the original "Provisional DSR" number, (b) identify the as-built condition, and (c) identify the cause and corrective action applicable to the failure to meet the specified provision. Disposition of this DSR determines disposition of the material.

- 5.3 Repair DSRs shall clearly identify (a) the present deviated condition, (b) that a repair is required and specify the detailed proposed repair procedure; and (c) the expected deviated condition with definitive limits that will still be present after completion of the repair procedure and the details of any other provisions intended to be met. Any DSR submitted within the scope of this requirement shall be identified as a "Repair DSR".

Bettis acceptance of the Repair DSR constitutes approval to proceed with the repair, inspection, and disposition of the material. Upon completion of the repair, the following two alternatives exist:

5.3.1 If the material meets or is less deviated than the expected condition identified in the original DSR, the DSR shall be resubmitted for information only. The resubmittal need not be the entire DSR but rather consist of notification that and how all conditions have been complied with, including appropriate inspection results. If all conditions have not been complied with, resubmittal of the DSR for action shall be required.

5.3.2 If the material fails to meet any of the defined limits upon completion of the repair or if the Seller specified provisions or Bettis imposed conditions are not fully complied with and the Seller still intends to use the material, the Seller shall submit a revision to the original DSR which must (a) reference the original "Repair DSR" number; (b) identify the defined limit which was to be met following repair, as identified in the original DSR; (c) identify the contract technical requirement violated; (d) identify the as-built condition and (e) identify the cause and corrective action applicable to the failure to meet the specified provision or condition. Disposition of this DSR determines disposition of the material.

- 5.4 In those cases where Bettis dispositions a DSR "Conditionally Approved," the Seller shall:

5.4.1 Establish a control system which includes the use of separate tags for each conditionally approved DSR on any of the affected components. As a part of this control, the Seller shall ensure that: (a) tags are placed on the component itself or on shop processing documents which accompany the affected components, (b) the tag remains with the component until the conditions are complied with, (c) the tag remains a part of the permanent record of each component, and (d) a log is maintained, listing the conditions and the status of compliance with the conditions. This log should be continuously updated so that it reflects the current status of each condition. Submit the log, or a list containing the same information, to Bettis each month.

An identification system that does not involve tags may be used by the seller provided that the system is equivalent to the tagging system above (including the requirement that paperwork accompany the component) and is approved by Bettis.

- 5.4.2 Resubmit the conditionally approved DSR to Bettis within ten calendar days after the conditions have been complied with for information or re-approval (when re-approval was identified as a condition of approval) ensuring that a copy of the resubmittal is forwarded to the Government Quality Assurance Representative (GQAR), as applicable. The resubmittal should include appropriate inspection results and when submitted for information, need not consist of the entire DSR but rather consist of notification that and how all conditions have been complied with.

NOTE: Transmittal of DSRs or notification that conditions have been met on a conditionally approved DSR by FAX is authorized when routine processing would otherwise result in critical schedular delays. When Government inspection is specified as part of the order, a record copy of the message should be submitted to the local GQAR immediately after the transmission is completed. The Seller shall review all dispositioned documents to insure that no errors have occurred in transmission and transcription of a FAX. The Seller must then submit within three working days a formal DSR stating that and how the deviated conditions on the subject component were complied with.

- 5.4.3 Identify in the order certification conditionally approved DSRs and repair DSRs. Include a statement both on the resubmitted DSR and in the order certification indicating that and how the conditions were complied with, or a reference to the document which describes how the conditions were met.

- 5.5 In instances where the Seller considers the conditions are subject to misinterpretation or does not occur with the conditions, the DSR shall be resubmitted to Bettis for approval prior to performing any work to comply with the conditions.

6.0 BETTIS ACTIONS

- 6.1 Bettis shall first evaluate whether acceptance of the DSR is of sufficient benefit to the Government to offset all Government and Bettis effort involved in evaluating the technical acceptability of the non-conforming condition. DSRs shall be disapproved and returned to the seller without further engineering evaluation if the benefit to the Government is insufficient. The seller shall be advised of the reason for disapproval.
- 6.2 If the DSR has not been properly submitted, or has not been properly classified as a Class II DSR, or does not have thoroughly responsive content, Bettis will immediately require the Seller to take necessary action to have the DSR completed or corrected. DSRs which require the seller to submit additional technical justification to support acceptability of the non-conforming condition will not be approved. In addition, Class II DSRs are disapproved without technical evaluation if the non-conforming condition is indicative of especially poor workmanship.

If the DSR has been properly prepared and is satisfactory with respect to the foregoing, Bettis will evaluate the DSR in accordance with the following criteria:

6.2.1 In instances where Bettis considers the DSR either acceptable or unacceptable from a technical standpoint, the DSR will be dispositioned accordingly and returned to the Seller for appropriate action.

6.2.2 In instances where the Bettis evaluation indicates the Seller's submittal to require modification before it can be accepted, Bettis may:

- a. Disapprove the DSR and advise the Seller that it will be reconsidered for approval with the inclusion of certain additional information and/or actions.
- b. Conditionally approve the DSR subject to the Seller's compliance with certain further stated requirements, such as identification of government release points through which the affected component may be conditionally released and/or at which government release point the component may not be released.

6.2.3 In instances where the Seller has identified the DSR as a "Provisional DSR," Bettis will conditionally approve the initial DSR if it is technically acceptable and of sufficient benefit to the Government. Repair DSRs will be dispositioned as conditionally approved or approved. Such approvals will, as a minimum, be subject to acceptable compliance with the Seller's provisions or satisfactory completion of repairs.

6.3 A copy of the submittal indicating disposition of the DSR will be returned to the Seller. The signature of a member of Bettis Procurement on the DSR will constitute contractual authorization for disposition of that DSR. It does not authorize any increase in the contract price or delay in delivery.

7.0 PREPARATION OF THE DSR

The number under the column "Block No." below refers to the numbers on the attached facsimiles of Form 73854. All questions with respect to the completion of these forms should be referred to the Bettis Buyer.

Note: The information required by 4.0 above will be shown in Blocks 16, 17, 18, and 19 (see attached form) or use attachments as required.

BLOCK
NO.

INSTRUCTIONS

1. NO.: Enter the last six digits of the Purchase Order number plus a sequentially assigned numeric suffix. Example: The first Degradation of Specification Requirements issued on purchase order 2166407 would be 2166407-1; the second DSR would be 2166407-2, etc. A resubmission of 216407-2 would be identified as 2166407-2A.

BLOCK
NO.

2. **TO:**

Bettis Atomic Power Laboratory
Post Office Box 79
Pittsburgh, Pennsylvania 15122-0079
Attention: (Buyer's Name)

NOTE: If contract or purchase order is initiated at NRF Procurement, use:

Naval Reactors Facility
Post Office Box 2068
Idaho Falls, Idaho 83401
Attention: (Buyer's Name)

3. **FROM:** Enter Seller's name and address (and subtier Seller's name and address if the DSR applies to a condition generated at a subtier).
4. **DATE OF INSPECTION:** Enter the date that the non-conforming condition was discovered.
5. **CONTRACT NO.:** Enter complete order number. Example 73-D-216407-M.
6. **DWG., SKETCH, DATA ATTACHED:** If supplementary drawing, sketches, or data are attached, so indicate. All attachments are to be identified with the same assigned number as described in (1) above.
7. **CLASS OF DSR:** Check "Class I or II" block (Class III DSRs are not applicable to these instructions).
8. **COMPONENT CODE:** Leave Blank
9. **DWG. NO. & REV.:** Self-explanatory. If not applicable, enter "N/A".
10. **ITEM NO.:** Self-explanatory
11. **SPECIFICATION NO. & REV.:** Enter specification and revision number. If not applicable, enter "N/A".
12. **SERIAL NO.:** Enter serial number of defective piece, if applicable. If not applicable, enter "N/A".
13. **NAME OF PART:** Self-explanatory
14. **BRIEF DESCRIPTION OF DEVIATION:** Self-explanatory
15. **TYPE OF DSR:** Self-explanatory

BLOCK
NO.

16. IDENTIFICATION OF BENEFIT TO THE GOVERNMENT FOR ACCEPTING THIS DSR: When providing this information, consider all elements which may provide benefit, including technical aspects, delivery, cost considerations, etc.
17. ACTUAL ITEM CONDITION OR DIMENSION: Describe the deviated condition clearly and fully. Use additional attached data and sketches as required to present a clear description of the deviation. Where defective product results from malfunction or lack of control of an operation or a process, define:
- The quantity and identification of product that has been processed through the operation or process subsequent to the inspection of the defective product being submitted for acceptance.
 - A statement as to the probable quality of the in-process product in (a) above and an estimate of when it will be through inspection.

If permission to repair is requested within the scope of paragraph 5.0, clearly identify the present deviated condition; identify that a repair is required and specify the proposed repair procedure; and identify the deviated condition that will be present after completion of the repair procedure.

18. & LIMITS OR STANDARDS APPLIED AND FREQUENCY RATIO: Show specific contract technical requirements of the purchase order with which the deviated product fails to conform.

Also provide the frequency ratio and the number of DSRs previously submitted for each dimension or condition which has not been met.

The frequency ratio is defined as the number of times a specific dimension, condition, standard or any order requirement has been violated by the Seller for a specific component of a given order in proportion to the number of units that have been examined. The frequency ratio is designed not only to provide a convenient method by which the Seller can determine which operations require further refinement, but also establishes the order requirements or design criteria which require review and possible revision.

The following examples are presented to assist the Seller in establishing frequency ratios:

- If during final machining of a component the threads on the one end were mismachined and two previous components were mismachined in the same location, and a total of ten units had been machined and inspected, the frequency ratio would be 3/10.
- After stress relief annealing a load of components, it was determined that the heating rate of the furnace was in excess of heating rate allowed. Two previous lots of components had been acceptably heat treated. The frequency ratio would then be 1/3.

BLOCK
NO.

When specifications apply to more than one material, component, or assembly, the frequency ratio must be based on the specific material, component, or assembly on which the DSR is written.

Include reference to effectivity, i.e., identification by date, serial number, lot number, etc., as appropriate of the components/materials to which the changed technical requirements apply.

20. ORIGINATOR'S SIGNATURE, TITLE, DEPARTMENT AND DATE: Class I DSRs thru
22. must be signed by a person in the Seller's management who has direct responsibility for the manufacturing, engineering, and quality control for the non-conforming product. Any subsequent information submitted by the seller in connection with Class I DSRs must also be signed at this level. Class II DSRs must be signed by the Seller's Manager of Engineering or Manufacturing or one of their superiors. Any subsequent information submitted by the seller in connection with Class II DSRs must also be signed at this level.

23. FOR CLASSIFICATION MARKINGS

Each DSR will be classified by the Seller in accordance with the policies and procedures established and approved by the Office of Nuclear and National Security Information, United States Department of Energy.

NOTES:

1. Unless otherwise specified in the purchase order, 2 black and white copies of any attachments are required.
2. See Attachment I to this form for specific checklist of requirements to be included with each DSR submitted. Lack of this information will be cause for "rejection" of submittal.
3. Send DSR to Bettis.

FORM 73844

(THIS FORM TO BE TYPEWRITTEN)

PAGE 1 OF _____
NO. _____

TO		REQUEST FOR APPROVAL OF	
②		DEGRADATION OF SPECIFICATION REQUIREMENTS	
		DATE OF INSPECTION	CONTRACT NO.
FROM		④	⑤
③		DRAWING SKETCH OR DATA ATTACHED?	
		⑥	⑦
DRAWING NO. & REV.		COMPONENT CODE	
⑨	⑩	⑪	⑫
NAME OF PART		BRIEF DESCRIPTION OF DEVIATION	
⑬	⑭		⑮
IDENTIFICATION OF THE BENEFIT TO THE GOVERNMENT FOR ACCEPTING THE DSR			
⑯			

ACTUAL ITEM CONDITION OR DIMENSION	LIMITS OR STANDARDS APPLIED	FREQUENCY RATE
⑰	⑱	⑲

ORIGINATOR'S SIGNATURE	DATE	TITLE & DEPARTMENT
⑳	㉑	㉒

APPROVING AGENCIES	SIGNATURE & DATE		DISPOSITION			SIGNATURE & DATE		DISPOSITION		
	BETTS		APPR.	COND. APPR.	DIS. APPR.			APPR.	COND. APPR.	DIS. APPR.

ACTION TAKEN HEREON DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PROVIDE A HIGH QUALITY PRODUCT AND ONE WHICH MEETS ALL OTHER CONTRACT REQUIREMENTS NOR DOES IT AUTHORIZE ANY INCREASE IN THE CONTRACT PRICE OR DELAY IN DELIVERY.

EXTERNAL COMMENTS

FOR CLASSIFICATION MARKINGS

㉓

PRIME DISPOSITIONING AUTHORITY					CONSULTING ACTIVITIES				

INTERNAL COMMENTS.	NR APPROVAL REQUIRED?	CHANGES IN OR ADDITIONS TO DCAS INSPECTION REQUIRED?
	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
	DCAS COMMENTS HAVE BEEN CONSIDERED?	NO. <u>1</u> OF _____
	<input type="checkbox"/> YES <input type="checkbox"/> NO	PAGE <u>1</u> OF _____

REQUEST FOR APPROVAL OF
DEGRADATION OF SPECIFICATION
REQUIREMENTS (CONTINUATION SHEET)
Form 73786a

NO. 1
P.O./CONTRACT NO. 5

ACTUAL ITEM CONDITION OR DIMENSION	LIMITS OR STANDARDS APPLIED	FREQUENCY RATIO
(17)	(18)	(19)

**INSTRUCTIONS FOR SELLER'S SUBMITTAL OF "REPAIR APPROVAL REQUESTS"
FORM 73649**

1.0 INTRODUCTION

It is Bettis Laboratory policy to obtain products in strict accordance with contract and purchase order requirements. However, under certain conditions, Bettis will consider Seller requests for Bettis approval to repair non-conforming product(s).

2.0 SCOPE

This instruction (1) defines the Seller's required action to provide information necessary for Bettis review of non-conforming product(s) and (2) specifies instructions relative to the preparation and transmittal of Repair Approval Request (RAR) forms.

3.0 DEFINITIONS

3.1 Product is purchased raw materials, assemblies, components, equipment, or services.

3.2 Contract Technical Requirements include specifications, standards, and drawings (except for dimensions described in 3.2.4 below) invoked by the contract or purchase order and all of the following Seller-originated documents when approval is required by the contract or purchase order:

3.2.1 Welding procedures

3.2.2 Quality assurance procedures

3.2.3 Process procedures

3.2.4 Drawings, except for dimensions which:

- a. are measured at an intermediate stage of manufacture; and
- b. will be changed by the manufacturer during subsequent operations; and
- c. will not result in a violation of final product dimensions.

3.3 Non-conforming Product(s) is any product that does not meet contract technical requirements.

3.4 Repair Approval Request (RAR) is a form initiated by the Seller which describes a non-conforming condition and requests approval to repair the item providing all of the following situations exist:

3.4.1 The non-conforming condition violates a contract technical requirement.

3.4.2 The item can be repaired to be in full conformance with all contract technical requirements.

3.4.3 The proposed repair is of a different kind or is more extensive than allowed by contract technical requirements. A repair is considered of a different kind than allowed if the contract technical requirements either do not mention the type of repair proposed or specify that the repair is not allowed unless otherwise approved.

4.0 CONTENT

RARs shall contain the following information:

- 4.1 Identification of the non-conforming part (by serial number, if applicable), description of the non-conforming condition, date non-conforming condition was discovered, and identification of the contract technical requirement violated.
- 4.2 Proposed method of repair. If the proposed repair involves a welding procedure whose qualification is not specifically covered by the Welding Standard such as half-bead temper repairs, then the RAR should specifically identify how this weld will be qualified.
- 4.3 Detailed engineering basis for proposed repair which shall include a review of previous DSRs/RARs on the affected part or component to determine if there are any compounding effects of accepting the proposed repair.
- 4.4 Cause of the non-conforming condition, and corrective action taken by the Seller to prevent recurrence.

5.0 BETTIS ACTIONS

- 5.1 If a RAR is not properly submitted or does not have thoroughly responsive content, Bettis will require the Seller to take necessary action to have the RAR completed or corrected. If the RAR has been properly submitted and has the proper content as described herein, Bettis will evaluate the RAR.
- 5.2 A copy of the submittal indicating disposition of the RAR will be returned to the Seller. The signature of a member of Bettis Procurement on the RAR will constitute contractual authorization for disposition of that RAR. It does not authorize any increase in contract price or delay in delivery.

6.0 PREPARATION OF THE RAR

6.1 The numbers under the column "Block No." below refer to the numbers on the attached facsimile of Form 73649. All questions with respect to the completion of this form should be referred to the Bettis Buyer.

Note: The information required by 4.0 above will be shown in Blocks 9 and 11 (see attached form) or use attachments as required.

In preparing a RAR consider the following:

- 6.1.1 If the contract technical requirements prohibit the proposed type of repair, appropriate action shall be taken via a DSR.

- 6.1.2 If the contract technical requirements specifically allow the type of repair subject to fulfilling certain conditions, a RAR is not required if those conditions are fulfilled. This applies even if one of the conditions to be fulfilled is that the Seller obtain approval of each specific repair in question prior to proceeding with the repair.
- 6.2 RARs are to be submitted within fifteen calendar days after the non-conforming condition is discovered (within thirty calendar days on subcontracted materials) or an explanation is to be submitted with the RAR explaining circumstances which caused the delay.

BLOCK
NO.

INSTRUCTIONS

1. NO.: The Seller shall enter the last six digits of the purchase order number plus a sequentially assigned alpha numeric suffix. The suffix shall consist of the letter "R" plus a numeral. Example: The first RAR issued on Purchase Order 73-2166407 would be 2166407-R1; the second would be 2166407-R2, etc. If an RAR is being resubmitted by the Seller, the original number plus a sequential letter designation must be used (i.e. 2166407-R1A).
2. TO:

Bettis Atomic Power Laboratory
Post Office Box 79
Pittsburgh, Pennsylvania 15122-0079
Attention: (Buyer's Name)

NOTE: If contract or purchase order is initiated at NRF Procurement, use:

Naval Reactors Facility
Post Office Box 2068
Idaho Falls, Idaho 83401
Attention: (Buyer's Name)
3. FORM TITLE: Check "Repair Approval Request" block.
4. FROM: Enter Seller's name and address (and subtier Seller's name and address if the RAR applies to a condition generated at a subtier).
5. CONTRACT NO.: Self-explanatory
6. REASON FOR SUBMITTAL: Self-explanatory
7. TYPE OF SUBMITTAL: Self-explanatory
8. NAME OF PART: Self-explanatory
9. BRIEF DESCRIPTION OF REQUEST: Self-explanatory

BLOCK
NO.

10. COMPONENT CODE: Leave blank.
11. SUBJECT AND IDENTITY OF ATTACHMENTS: Include the requirements of Paragraph 4.0 of page 19, using attachments as required.
12. REFERENCES/REMARKS: Identify the following:
 - (1) Applicable references, providing sufficient information to identify them.
 - (2) Indication of the particular contractual requirement that is fulfilled by submittal of the Repair Approval Request.
 - (3) Effectivity, i.e. identification by date, serial number, lot number, etc. as appropriate, of the components/materials to which the repairs apply.
(Note: If the submittal confirms a prior FAX, so state, and indicate in bold type the date and identification of the FAX.)
13. ORIGINATOR'S SIGNATURE: The RAR must be signed by the Seller's Manager of Engineering or Manufacturing or one of their superiors. Any subsequent information submitted by the Seller in connection with the RAR must also be signed at this level.
14. DATE: Enter the date that the non-conforming condition was discovered.
15. TITLE: Insert the title of the individual who signed the RAR (see 13 above).
16. FOR CLASSIFICATION MARKINGS: Each RAR will be classified by the Seller in accordance with the policies and procedures established and approved by the Office of Nuclear and National Security Information, United States Department of Energy.

NOTES:

1. Unless otherwise specified in the purchase order, 2 black and white copies of any attachments are required.
2. See Attachment 1 to this form for specific check list of requirements to be included with each RAR submitted. Lack of this information will be cause for "rejection" of submittal.
3. Send RAR to Bettis.

**INSTRUCTIONS FOR SELLER'S SUBMITTAL OF "APPROVAL REQUEST"
FORM 73649**

1.0 INTRODUCTION

It is Bettis Laboratory policy to obtain products in strict accordance with contract and purchase order requirements. All Seller requests to Bettis for use of drawings, specifications, procedures, quality control documents, etc., as specified in the order, shall be prepared and submitted in accordance with the following instructions.

2.0 VENDOR SUBMITTAL ACTIONS

In instances where "Approval Request" is conditionally approved by Bettis subject to specific comments, Seller shall prepare and transmit a new "Approval Request" incorporating resolution of specific comments for Bettis review and approval. Such transmittal denotes Seller's concurrence with Bettis comments. Pending such transmittal, review and approval, Seller may proceed with the work involved providing he complies with comments. The new AR which incorporates the conditional approval must be submitted within thirty calendar days after the conditional approval is received by the Seller. Failure to do this will automatically cause the conditional approval to revert to disapproval.

In instances where "Approval Request" is disapproved by Bettis, Seller shall revise disapproved items and secure approval by issuance of a revised "Approval Request." Seller shall not perform work affected by this disapproval until Bettis approval is secured.

3.0 BETTIS ACTIONS

A copy of the submittal indicating disposition of the AR will be returned to the Seller. The signature of a member of Bettis Procurement on the AR will constitute contractual authorization for disposition of that AR. It does not authorize any increase in contract price or delay in delivery.

BLOCK
NO.

INSTRUCTIONS

1. NO.: The Seller shall enter the last six digits of the purchase order number plus a sequentially assigned numeric suffix. Example: The first "Approval Request" issued on Purchase Order 73-2166407 would be 2166407-1; the second would be 2166407-2, etc. If an Approval Request is being resubmitted by the Seller, the original number plus a sequential letter designation must be used (i.e., 2166407-1A).
2. TO:

Bettis Atomic Power Laboratory
Post Office Box 79
Pittsburgh, Pennsylvania 15122-0079
Attention: (Buyer's Name)

BLOCK
NO.

Note: If contract or purchase order is initiated at NRF Procurement, use:

Naval Reactors Facility
Post Office Box 2068
Idaho Falls, Idaho 83401
Attention: (Buyer's Name)

3. FORM TITLE: Check "Approval Request" block.
4. FROM: Enter Seller's name and address.
5. CONTRACT NO.: Self-explanatory
6. REASON FOR SUBMITTAL: State reason. If the AR is being submitted for information, include a statement to this effect.
7. TYPE OF SUBMITTAL: Self-explanatory
8. NAME OF PART: Self-explanatory
9. BRIEF DESCRIPTION OF REQUEST: Self-explanatory
10. COMPONENT CODE: Leave blank.
11. SUBJECT AND IDENTITY OF ATTACHMENTS: List title(s) of document(s) being transmitted. The name and drawing number, including revision numbers or symbols, of the component(s) covered by the submittal must be indicated.

Normally, only one type of document should be submitted via each AR, e.g. drawing and process outline should not be included on the same AR but should be submitted on separate ARs. Such action will enable more expeditious disposition of an AR.
12. REFERENCES/REMARKS: Identify the following:
 - (1) Applicable references, providing sufficient information to identify them.
 - (2) Indication of the particular contractual requirement that is fulfilled by the submission of the Approval Request.
 - (3) Effectivity, i.e. identification by date, serial number, lot number, etc. as appropriate, of the components/materials to which the technical requirements to be approved apply. (Note: If the submittal confirms a prior FAX, so state, and indicate in bold type the date and identification of the FAX.)
13. ORIGINATOR'S SIGNATURE: Signature of the Seller's authorized representative who is requesting the approval.

BLOCK
NO.

14. DATE: Insert date on which the Seller prepares form.
15. TITLE: Insert the title of the individual who signed in block 13.
16. FOR CLASSIFICATION MARKINGS: Each AR will be classified by the Seller in accordance with policies and procedures established and approved by the Office of Nuclear and National Security Information, United States Department of Energy.

NOTES:

1. Unless otherwise specified in the purchase order, 2 black and white copies of any attachments are required.
2. Send AR to Bettis.

FORM 73844

(THIS FORM TO BE TYPEWRITTEN)

PAGE ① OF _____
NO. _____

TO	③ APPROVAL REQUEST <input type="checkbox"/> REPAIR APPROVAL REQUEST <input type="checkbox"/>
FROM	CONTRACT NO.

REASON FOR SUBMITTAL, I.E., IDENTIFY SPECIFIC CONTRACT REQUIREMENT(S) BEING SATISFIED BY SUBMITTAL ⑥

TYPE OF SUBMITTAL ⑦ WELDING PROCEDURE OTHER (SPECIFY)
 PROCESS FLOW SHEET

NAME OF PARTY ⑧	BRIEF DESCRIPTION OF REQUEST ⑨	COMPONENT CODE ⑩
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SUBJECT AND IDENTITY OF ATTACHMENTS:
⑪

REFERENCES/REMARKS:
⑫

THE CONTRACTOR REPRESENTS THAT THIS APPROVAL REQUEST IS IN CONFORMANCE WITH THE CONTRACT TECHNICAL REQUIREMENTS

ORIGINATOR'S SIGNATURE ⑬	DATE ⑭	TITLE & DEPARTMENT ⑮
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FOR LABORATORY/CONTRACTING AGENCY USE ONLY										
APPROVING AGENCIES	SIGNATURE & DATE		DISPOSITION			SIGNATURE & DATE		DISPOSITION		
	SETTS		APPR.	COND. APPR.	DIS. APPR.			APPR.	COND. APPR.	DIS. APPR.

ACTION TAKEN HEREON DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PROVIDE A HIGH QUALITY PRODUCT AND ONE WHICH MEETS ALL CONTRACT REQUIREMENTS; NOR DOES IT AUTHORIZE ANY INCREASE IN THE CONTRACT PRICE OR DELAY IN DELIVERY EXTERNAL COMMENTS:

IF THE CONTRACTOR CONSIDERS THAT ANY COMMENTS MADE ABOVE AND/OR CONDITIONAL APPROVAL RESULT OR WILL RESULT IN A CONTRACT PRICE INCREASE OR DELAY IN DELIVERY NO ACTION SHOULD BE TAKEN IN COMPLYING WITH THIS DOCUMENT AND THE CONTRACTOR'S PROPOSAL FOR ACCOMPLISHING THE WORK SHOULD BE SUBMITTED TO THE CONTRACTING OFFICER AS SOON AS POSSIBLE.

FOR CLASSIFICATION MARKINGS:
⑯

PRIME DISPOSITIONING AUTHORITY		CONSULTING ACTIVITIES	
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INTERNAL COMMENTS:	CHANGES (IN OR ADDITIONS) TO DEAS INSPECTION REQUIRED? <input type="checkbox"/> YES <input type="checkbox"/> NO	NR APPROVAL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NO. ⑰ PAGE _____ OF _____
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