Bechtel Associates Professional Corporation
Ann Arbor, Michigan

GENERAL REQUIREMENTS

FOR

SUPPLIER QUALITY ASSURANCE PROGRAMS

FOR THE

MIDLAND PLANT

UNITS 1 AND 2

FOR

CONSUMERS POWER COMPANY

No.	DATE	REVISIONS	BY	CH'K	APPR
7	5-24-78	Added Paragraph 1.4, corrected Rev. No. on Exhibit A Corrected Sheet ii-Rev. 6-Block-Added clarification in Paragraph 2.2, Exhibit B-revised	R.E.E.	CD	
6	6/23/77	Revised as noted to clarify and incorporate QA Reg. Guide Requirements Deleted APP. III	LAM		
5	8-3-76	Revised to Ref. Data Sheet 1 and Add Appendix III			
4	6 18 74	Revised to delete "Q" des. and add Appendix II			
3	4-15-74	Revised To Use Mandatory Form Per EDP 6.10 & to Clarify ANSI Ref.			

ORIGIN

BECHTEL

GENERAL REQUIREMENTS FOR SUPPLIERS QUALITY ASSURANCE PROGRAMS

JOB No. 7220

SPEC DES GUIDE No. 7220-G-23

REV. 7

Sheet 1

SHEET _____ OF _____

AA-G-100373

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SHEET	LATEST REV.	SHEET	LATEST REV.	SHEET	LATEST REV.	SHEET	LATEST REV.	SHEET	LATEST REV.	SHEET	LATEST REV.	SHEET	LATEST REV.
i	7												
ii	7												
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App I	6												
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NO.	DATE	REVISIONS	BY	CHK'D	APP'D	NO.	DATE	REVISIONS	BY	CHK'D	APP'D
6	6/22/77	Revised to clarify & incorp. Reg. Guides Delete APP. III	LAM	R.E.L.							
5	8-7-74	Rev. to Ref. Data Sht and add Appendix III									
4	6-18-74	Rev. to delete "Q" de & add App. II									
3	3-29-74	Rev. to Change Form									
2	3-11-74	Rev. Per CPCo Comments									
1	1/18/74	Rev. Per CPCo comm									
0	10/3/73	Initial Issue				7	5/11/77	Correct EXH A Rev. App III Deleted Rev. 6	RZL	CD	

M-338-1C
3-11-58

FACING SHEET

GENERAL REQUIREMENTS FOR SUPPLIERS QUALITY ASSURANCE PROGRAMS

JOB No 7220

Specification 7220-G-23

Sheet ii

REV. 2

GENERAL REQUIREMENTS

FOR

SUPPLIER QUALITY ASSURANCE PROGRAMS

FOR THE

MIDLAND PLANT

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CONSUMERS POWER COMPANY

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1.0 SCOPE

1.1 This specification provides the quality assurance requirements for the equipment, material, or services as specified in the purchase order, specifications, or material requisitions.

1.2 This specification does not delete or revise (but is in addition to) those requirements defined by the procurement documents. If a supplier believes that an inconsistency exists between this specification and the procurement documents and referenced codes and standards, he shall immediately notify Bechtel for resolution. (2)

1.3 Definitions used herein are derived from ANSI N45.2.10-1973. If the supplier needs clarification, requests departure, or feels an inconsistency exists between this specification and the procurement documents, he shall immediately notify Bechtel for resolution. (3)

1.4 For all activities within the scope of the ASME B&PV Code, the supplier shall maintain a quality program that is in compliance with current Code requirements. All revisions necessary to meet these requirements shall be submitted to the buyer within seven days after the supplier receives written acceptance by the authorized inspection agency. Evidence of Code acceptance shall accompany the submittal. (7)

2.0 GENERAL PROGRAM REQUIREMENTS

2.1 The term supplier, as used herein, includes seller, vendor, contractor, and subcontractor.

2.2 The project quality assurance program is governed by NRC Regulation 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants." To satisfy this requirement, the supplier shall establish and implement a quality assurance program that conforms to the applicable provisions of ANSI N45.2-1971, "Quality Assurance Program Requirements for Nuclear Power Plants" as delineated on Data Sheet 1 (Exhibit A) and to the other codes and standards as cited in the contract documents. For commodities within the scope of the ASME (6) (7)

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B&PV Code, the Code shall govern; for those items not within the scope of the Code, ANSI N45.2-1971 QA program requirements shall be applicable. These quality assurance requirements shall apply to all aspects of the work necessary for carrying out this contract, including design, procurement, fabrication, inspection, installation, and testing. (Data Sheet 1 is attached to this specification for reference only. This completed form is attached to the material requisition package.)

2.3 In the event a supplier does have a quality assurance program in accordance with Paragraph 2.2 and if the supplier's function is limited to placing the order with the actual manufacturer, the supplier shall be responsible for providing a controlled copy of the manufacturer's quality assurance program documents to Bechtel within 30 days after the award. The manufacturer's and supplier's quality assurance program documents must meet the requirements as outlined in this specification that pertain to the activities he performs. In no case will the supplier start activities without prior approval of the portions of the program applicable to the respective operation.

2.4 When audits are required the supplier shall implement a system of internal and external audits consistent with the requirements of ANSI N45.2.12, Draft 4, Rev. 1, dated November 1, 1974, "Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants."

2.5 When it becomes necessary for the supplier to procure materials, components, or services from a subsupplier(s), it is the suppliers responsibility to establish and implement a procurement control process consistent with the requirements and guidelines of ANSI N45.2.13, Draft 3 Rev. 3 dated June 1975, "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants."

2.6 Definitions utilized in the Supplier's Quality Assurance Program shall be consistent with ANSI N45.2.10-1973.

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3.0 ADDITIONAL REQUIREMENTS

3.1 Within 30 days after award of contract and prior to starting any activities relating to the applicable contract, the supplier shall submit a controlled copy of his quality assurance program documents which defines the program that he will follow to meet this specification. With his quality assurance program documents, the supplier may be required to submit a facsimile of data sheet 1, on which he shall complete the "Supplier Document and Paragraph References" column by listing document identity numbers and applicable paragraphs which satisfy the criteria imposed on him (as delineated in the lefthand column of the data sheet). Such a requirement would be invoked at the time of submittal of the controlled copy of the quality assurance program documents.

3.2 Bechtel may approve, approve with comments, or disapprove the supplier quality assurance program documents. Upon Bechtel's approval, activities may proceed. If approved with comments, the Supplier may proceed, provided that he incorporates Bechtel's comments in the quality assurance program documents (i.e. revisions, addenda, or amendments) and resubmits them for final approval within 30 days. In no case will the supplier start activities without prior approval of the portions of the program applicable to the respective operation. Changes to the Bechtel approved program shall be submitted by the supplier for approval in the same manner as original submittals.

NOTES: Approval does not relieve the supplier of the obligation to comply with the requirements of the procurement documents, including this specification. If the program is subsequently found to be ineffective or inadequate in providing for acceptable control, Bechtel reserves the right to require necessary revisions. All proposed program modifications shall be submitted to Bechtel for review and acceptance in accordance with the requirements for initial program submittals.

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3.3 In order to comply with Subsection 50.55(e) of 10 CFR 50 Appendix B, the supplier, in less than 12 hours after detection, shall report to Bechtel Project Engineering each deficiency found in design, manufacturing, and/or construction, which, were it to have remained uncorrected, could have affected adversely the safety of operations of the nuclear power plant at any time throughout the expected lifetime of the plant, and which represents: 6

a. A significant breakdown in any portion of the quality assurance program conducted in accordance with the requirements of ANSI N45.2

b. A significant deficiency in final design as approved and released for manufacturing and/or construction such that the design does not conform to the criteria and bases stated in the specifications 2

c. A significant deficiency in manufacturing and/or construction of/or significant damage to a structure, system, or component which will require extensive evaluation, extensive redesign, or extensive repair to meet the criteria and bases stated in this specification or to otherwise establish the adequacy of the structure, system, or component to perform its intended safety functions

d. A significant deviation from performance specifications which will require extensive evaluation, extensive redesign, or extensive repair to establish the adequacy of a structure, system, or component to meet the criteria and bases stated in the specifications or to otherwise establish the adequacy of the structure, system, or component to perform its intended safety function.

e. Notification of reportable deficiencies as delineated above shall be by telephone or TWX, followed up by a completed SDDR form per instructions in Appendix II. 6

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3.4 Any departure from the requirements of the procuring documents or Bechtel approved supplier technical documents which the supplier intends to incorporate in the completed item or service provided must be documented on a Supplier Deviation Disposition Request (SDDR). Deviation requests shall be submitted to the Bechtel project engineer with a copy to the Bechtel supplier quality representative if one is assigned within five working days after detection. Specific instructions are contained in Appendix II. The signature of the suppliers authorized representative in block number 17 of the SDDR form, signifies compliance with Paragraph 3.3. In addition, the supplier shall also maintain a status list of all nonconformances.

3.4.1 Definitions

a) Rework is defined as the process by which a nonconforming item is made to conform to a prior specified requirement by completion, remachining, reassembling, or other corrective means. Items classified as rework do not require submittal of the SDDR. 6

b) See sheet 2 of SDDR for difinition of repair.

3.5 Engineering and quality verification documents shall be submitted to Bechtel in accordance with the provisions of Form G-321-D. While in the supplier's facilities these and other records required by applicable codes and standards which are necessary to verify activities affecting quality, shall be maintained in facilities to protect contents from possible destruction by causes such as fire, flooding, tornadoes, insects, rodents, and from possible deterioration by a combination of extreme variations in temperature and humidity conditions. Storage systems shall provide for the accurate retrieval of information without undue delay. (Compliance to ANSI N45.2.9-1974, "Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants" fulfills these requirements.) Quality assurance records are those records which

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furnish documentary evidence of the quality of items and of activities affecting quality. Records become quality assurance records upon issuance for use.

3.5.1 Records shall not be stored loosely. They shall be firmly attached in binders or placed in folders or envelopes for storage on shelving in containers. Steel file cabinets are preferred.

3.5.2 An audit system shall be established to assure that the quality assurance records' storage system is effective. The following shall be performed as a minimum:

a. Periodic surveys to assure that records logged in are available and have been placed in their proper location within the files and to assure that the control system is adequate

b. Periodic audits to assure that the facilities are in good condition and that the temperature/humidity controls and protective devices are functioning properly

c. Periodic audits of the records to assure that the documents are not deteriorating due to improper storage practices or rough handling

d. The frequency of surveys and audits delineated above shall be determined by the supplier and addressed in the quality assurance program documents

3.6 All quality related records, procedures, and qualifications shall be available for examination by Bechtel or Bechtel's authorized agents.

3.7 The applicable quality assurance records shall be considered valid only if stamped, initialed, signed, or otherwise authenticated and dated by authorized personnel. These may be either the original or a high quality reproducible copy.

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3.8 No quality related record shall be destroyed or otherwise disposed of without written permission of Bechtel (or their designee).

3.9 QUALIFICATIONS OF INSPECTION, EXAMINATION, AND TESTING PERSONNEL

3.9.1 The supplier's quality assurance program shall provide measures to assure that personnel performing safety-related inspections, examinations, and tests are qualified to perform these activities. Such measures include procedures for qualifications of personnel describing the minimum experience, training, and proficiency testing required for qualification. The measures shall also include requirements for records documenting qualifications for each of the suppliers' inspection, examination, and testing personnel. (Compliance to ANSI N45.2.6, "Qualifications of Inspection, Examination, and Testing Personnel for the Construction Phase of Nuclear Power Plants" fulfills these requirements.)

3.9.2 Nondestructive examination performed according to the quality requirements of Section III of the ASME Boiler and Pressure Vessel Code shall be performed by supplier personnel certified to SNT-TC-1A

3.9.3 Personnel qualification procedures will be reviewed by Bechtel prior to initiation of inspections, examinations, or tests.

4.0 QUALITY SURVEILLANCE

4.1 All designing, procuring, manufacturing, processing, assembling, testing, examination, and inspection operations performed by the supplier and his lower-tier suppliers are subject to surveillance by Bechtel or Bechtel's authorized agents. This surveillance shall in no way relieve the supplier of any contractual responsibilities.

NOTE: The term surveillance, here, may include inspection, survey, and/or audit.

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4.2 The Bechtel supplier quality representative shall be given free access to the supplier's and his subsupplier's facilities to perform the necessary surveillance and report on the work in all phases of design, manufacturing, and testing.

4.3 The supplier shall give the Bechtel supplier quality representative at least five working days prior notice of all tests, and other check points in the manufacturing program specifically requested by the representative, after a joint review of supplier's work plan(s) and this specification.

4.4 If the requirements of this specification have not been fulfilled, the Bechtel supplier quality representative has the authority to refuse release for shipment.

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APPENDIX I

PROPOSAL

(This sheet applies to the bid stage)

With his proposal, each bidder shall submit a summary description of the quality assurance program to be implemented in the performance of the work, or an uncontrolled copy of his quality assurance manual or procedure. This shall include information on the organization of the bidder, including the authority and responsibility of personnel performing QA/QC functions. It shall also explain administrative policies and procedures to be used in carrying out the program.

The bidder shall provide an adequate statement of justification if his quality assurance program does not need to contain all of the elements or portions thereof called for in Data Sheet 1 (Exhibit A). Any modifications agreed to by Bechtel will be identified in the procurement documents.

Bechtel will evaluate the description of the quality assurance program to determine its acceptability. An acceptable quality assurance program is a mandatory requirement for placing an order.

If a bidder is currently performing to or has completed a Bechtel order which invokes the requirements of this specification, he may, in lieu of submitting a copy of his manual, submit a letter listing the date of Bechtel acceptance, the controlled manual to be used and the revision that is currently in effect or was in effect, and a statement that it will apply for this proposed effort.

Bechtel reserves the right to survey/audit the bidder/supplier to determine the adequacy of his quality program as he proposed or is executing.

APPENDIX II

SDDR INSTRUCTIONS

DEVIATION - any departure from the requirements of the procuring documents, which the supplier intends to incorporate in the completed item or service provided.

1.0 The supplier shall be required to submit deviation requests to the Bechtel project engineer with a copy to the Bechtel supplier quality representative within five working days after detection. When this time limit cannot be met, notification by telephone, TWX, etc is acceptable; at that time, a revised submittal date shall be established. Any deviation is considered unacceptable until approval from Bechtel in writing is obtained.

2.0 SDDRs must be supported by technically valid information that is sufficient for project engineering evaluation. When necessary, the supplier shall attach supporting technical documents (of reproducible quality) to the SDDR. One copy of each attachment must also be supplied to the Bechtel (supplier quality representative), if assigned.

3.0 Detailed instructions for completion of the SDDR are shown on the attached form and instruction sheet, Exhibit B. It is required that all portions of the SDDR applicable to the supplier be completed prior to submittal to Bechtel including Block No. 10. If the entries are not completed, the SDDR will be returned to the supplier for inclusion of the pertinent information.

4.0 A copy of the SDDR, with the applicable attachment(s), is returned to the supplier after completion of Bechtel engineering actions.

5.0 For approved SDDRs, suppliers may be required by project engineering to change their engineering documents to reflect the "as-built" condition without extra cost to the Buyer.

A copy of the completed SDDR (including attachments) shall be included by the supplier in the QC data package for the item(s) to which it applies. The SDDR is considered complete when all entries are made including the appropriate verification signatures by the supplier and Bechtel supplier quality representative. If no representative is assigned for the order,

arrangements will be made by Bechtel engineering for verification of implementation.

6.0 A copy of the SDDR form shall be maintained as a QA record by the supplier after all entries have been completed.

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QUALITY ASSURANCE PROGRAM ELEMENTS

(DATA SHEET 1)

THE FOLLOWING ANSI N45.2 - 1971 QUALITY ASSURANCE PROGRAM ELEMENTS APPLY TO THIS SPECIFICATION.

EXHIBIT A TO
7220-G-23
Rev. 7 △7

APPLICABLE		TO BE COMPLETED BY BECHTEL	TO BE COMPLETED BY THE SUPPLIER: SUPPLIER DOCUMENT AND PARAGRAPH REFERENCES
☐	QUALITY ASSURANCE PROGRAM		
☐	ORGANIZATION		
☐	DESIGN CONTROL		
☐	PROCUREMENT DOCUMENT CONTROL		
☐	INSTRUCTIONS, PROCEDURES, AND DRAWINGS		
☐	DOCUMENT CONTROL		
☐	CONTROL OF PURCHASED MATL., EQUIP., & SERVICES		
☐ △5	IDENTIFICATION CONTROL OF MATLS., PARTS, COMPONENTS		
☐	CONTROL OF SPECIAL PROCESSES		
☐	INSPECTION		
☐	TEST CONTROL		
☐	CONTROL OF MEASURING AND TEST EQUIPMENT		
☐	HANDLING, STORAGE AND SHIPPING		
☐	INSPECTION, TEST AND OPERATING STATUS		
☐	NONCONFORMING ITEMS		
☐	CORRECTIVE ACTION		
☐	QUALITY ASSURANCE RECORDS		
☐	AUDITS		
☐	OTHERS		

NO.	DATE	REVISIONS	BY	CHECKED	APPROVED

7220-G-23	BECHTEL		JOB NO.	
			DOCUMENT NO.	REV.
DATA SHEET 1				2 9 6

△4

EXHIBIT B
7220-G-23
Rev. 7

Supplier Deviation Disposition Request

FOR SUPPLIER USE	
Supplier SDDR No.	Date Submitted

NOTE: The reverse side of this form contains the instructions for its preparation and use. Items marked with an asterisk (*) are for Bechtel entries only.

FOR BECHTEL USE	
*Bechtel SDDR No.	*Date Received

Supplier shall complete all blocks 1 through 18 with black ink or typewriter. Use NA for Not Applicable.

1. Supplier Name: _____ Address _____ City & State _____ Zip _____

2. Supplier's Order No.	3. Supplier's Part No.	4. Supplier's Part Name	5. Date Deviation Determined	6. Previous SDDR (No. & Date)
7. Bechtel P.O. No.	**8. Bechtel Part No.**	**9. Bechtel Part Name**	**10. Bechtel Inspector Notified**	**11. Bechtel Eng. Notified**

12. Qty or Serial No. | 13. Deviation Description (Attach extra sheets, illustrations, sketches, etc. as necessary)

14. Supplier's Disposition Classification: ☐ Use As Is ☐ Repair ☐ Modify Bechtel Requirement

15. Proposed Disposition and Technical Justification: (Attach extra sheets, sketches, etc. as necessary)

16. Associated Supplier Document Change(s):

17. Cost Effects:

18. Suppliers Authorized Representative

Signature: _____ Title: _____

Name: _____ Date: _____

*19. Bechtel Engrg. Action:

☐ Proposed Disposition Accepted ☐ Proposed Disposition Rejected

Engrg. Follow-up: ☐ Dwg Change ☐ Spec/Req. Change ☐ Other ☐ Other Suppliers Affected

*20. Bechtel Disposition Statement including Justification (Attach extra sheets, sketches, etc. as necessary)

*21. Bechtel Acceptance	Date	Verification Signatures	Date
GS _____		22. Supplier _____	
PE _____		*23. Bechtel Supplier Quality Representative _____	
POE _____			

INSTRUCTIONS FOR COMPLETING SDDR FORM

(Use Black Ink or Typewriter)

This form is used by a supplier to:

a) Notify Bechtel of deviations from approved technical requirements and document the supplier's proposed disposition, and with their technical justification
b) Record Bechtel's disposition of the SDDR.

A deviation is any departure from the technical requirements of the procuring documents which the supplier proposes to incorporate in the completed item or service provided. Deviation disposition can be classified as Repair, Use-As-Is, or Modify Requirement.

Repair is defined as the process of restoring a nonconforming characteristic to a condition such that the capability of an item to function reliably and safely is unimpaired, even though that item still may not conform to the original requirement. Repair includes alterations to the properties of the material through heat-treating, welding, metal deposition, chemical processing, etc. This form is not to be used for cases where Bechtel has previously provided authorization to proceed using an accepted repair procedure covering a specific type of repair; however, records must be maintained for each specific repair.

Bechtel's engineering action and disposition statement does not relieve the Supplier from responsibility for the accuracy, adequacy, or suitability of the item or service being provided as defined in the procuring documents, nor does it constitute waiver of the right to renegotiate the terms of the procuring documents.

NOTE: Items marked by an asterisk (*) are for Bechtel use only.

Block No.	Entry Information
1.	Supplier's name and address. List lower-tier Supplier's name and location (City and State) if applicable.
2.	Enter the Supplier's order number if one has been assigned.
3.	Enter Supplier's Part No. as applicable from the drawing, catalog, internal specification, etc. If the Deviation Request applies to all parts and additional space is needed, a list of parts to which the request applies may be attached.
4.	Enter Supplier's Part Name.
5.	Enter the date and the method (Spec. review, NDE, dielectric test, etc.) used to disclose the deviation.
6.	List any previous SDDR's and their dates that have been submitted for deviations requested on this Purchase Order.
7.	Enter the Bechtel Purchase Order Number.
8.	Enter the Bechtel Requisition Item, part, tag or code number as it appears in the requisition. If additional space is needed, a separate sheet may be attached.
9.	Enter the Bechtel Part Name if one has been assigned.
10.	Enter the date and the method (TWX, letter, etc.) used to notify the Bechtel Supplier Quality Representative.
11.	Enter the date and the method (TWX, letter, etc.) used to notify Bechtel Engineering.
12.	As applicable, enter quantities or serial numbers of the items to which the deviation applies. If not serialized, record lot, batch, heat or other applicable identifying information.
13.	Describe the deviating characteristics and define the extent of the out-of-specification condition for each identified piece affected. Identify the location of the deviating characteristic by print coordinates or specific location, as applicable. Attach extra sheets, photographs, sketches, etc., as necessary.
14.	Identify disposition classification.
15.	Describe the proposed disposition and provide technical justification for Bechtel's evaluation. If the deviation is correctable by repair, submit a detailed repair procedure or reference the procedure previously accepted (Level 1) by Bechtel for use in similar situations. Provide Bechtel control number, supplier control number and procedure title.
16.	Identify the nature of changes that may result on associated supplier documents (drawings, specs., procedures, installation instructions, etc.).
17.	Enter the cost impact of the subject deviation.
18.	Enter the name (typed or printed), signature and title of the supplier representative authorizing the disposition request and date signed.
*19.	Enter an X in the applicable boxes.
*20.	Provide appropriate justification for the Bechtel action(s) indicated in Block 19. When changes to drawings, specifications, requisitions, or other Bechtel documents are involved, each document should be identified and the associated change briefly described. If other suppliers are affected, indicate who they are and the document that initiated resolution of that involvement. "Other" follow-up action (e.g., the need for additional Bechtel calculations, additional drawings or sketches, inspection by a Project Engineering representative, etc.) should also be identified here.
*21.	GS – Signature of the responsible Discipline Group Supervisor accepting the Engineering action and the date signed. PE – Signature of the Bechtel Project Engineer and the date signed.
22.	Signature of the supplier's inspector or other representative authorized to verify that the accepted disposition was correctly accomplished.
*23.	Signature of the Bechtel Supplier Quality Representative or other representative verifying that the accepted disposition was correctly accomplished.

NOTE: A copy of the completed SDDR form shall be included by the supplier in the QC data package for each item to which it applies.