



Waste Treatment Plant Project



2016 Supply Chain Collaboration Event

QVD – How To Get Started

Quality Verification Documentation (QVD)

Discussion Topics

- Lessons Learned
- Start With The End In Mind (G-321-V Form)
- Define and Simplify Your Process
 - Document Management Process? (QVD Video)
- Developing Requirement Basis
- Use of Review/Accounting Matrix
- When Are We Done?
- Plus/Delta

Quality Verification Documentation (QVD)

Lessons Learned

- Two of the top five issues discovered with received equipment are specific to QVD
- As a result of historical documentation review, we have better defined how to account for and review QVD
- Corrective action drove a deeper look at how we define complete QVD
- Our internal procedures provide a means to define and account for what is required
- Roll out of the “QVD Video” describes to our supply base a process that is the basis for the BNI approach to QVD review
- We continue to get smarter and our plans include making our supply base part of making this process successful to ensure equipment pedigree is complete and accurate

Quality Verification Documentation (QVD)

Start With The End In Mind (G-321-V Form)

- The requirements for the QVD/QVRP are detailed in the G-321-V Form

QUALITY VERIFICATION DOCUMENT REQUIREMENTS						
<i>Bechtel National, Inc.</i>			QUALITY VERIFICATION DOCUMENT REQUIREMENTS			
River Protection Project - Waste Treatment Plant						
1. DOCUMENT CATEGORY NUMBER	2. SPECIFICATION PARAGRAPH REFERENCE	3. DOCUMENT DESCRIPTION	4. BECHTEL RELEASE	5. FIELD RECEIPT INSPECTION CHECK-IN	6. REMARKS	7. DOC. SUPPLIER PAGE COUNT
12.0	Section 2.5.7 – Note 5	Welding Verification Documents				
14.0	4.7 – Note 2	Major Repair Verification Reports				
16.0	Section 2.5.8 – Note 5	Heat Treat Reports (if applicable)				
17.1	4.1.1 / 6.4 – Note 2	MTR - Material Test Reports				
17.3	4.1.1/6 – Note 2	Ferrite Data (if applicable)				
17.4	4.1.1 / 6.4 – Note 2	Material Certificate of Compliance				
17.7	7.1	Hardness Test Reports (if applicable)				
18.0	9.2	CODE COMPLIANCE (Code Data Reports)				
19.0	6.1.4, 7.2 & 9.4	UT - Ultrasonic Examination and Verification Reports				
20.0	6.1.4, 7.2 & 9.4	RT - Radiographic Examination and Verification Reports				



Quality Verification Documentation (QVD)

Define and Simplify Your Process

- QVD Video (Located in Vit Plant Website)
www.hanfordvitplant.com/supplier-quality
 - Located in the “QVD Management for Completeness” link

What We Use To Begin Our QVD Review

- QVD Review Report
 - Defines (through attachments) documents required to begin and complete review
 - Provides roll-up of requirements and review results
 - [QRR for QVD.pdf](#)

Quality Verification Documentation (QVD)

Developing Requirements Basis

What specifically applies to this item/tag number/material?

- Specific PO Requirements (Scope of Work)
- Design/Detail Drawings
- Relevant Specifications Detailed in the MR/PO
- SDDRs
- Sample of QRR Attachment
 - Some more complex than others
 - [Sample QRR with attachments.pdf](#)

Quality Verification Documentation (QVD)

Use of Review/Accounting Matrix

- After developing your requirements basis, you will need a tool to define the specific documents to be accounted for
 - Review matrices serve that purpose
 - Segregated primarily by material and welding
 - This process to begin at the very beginning of order execution

- Blank examples of what we use for this activity
 - [QVD Material Matrix.xls](#)
 - [QVD Weld Matrix.xls](#)

Quality Verification Documentation (QVD)

When Are We Done?

1. The supplier has assembled all the required documents defined in the purchase order, performed its internal review, reconciled all outstanding issues, and signed the G-321-V form.
2. The completed and supplier signed QVD package is delivered to the SQR (when applicable), this review is completed and the G-321-V form is signed by the BNI SQR.
 - A. Note: These activities coincide with the completion of the RFSC (Readiness for Shipment Checklist)
 - B. Keep in mind, the SQR is an integral part of assisting with solving issues, but is not to be used in the place of the supplier's review process

Quality Verification Documentation (QVD)

Plus/Delta – Discussion Topics

Were the topics beneficial?

What topics do we need to further address?

How does QVD/QVRP review impact you?

What can we do better to minimize QVD issues early in the procurement and during final review?



QUALITY VERIFICATION DOCUMENT REVIEW REPORT

Title: [Redacted]

Document No: [Redacted]

Rev: 0

Revision History:

Revision Number	Reason for Revision
0	Original Issue

Commodity/Type: [Redacted]	PO: [Redacted]	MRR/SRR #: N/A
PO # Line Item No: 9		[Redacted]
Total Items: 1		
Tag ID: [Redacted]		
QVD Reviewer Name: [Redacted]	Supplier: [Redacted]	Review Phase: Before Receipt
Drawings: See Attachment 1		
Specifications: See Attachment 2		
Attachments:		
Attachment 1 - Drawings		
Attachment 2 - Specifications and SDDRs		
Attachment 3 - QVD Material Matrix		
Attachment 4 - Coatings Matrix		
Attachment 5 - Welding Matrix [Redacted]		
Attachment 6 - Welding Matrix [Redacted]		
Attachment 7 - Welding Matrix [Redacted]		
Attachment 8 - Welding Matrix [Redacted]		
Attachment 9 - Welding Matrix [Redacted]		
Attachment 10 - Welding Matrix [Redacted]		
Attachment 11 - Welding Matrix [Redacted]		



QUALITY VERIFICATION DOCUMENT REVIEW REPORT

Title: [REDACTED] Rev. 0

Document No: [REDACTED]

Rev: 0

Revision History:

Revision Number	Reason for Revision
0	Original Issue

Commodity/Type: [REDACTED]	PO: [REDACTED]	MRR/SRR #: [REDACTED]
# Line Item: 3.116		Pre Job
Total Items: 1		Pre Job
Tag ID/Stock Code/Line Item: [REDACTED]		Pre Job
		Pre Job

QVD Reviewer Name: [REDACTED]	Supplier: [REDACTED]	Review Phase: After Receipt
---	--------------------------------	---------------------------------------

Summary of Review Results:
Documents were reviewed for legibility, traceability, completeness, accuracy, and compliance to QVD requirements. The QVD package found in [REDACTED] is for the replacement heater element for [REDACTED]. No issues were identified. Satisfactory.

Doc. Category	Document Description	Review Result Comments	Results (S/U/I)	# Pages in Doc. Category	Issue Code	Issue Document
12.0	Weld Verification Documents	Review of the QVD requirements indicated that no records are required. No welding was performed. Not Applicable.	N/A	0	N/A	N/A
13.0	MATERIAL VERIFICATION REPORTS	Review of the QVD requirements indicated that no records were required to be submitted. The replacement heater element did not require additional shop tests. Not Applicable.	N/A	0	N/A	N/A
14.0	Major Repair Verification Documents	Deleted per the G-321-V form	N/A	N/A	N/A	N/A
15.0	CLEANING AND COATING VERIFICATION REPORTS	Review of the QVD requirements indicated that carbon steel material requires coating. No carbon steel items received. Not Applicable.	N/A	0	N/A	N/A
16.0	Heat Treat Reports	Review of the QVD requirements and drawings indicated that no records were required to be submitted. No heat treatment required for this replacement heater element. Not Applicable.	N/A	0	N/A	N/A
17.1	MTR - MATERIAL TEST REPORTS	Review of the QVD requirements indicated that no records were required to be submitted. This CM heater element doesn't require an MTR. Not Applicable.	N/A	0	N/A	N/A
17.4	MATERIAL CERTIFICATE OF COMPLIANCE	Submitted document on MRR page 41 was reviewed for legibility, traceability, completeness, and compliance to the QVD requirements. No issues identified. See Attachment 2, Line 4. Satisfactory.	S	1	N/A	N/A
18.0	Code Compliance (Code Data Reports)	Review of the QVD requirements indicated that no records were required to be submitted. This CM heater element doesn't require a Code Data Report. Not Applicable.	N/A	0	N/A	N/A
19.0	UT - ULTRASONIC EXAMINATION	Review of the QVD requirements indicated that no UT records are required. No welding was performed. Not Applicable.	N/A	0	N/A	N/A
20.0	RT - RADIOGRAPHIC EXAMINATION	Review of the QVD requirements indicated that no RT records are required. No welding was performed. Not Applicable.	N/A	0	N/A	N/A



Doc. Category	Document Description	Review Result Comments	Results (S/U/I)	# Pages in Doc. Category	Issue Code	Issue Document
21.0	MT - MAGNETIC PARTICLE	Review of the QVD requirements indicated that no MT records are required. No welding was performed. Not Applicable.	N/A	0	N/A	N/A
22.0	PT-Liquid Penetrant Examination Verification Reports	Review of the QVD requirements indicated that no PT records are required. No welding was performed. Not Applicable.	N/A	0	N/A	N/A
24.0	Pressure Test and Verification Reports, including hydro, loop flow test, and leak test (Melter lid, Walls Modules and Base Cooling Panels)	Review of the QVD requirements indicated that no records were required to be submitted. Pressure tests are not required for this heater element. Not Applicable.	N/A	0	N/A	N/A
25.0	Inspection and Verification Reports	Review of the QVD requirements indicated that no records were required to be submitted for this is a replacement CM heater element. Not Applicable.	N/A	0	N/A	N/A
26.1	Mechanical Test Reports	Review of the QVD requirements indicated that no records were required to be submitted. The CM heater element did not require disassembly or fit check. Not Applicable.	N/A	0	N/A	N/A
26.2	Electrical Test Reports	Review of the QVD requirements indicated that no records were required to be submitted. This replacement CM heater element doesn't require it to be disassembled into multiple pieces. This Not Applicable.	N/A	0	N/A	N/A
30.0	SDDR - SUPPLIER DEVIATION DISPOSITION REQUEST	There are no SDDRs against Item 10 on drawing [REDACTED] [REDACTED] Not Applicable. Reviewer's Comment: The Attachment to the G-321-V form was provided in error. The Attachment isn't for this replacement heater element [REDACTED]	N/A	0	N/A	N/A
31.0	Positive Material Identification (PMI)	Review of the QVD requirements indicated that no records were required to be submitted. PMI as specified in Purchase Order, Attachment 1, Section 3.1.4 is not required for this CM heater element. Not Applicable.	N/A	0	N/A	N/A
34.0	Factory Acceptance Test (FAT) Report	Review of the QVD requirements indicated that no records were required to be submitted. This DCN is marked "N/A" in PO Attachment 1, Section 3.6.3. Not Applicable.	N/A	0	N/A	N/A
33.0	Commercial Grade Dedication	Deleted per the G-321-V form	N/A	N/A	N/A	N/A
General						
Gen-1	Documents sections listed on the G-321-V form include page count totals	Reviewed page counts as documented in the PRR documents submitted. Satisfactory.	S	1	N/A	N/A
Gen-2	Verify PO listed matches revision at time of release/review	Verified PO revision matches the correct revision during the time of release. Satisfactory.	S	N/A	N/A	N/A



Doc. Category	Document Description	Review Result Comments	Results (S/U/I)	# Pages in Doc. Category	Issue Code	Issue Document
Gen-3	Form signed (as timing permits) where required by: 1) Supplier 2) SQR and, if already received, 3) Field Representative	Verified all signatures and dates that are required are present. Satisfactory.	S	N/A	N/A	N/A

QVD Reviewer:

Print Name Signature

Date

Independent Reviewer:

Print Name Signature

Date





G-321-V DCN Applicable Specification Requirements

Document #	REV	Supplier or Subcon Doc. Number	DCN 12.0	DCN 13.0	DCN 15.0	DCN 16.0	DCN 17.1	DCN 17.4	DCN 18.0	DCN 19.0	DCN 20.0	DCN 21.0	DCN 22.0	DCN 24.0	DCN 25.0	DCN 26.1	DCN 26.2	DCN 30.0	DCN 31.0	DCN 34.0
PO Attachment 1, Scope of Work	■	ATTACHMENT 1, Rev. 9	3.6.3	3.6.3	3.6.3	3.6.3	3.6.3	3.6.3	3.6.3	3.6.3	3.6.3	3.6.3	3.6.3	3.6.3	3.1.3, 3.6.3	3.6.3	3.6.3	3.6.3	3.6.3	3.6.3
■	■	■	5.1.2 5.1.7 6.3.1	6.4.2	5.5.2	5.4	4.1.2 4.1.6	4.1.8	6.4.9	6.3	6.3	6.3	6.3	6.4.4 6.4.5 6.4.6 6.4.7		5.2.9 5.1.20.2.4	6.4.8 5.3.7.2			N/A
■	■	SDDR																3.7		
■	■	PMI																	6.0 7.0	
■	■	CGD	N/A	N/A	N/A	N/A	2.4	2.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Applicable Drawings and VDCNs	REV	Document Number	Change Description
■	■	■	
■	■	■	
■	■	■	Added Note #16, Commercial Material (CM) to Item 10

Applicable SDDR #	REV	Document Number	Change Description
No SDDRs having to do with	■	■	

Attachment 1
Materials QVD Matrix

	A	B	C	D	E	F	G	H	I	J	K	L	N	O	P	Q	R	S	T	U	V
1	BOM	Component ID	BOM - Item Description (Drawing)				Change Notices	Purchase Order	DCN 17.1				DCN 17.4				DCN 31.0		Comments	Review Results	
2									Material Heat #	MTR Material Size/Type/Grade		MTR Pg #	ASME/ASTM		Material Size/Type/Grade		C of C Pg #	PMI			PMI Pg #
3	Material Item #	Material Description	Item Description	QTY	Size/Thk (IN.)	Material Type Grade	SDDRs/VDCNs/FCs	Rev		Size/Thk (IN.)	Material Type Grade		Chems	Phys	Size/Thk (IN.)	Material Type Grade					
4		U 60.0X43.50X14X1.25 SH=2.0, C=3.50	Heater Element	1	U 60.0X43.50X14X1.25 SH=2.0, C=3.50	Silicone Carbide		58	N/A	N/A	N/A	N/A	N/A	N/A	U 60.0X43.50X 14X1.25	Silicone Carbide	MRR pg. 41	N/A	N/A		S

