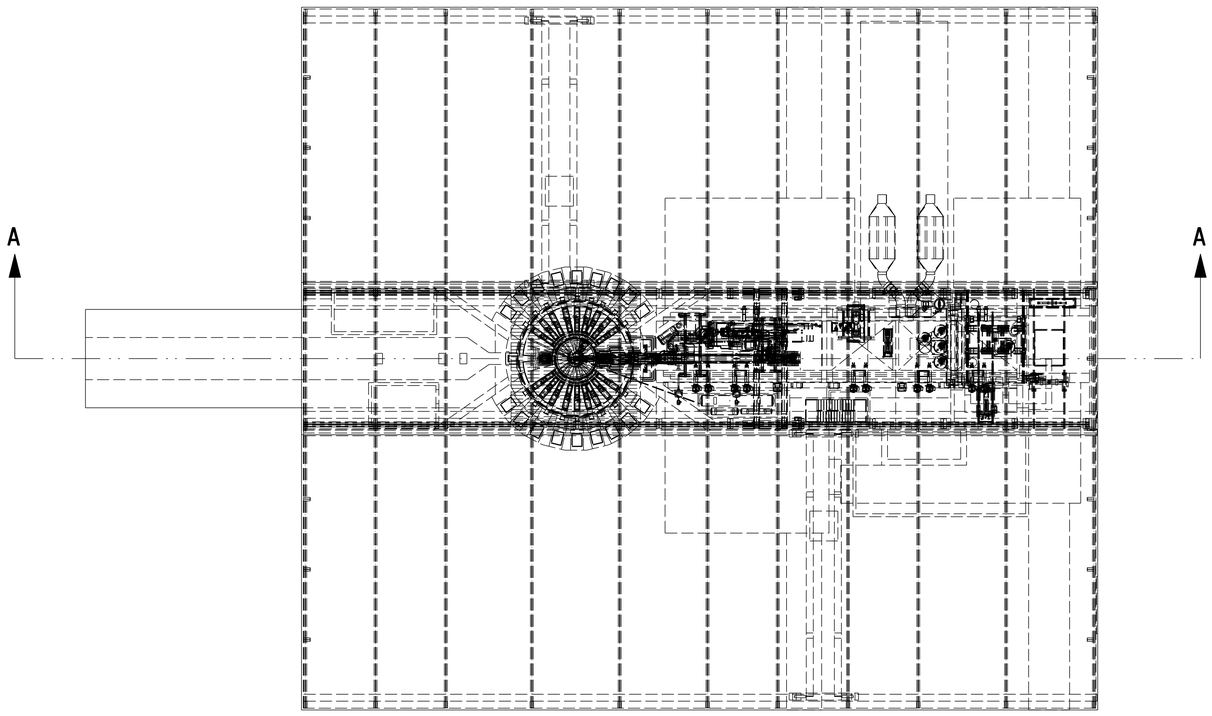
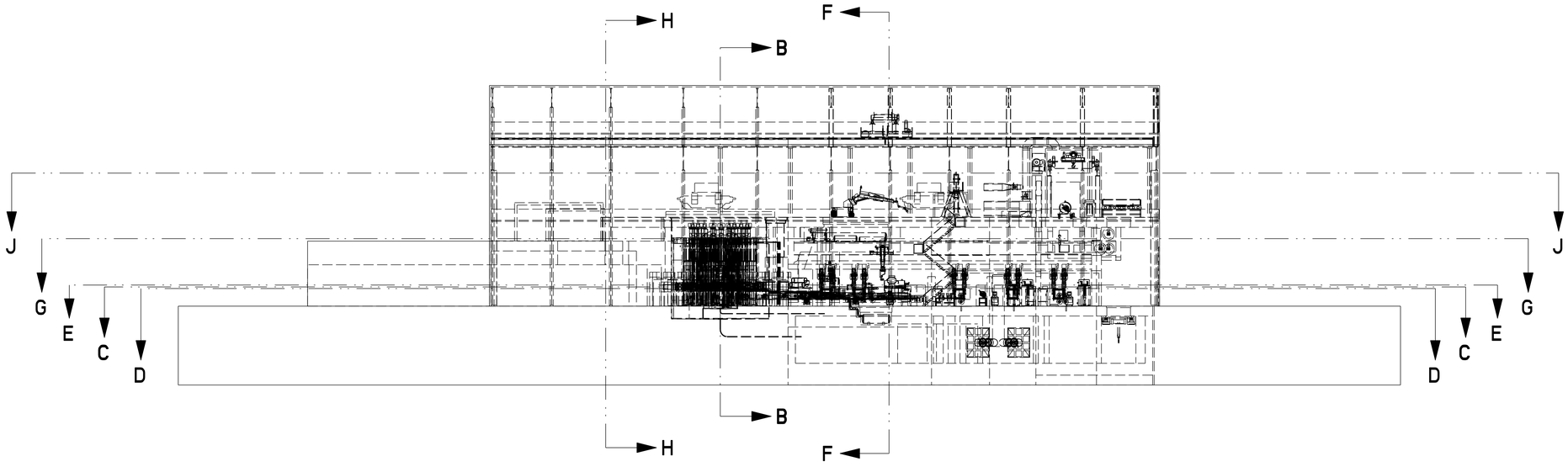
NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.





QUALITY VERIFICATION

MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (RCHART)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE CONTROL NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE	REVISION APPROVALS													SQUAD CHECK											

SCALE .005

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
	:	:
	:	:
	:	:
	:	:
DRAWING APPROVALS		DATE

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

1	48	49	50	PLANT	BLDG	FL	SHT	OF	TYPE	CLASS
3	M	E	U				1	16		

51 52 53 M3E087000A002 REV

NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY, COMPLETENESS OR USEFULNESS OF THE INFORMATION OR STATEMENTS CONTAINED IN THESE DRAWINGS, OR THAT THE USE OR DISCLOSURE OF ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS MAY NOT INFRINGE PRIVATE RIGHTS OF OTHERS. NO LIABILITY IS ASSUMED WITH RESPECT TO THE USE OF, OR FOR DAMAGES RESULTING FROM THE USE OF, ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS. DRAWINGS MADE AVAILABLE FOR INFORMATION TO BIDDER ARE NOT TO BE USED FOR OTHER PURPOSES, AND ARE TO BE RETURNED UPON REQUEST OF THE FORWARDING CONTRACTOR.

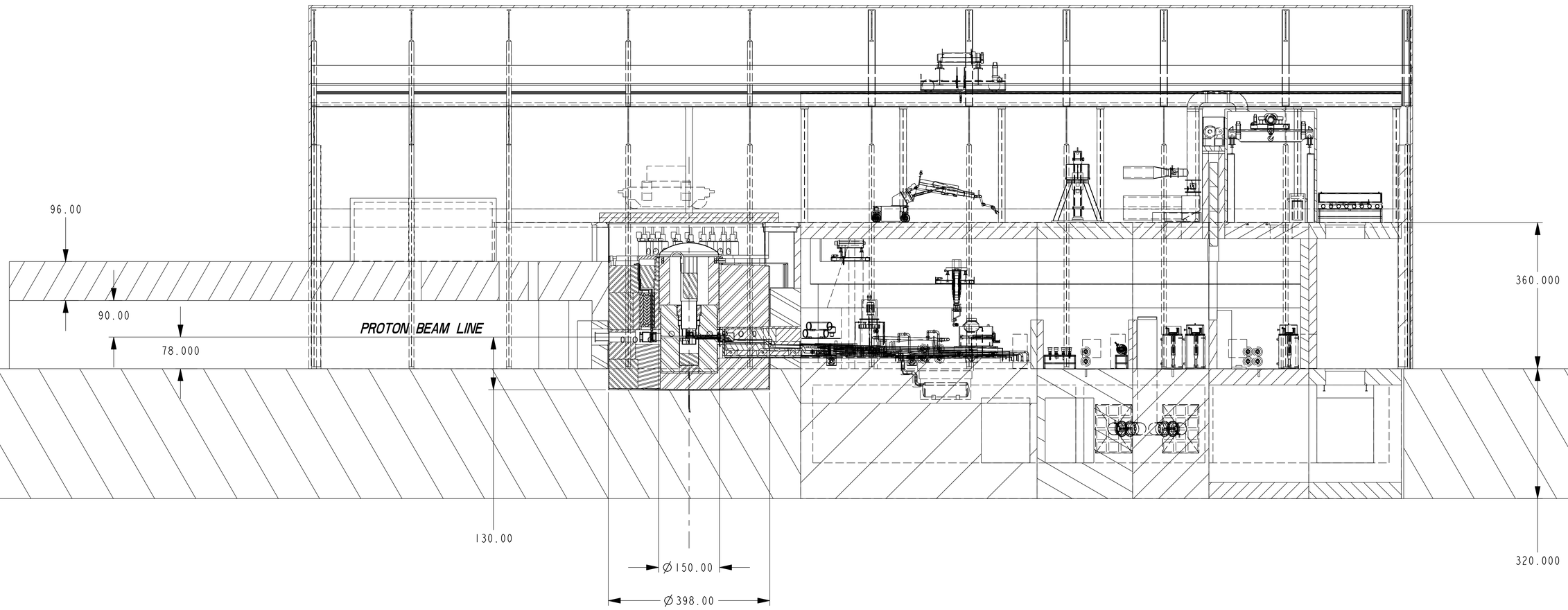
P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



SECTION A-A
THRU PROTON BEAM LINE

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (W/CHART)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:
100	DOCUMENTION	X

* SYMBOL I INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE					REVISION APPROVALS									SQUAD CHECK											

SCALE .010

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
:	:	:
:	:	:
:	:	:
DRAWING APPROVALS		DATE

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

1	48	49	50	PLANT	BLDG	FL	SHT	OF	TYPE	CLASS
3	M	E	U				2	16		

51 52 53 M3E087000A002 REV

NO REPRESENTATION OR WARRANTY,EXPRESSED OR IMPLIED,IS MADE AS TO THE ACCURACY, COMPLETENESS OR USEFULNESS OF THE INFORMATION OR STATEMENTS CONTAINED IN THESE DRAWINGS, OR THAT THE USE OR DISCLOSURE OF ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS MAY NOT INFRINGE PRIVATE RIGHTS OF OTHERS. NO LIABILITY IS ASSUMED WITH RESPECT TO THE USE OF, OR FOR DAMAGES RESULTING FROM THE USE OF, ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS. DRAWINGS MADE AVAILABLE FOR INFORMATION TO BIDDER ARE NOT TO BE USED FOR OTHER PURPOSES, AND ARE TO BE RETURNED UPON REQUEST OF THE FORWARDING CONTRACTOR.

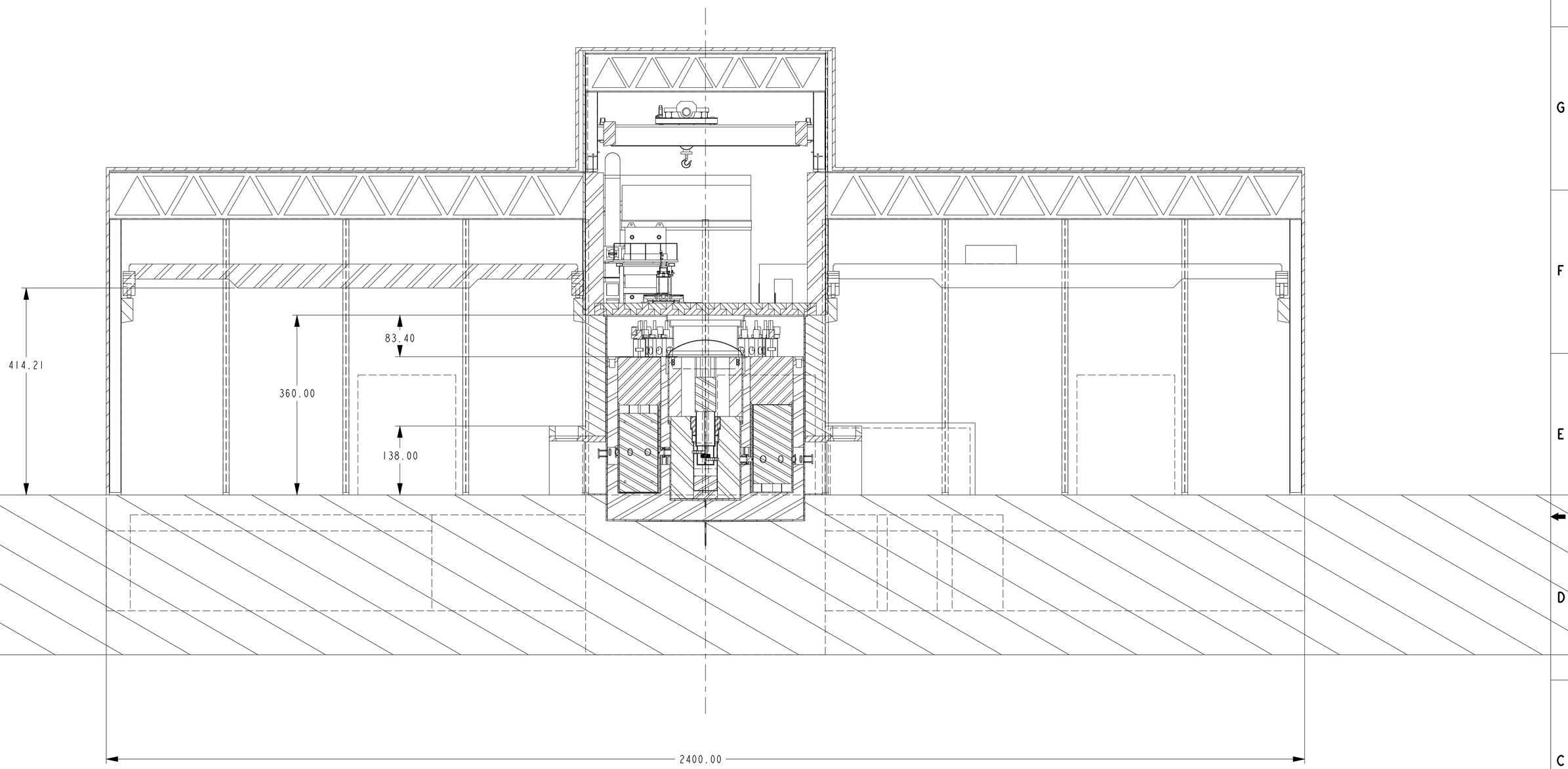
P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



SECTION B-B

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (W/CHART)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

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P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE					REVISION APPROVALS									SQUAD CHECK											

SCALE .013

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DRAWING APPROVALS	DATE
DES	
DRW R. HUERTO	3-10-99
CHK :	:
SECT :	:
DEPT :	:
PE :	:
CR :	:
PJ :	:
REQ :	:
:	:
:	:

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

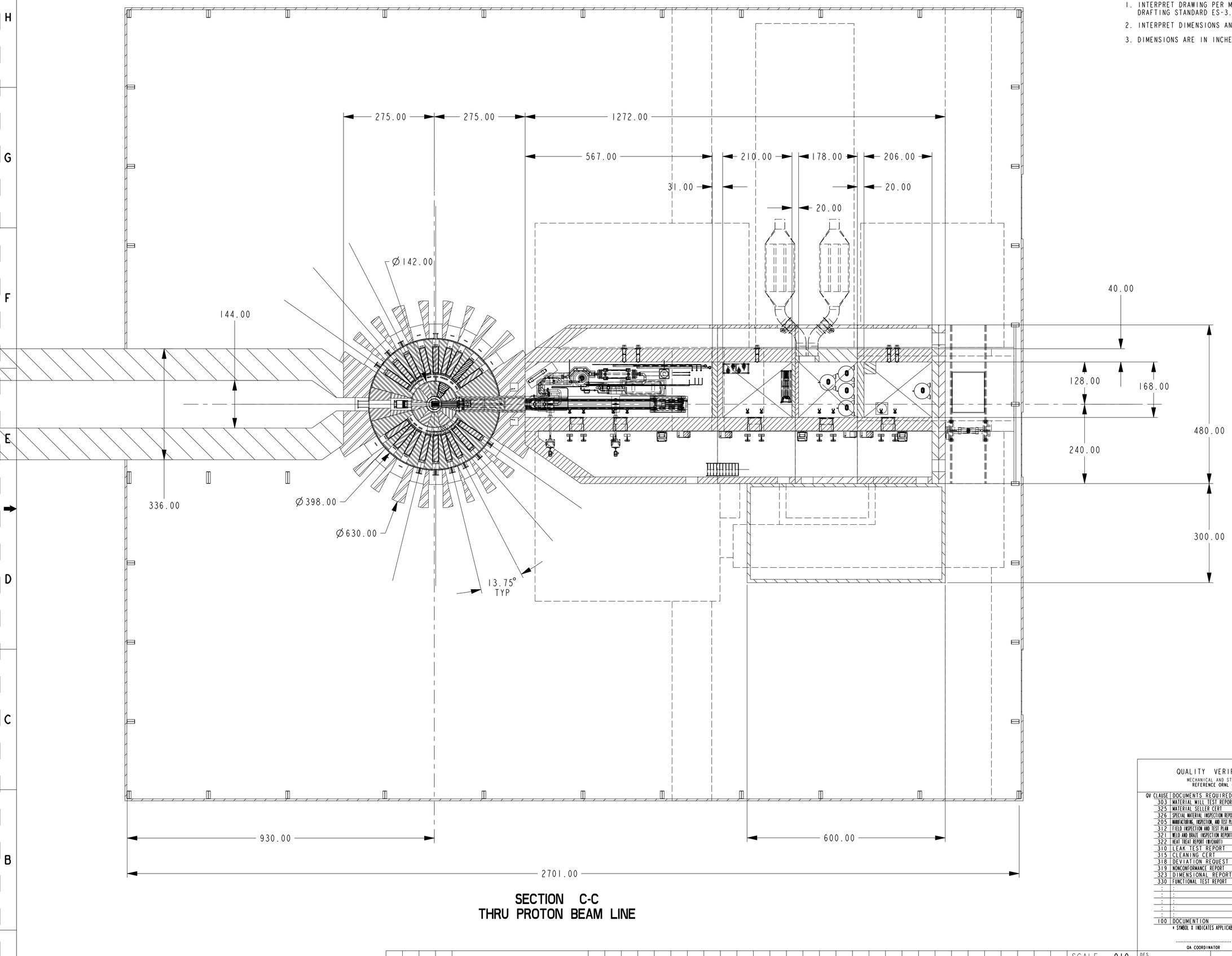
1	48	49	50	PLANT	BLDG	FL	SHT	OF	TYPE	CLASS
3	M	E	U				3	16		

51 52 53 M3E087000A002 REV

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



SECTION C-C
THRU PROTON BEAM LINE

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (W/CHART)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE		REVISION APPROVALS												SQUAD CHECK											

SCALE .010

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DRAWING APPROVALS		DATE
DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
	:	:
	:	:
	:	:

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

1	48	49	50	PLANT	BLDG	FL	SHT	OF	TYPE	CLASS
3	M	E	U				4	16		
51		52		53						REV

M3E087000A002

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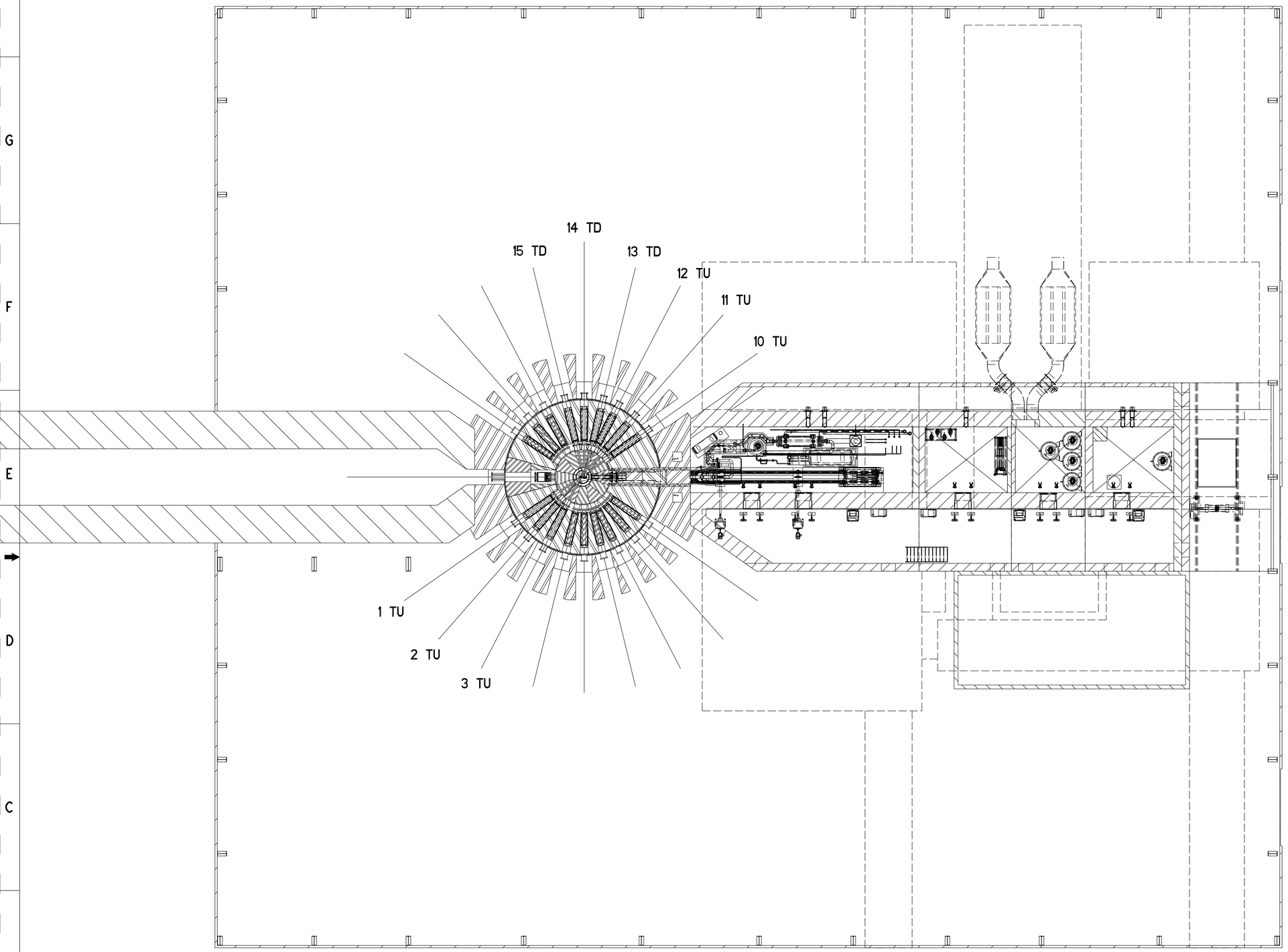
P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



SECTION E-E
THRU UPPER BEAM LINES
(ELEVATION: 7.64" ABOVE PROTON BEAM LINE)

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (W/CHART)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE					REVISION APPROVALS									SQUAD CHECK											

SCALE .010

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
	:	:
	:	:
	:	:
DRAWING APPROVALS		DATE

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

1	48	49	50	PLANT	BLDG	FL	SHT	OF	TYPE	CLASS
3	M	E	U				5	16		

51 52 53 M3E087000A002 REV

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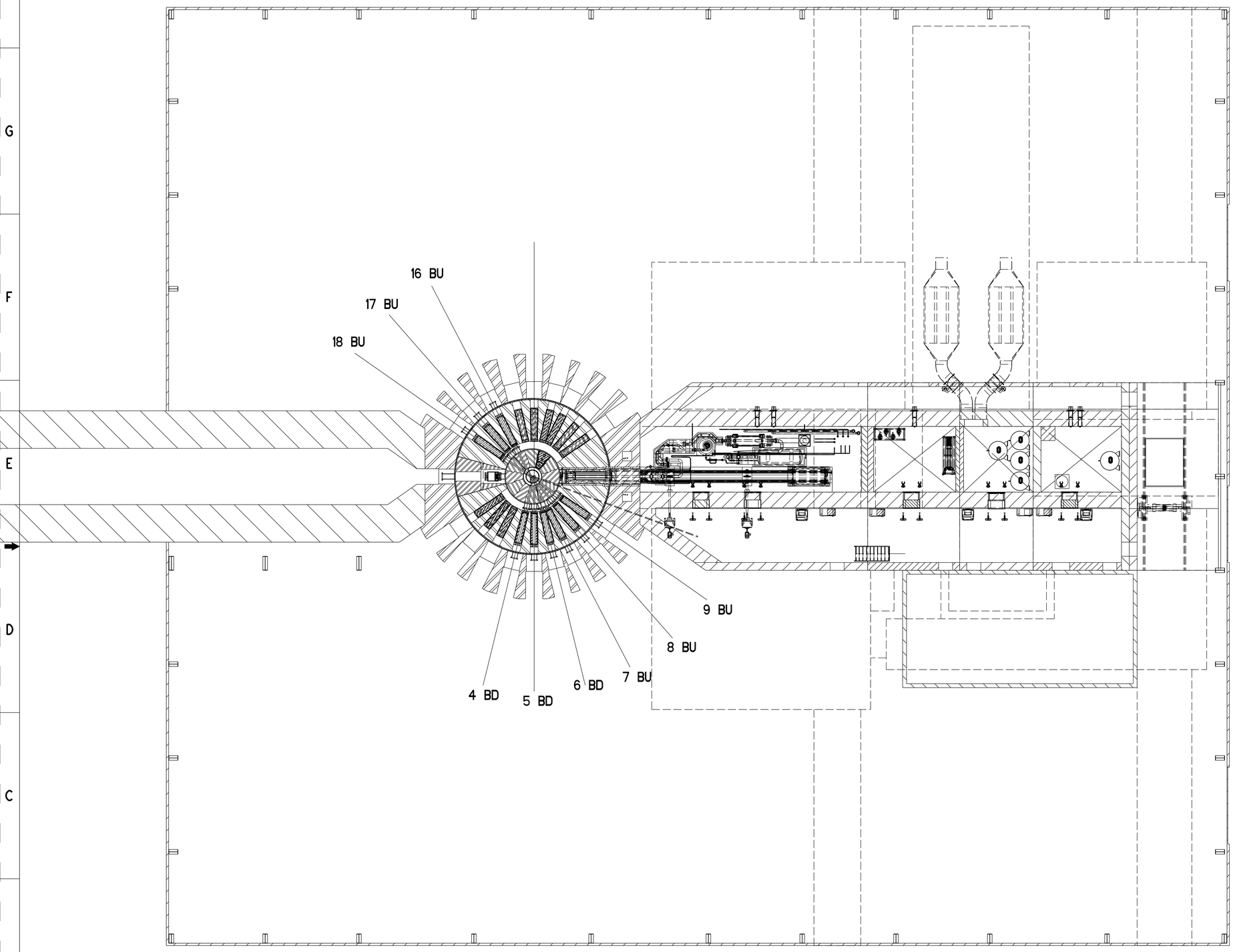
P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



SECTION D-D
THRU LOWER BEAM LINE
(ELEVATION: 6.38" BELOW PROTON BEAM LINE)

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (W/CHART)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE					REVISION APPROVALS									SQUAD CHECK											

SCALE .010

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DRAWING APPROVALS		DATE
DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
	:	:
	:	:
	:	:

LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

1	48	49	50	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
3	M	E	U				6 16		

51 52 53 M3E087000A002 REV

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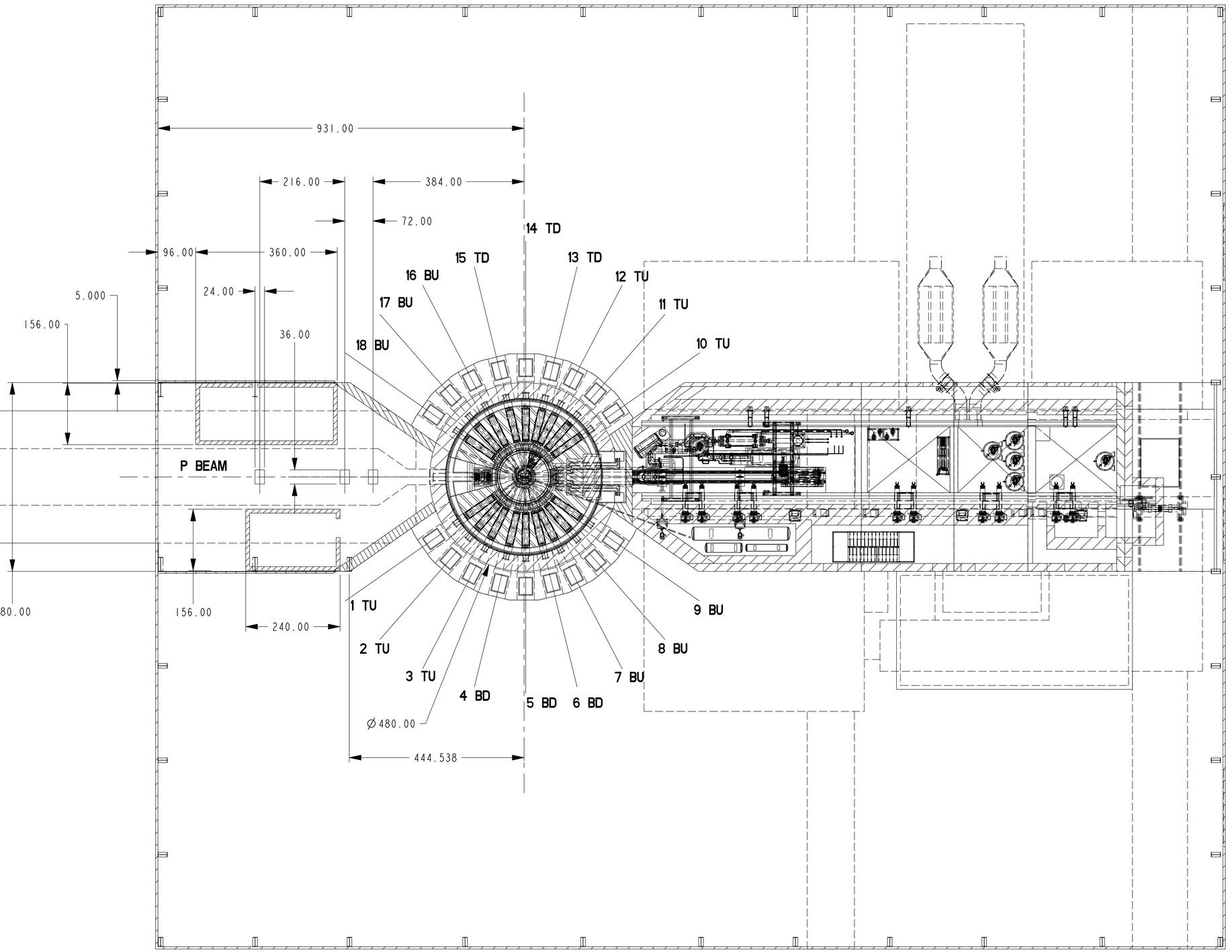
P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



SECTION G-G
JUST BELOW HIGH BAY FLOOR
OVER TARGET HOT CELL
(ELEVATION: 196″ ABOVE PROTON BEAM LINE)

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (MECHANIT)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE	REVISION APPROVALS													SQUAD CHECK											

SCALE .010

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DRAWING APPROVALS		
DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
	:	:
	:	:
	:	DATE

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME: SNS

TOTAL TARGET SYSTEMS

1	48	49	50	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
3	M	E	U			7	16		

51 52 53 M3E087000A002 REV

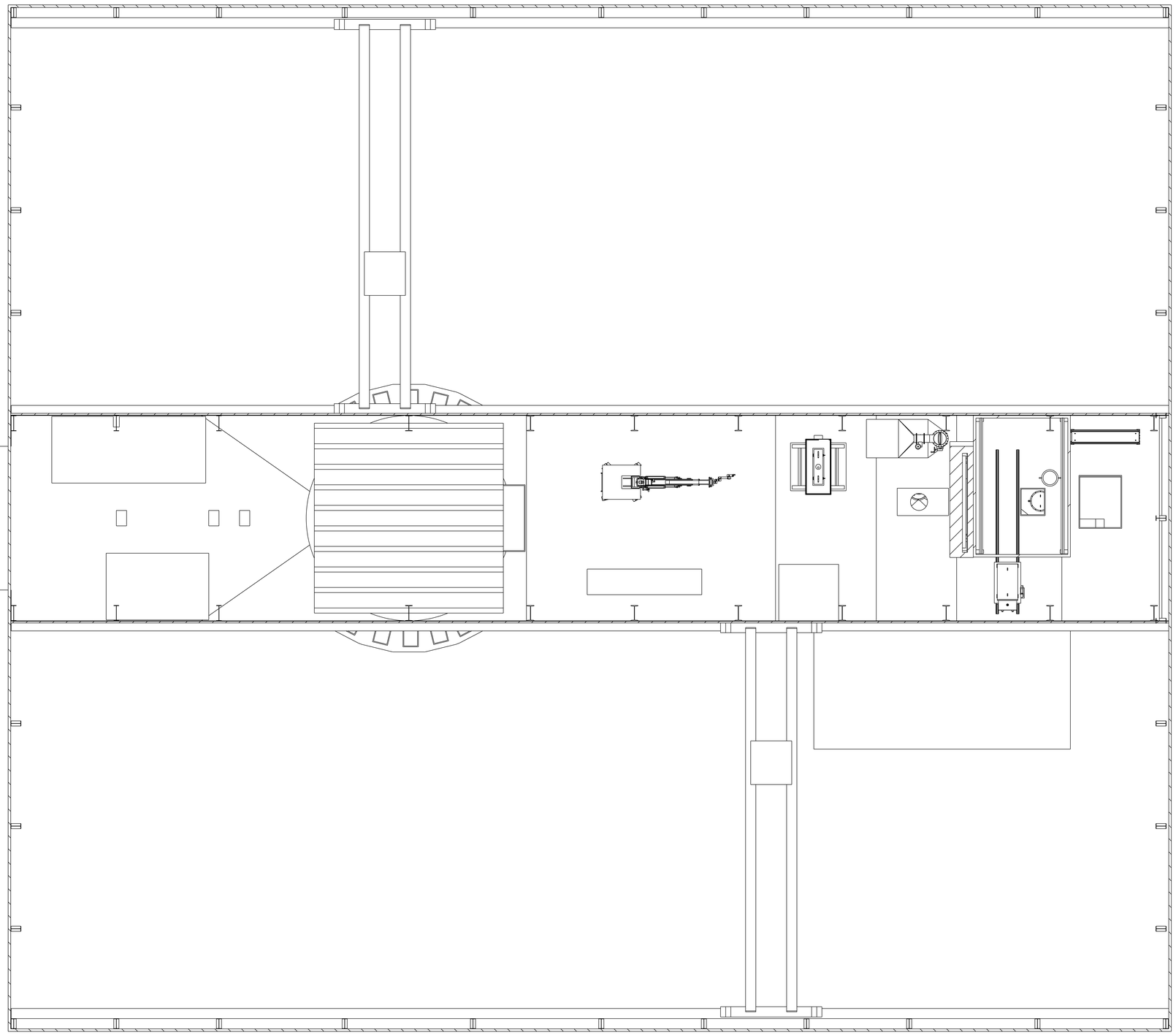
NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY, COMPLETENESS OR USEFULNESS OF THE INFORMATION OR STATEMENTS CONTAINED IN THESE DRAWINGS, OR THAT THE USE OR DISCLOSURE OF ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS MAY NOT INFRINGE PRIVATE RIGHTS OF OTHERS. NO LIABILITY IS ASSUMED WITH RESPECT TO THE USE OF, OR FOR DAMAGES RESULTING FROM THE USE OF, ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS. DRAWINGS MADE AVAILABLE FOR INFORMATION TO BIDDER ARE NOT TO BE USED FOR OTHER PURPOSES, AND ARE TO BE RETURNED UPON REQUEST OF THE FORWARDING CONTRACTOR.

P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



SECTION J-J
(ELEVATION: 462" ABOVE PROTON BEAM LINE)

QUALITY VERIFICATION

MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (W/CHART)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E0870000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE		REVISION APPROVALS												SQUAD CHECK											

SCALE .010

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DRAWING APPROVALS		DATE
DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
	:	:
	:	:
	:	:

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

1	48	49	50	PLANT	BLDG	FL	SHT	OF	TYPE	CLASS
3	M	E	U				8	16		
51		52		53	M3E0870000A002					REV

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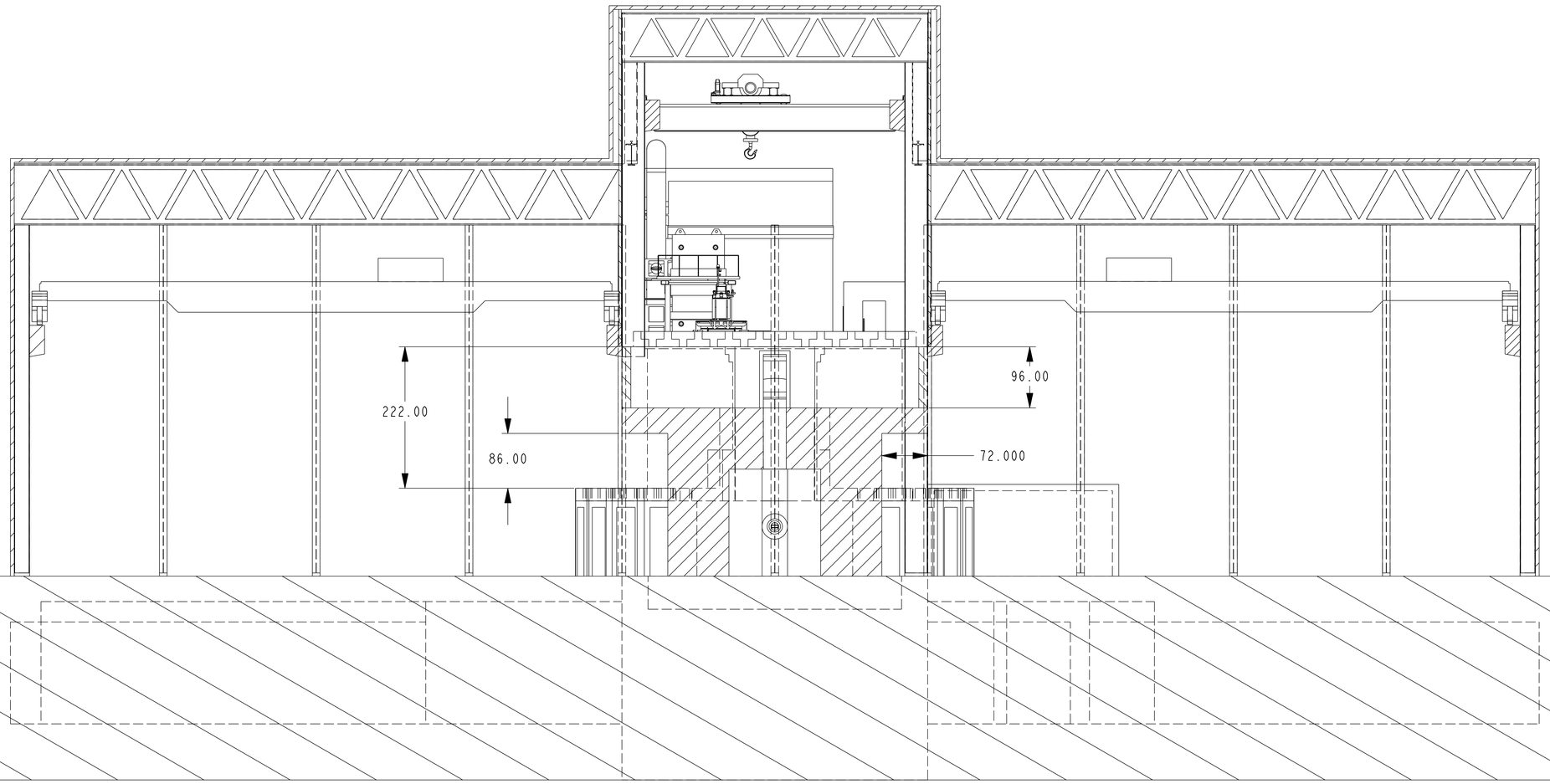
P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



SECTION H-H
THRU PROTON TUNNEL

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (W/CHART)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE					REVISION APPROVALS									SQUAD CHECK											

SCALE .013

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0° 15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DRAWING APPROVALS		DATE
DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
	:	:
	:	:
	:	:

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

1	48	49	50	PLANT	BLDG	FL	SHT	OF	TYPE	CLASS
3	M	E	U				9	16		
51		52		53						

M3E087000A002 REV

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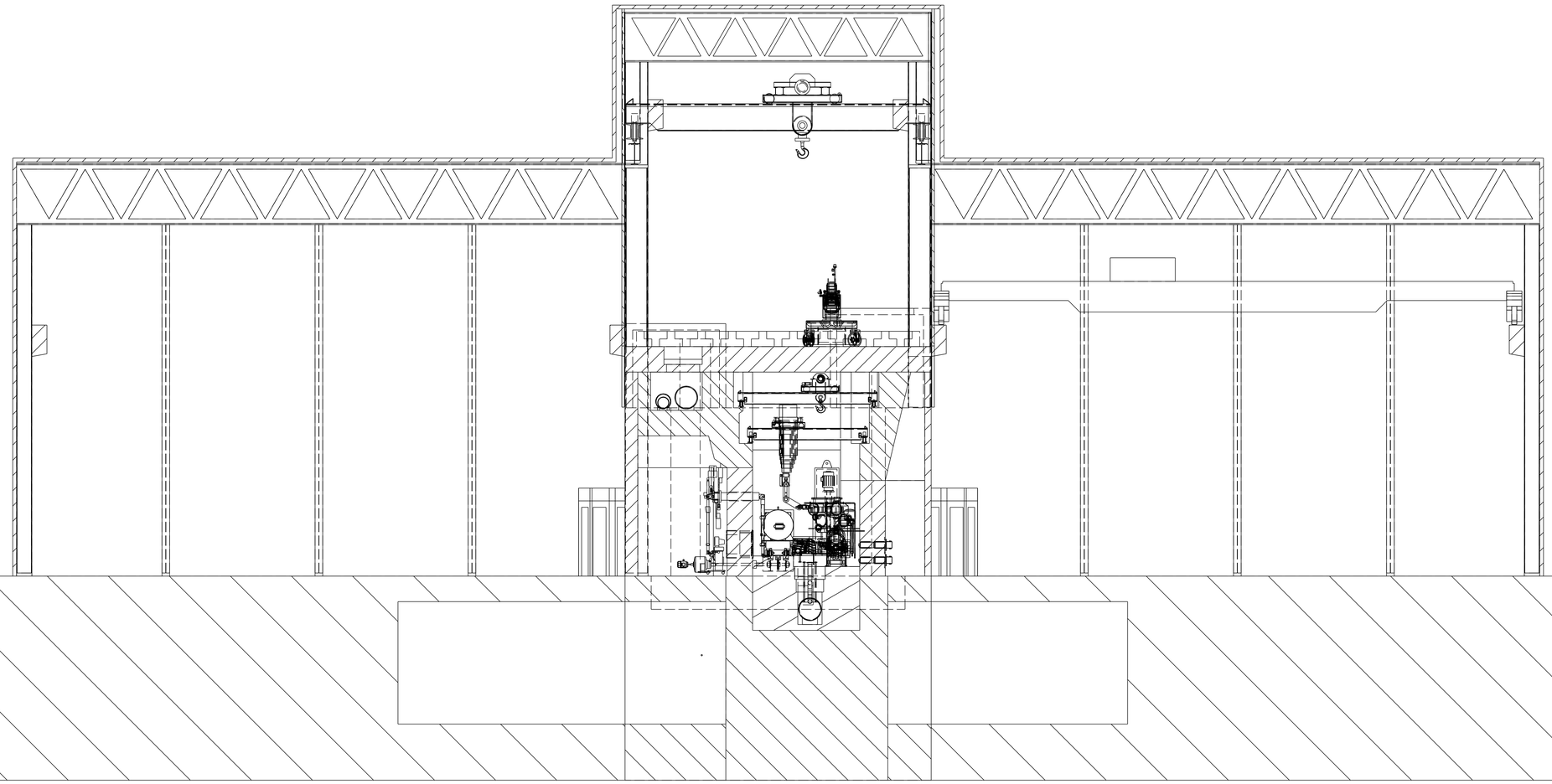
P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



SECTION F-F
THRU HOT CELL

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO #
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (FURNACE)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
100	DOCUMENTION	X

SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY, COMPLETENESS OR USEFULNESS OF THE INFORMATION OR STATEMENTS CONTAINED IN THESE DRAWINGS, OR THAT THE USE OR DISCLOSURE OF ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS MAY NOT INFRINGE PRIVATE RIGHTS OF OTHERS. NO LIABILITY IS ASSUMED WITH RESPECT TO THE USE OF, OR FOR DAMAGES RESULTING FROM THE USE OF, ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS. DRAWINGS MADE AVAILABLE FOR INFORMATION TO BIDDER ARE NOT TO BE USED FOR OTHER PURPOSES, AND ARE TO BE RETURNED UPON REQUEST OF THE FORWARDING CONTRACTOR.

P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION (REVISION OR ISSUE PURPOSE)	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES

REVISION APPROVALS | SQUAD CHECK

SCALE .013

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DES			
DRW	R. HUERTO	3-10-99	
CHK	:		:
SECT	:		:
DEPT	:		:
PE	:		:
CR	:		:
PJ	:		:
REQ	:		:
	:		:
	:		:
	:		:
	:		:
DRAWING APPROVALS		DATE	

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

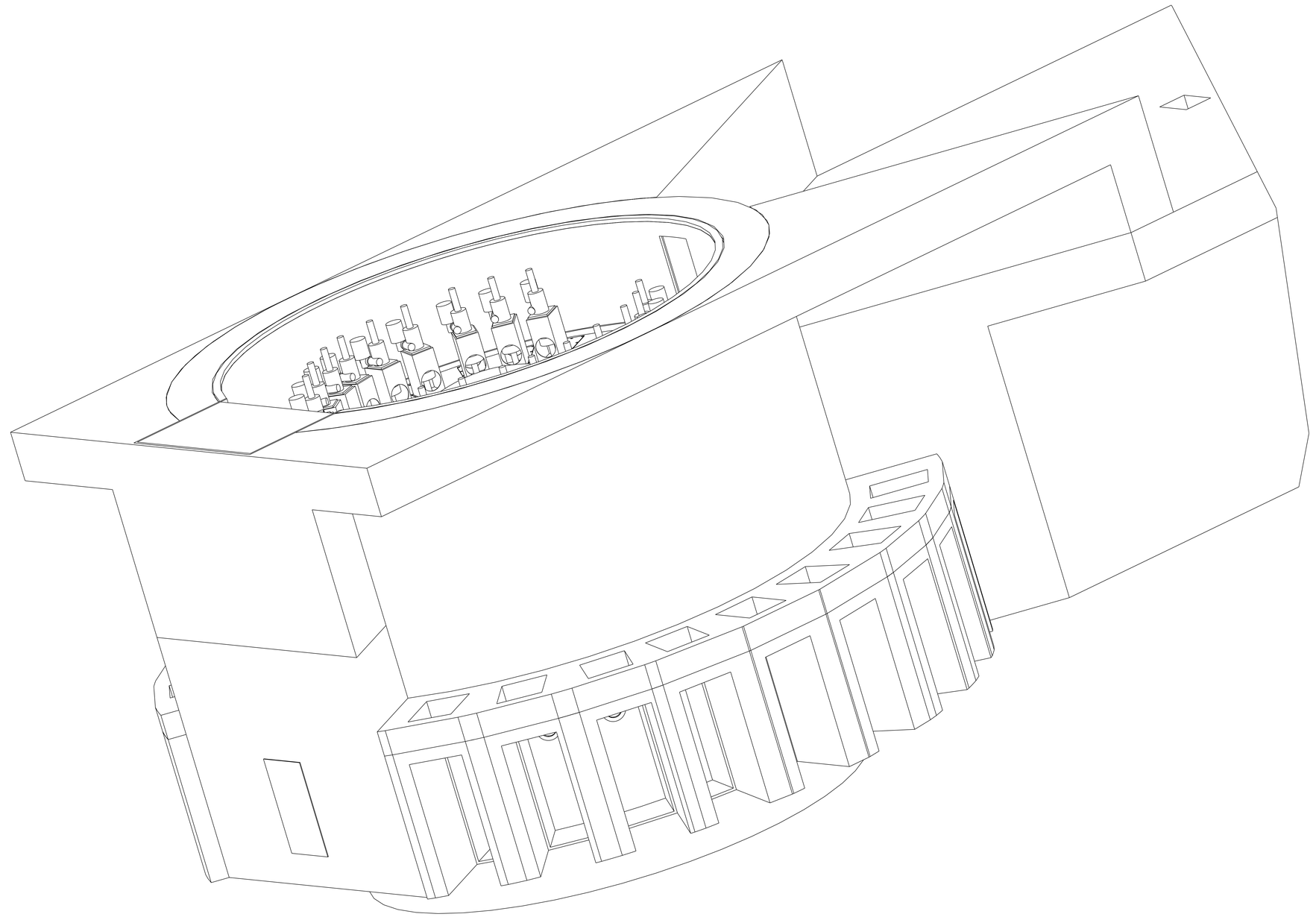
1	48	49	50	PLANT	BLDG	FL	SHT	OF	TYPE	CLASS
3	M	E	U				10	16		

51 52 53 M3E087000A002 REV

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



ISOMETERIC OF 10 TU CHOPPER CAVITY
SCALE 0.030

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (MECHANT)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE					REVISION APPROVALS									SQUAD CHECK											

SCALE .030
TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
	:	:
	:	:
	:	:
DRAWING APPROVALS		DATE

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

1	48	49	50	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
3	M	E	U				11 16		

51 52 53 M3E087000A002 REV

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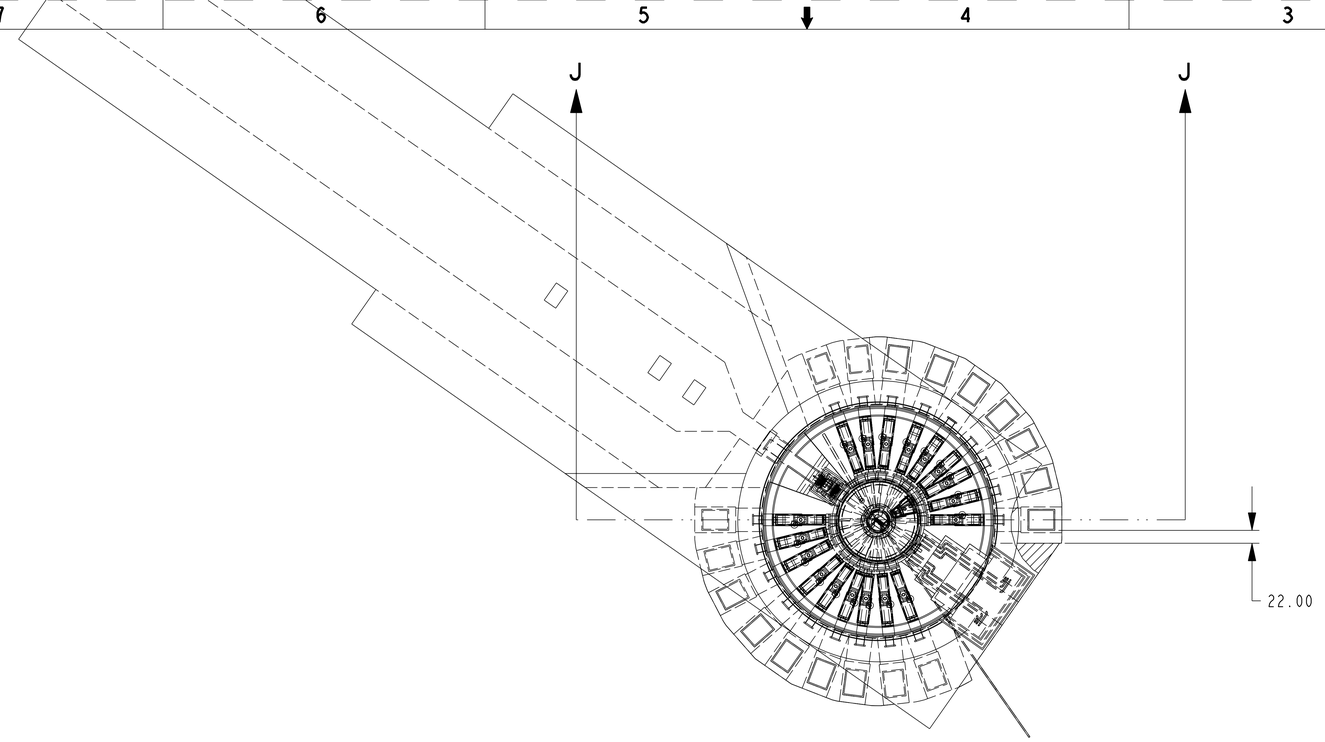
P THIS DRAWING PRODUCED ON PRO-ENGINEER

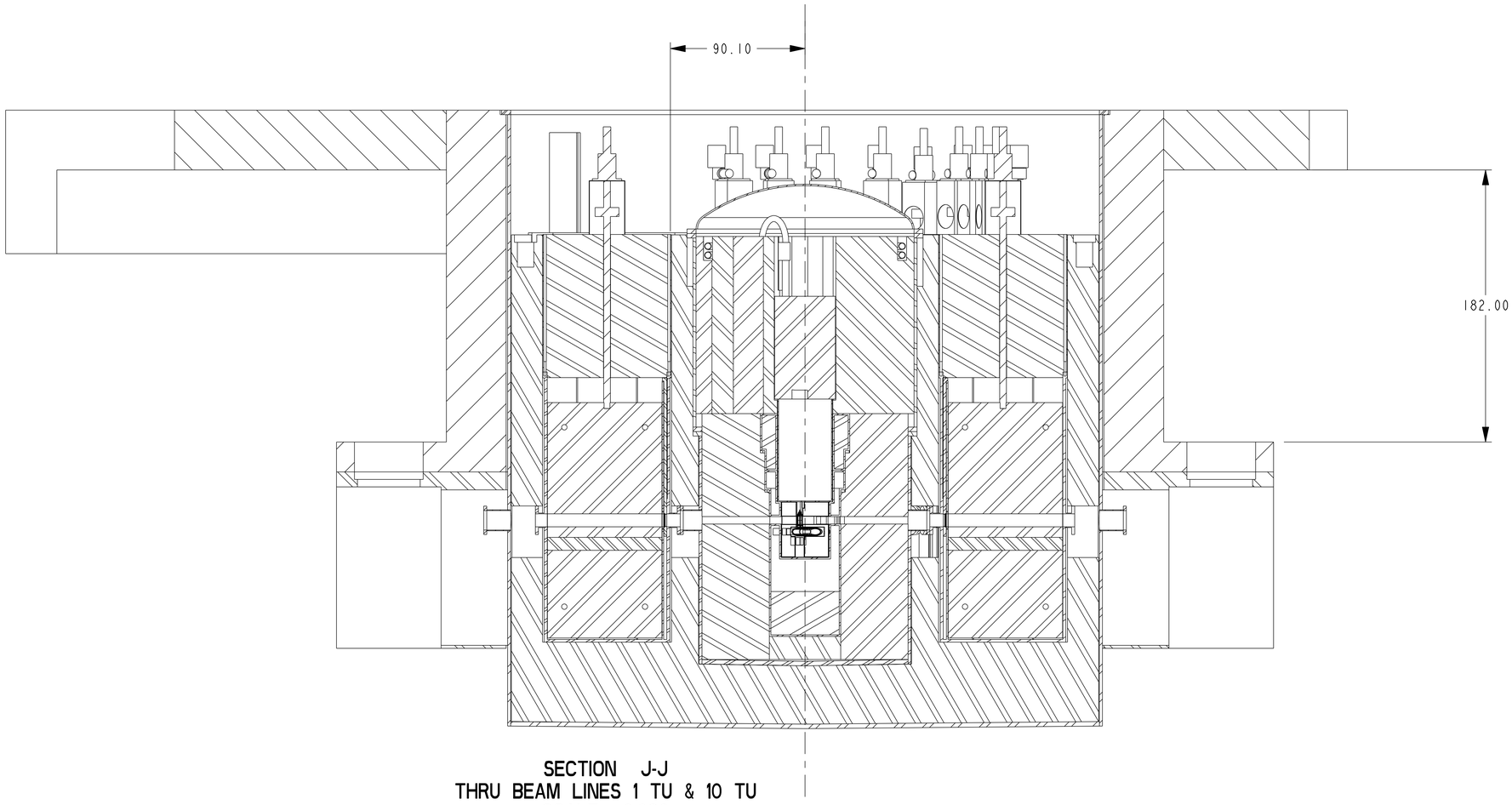
THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.





SECTION J-J
THRU BEAM LINES 1 TU & 10 TU
SCALE 0.030

QUALITY VERIFICATION

MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (W/CHART)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE					REVISION APPROVALS									SQUAD CHECK											

SCALE NOTED

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS	:
XX DECIMALS	±.01
XXX DECIMALS	±.005
ANGLES	±0°15'
BREAK SHARP EDGES	.06 MAX
FINISH	125 UNLESS OTHERWISE SPECIFIED

DES			
DRW	R. HUERTO	3-10-99	
CHK	:		:
SECT	:		:
DEPT	:		:
PE	:		:
CR	:		:
PJ	:		:
REQ	:		:
	:		:
	:		:
	:		:
	:		:
DRAWING APPROVALS		DATE	

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

1	48	49	50	PLANT	BLDG	FL	SHT	OF	TYPE	CLASS
3	M	E	U				12	16		

51 52 53 M3E087000A002 REV

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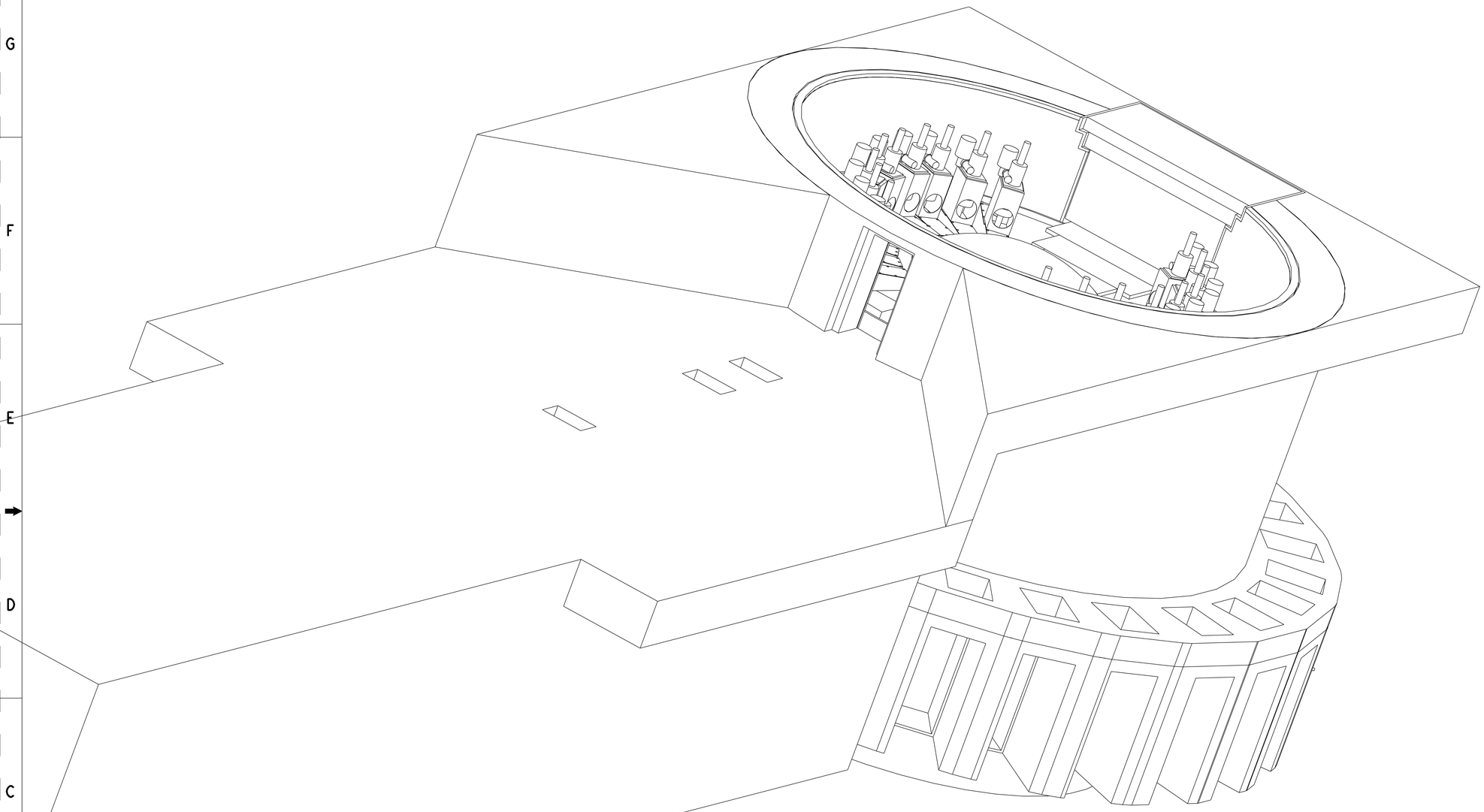
P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



QUALITY VERIFICATION

MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (W/CHART)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:
:	:	:
100	DOCUMENTTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

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P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE					REVISION APPROVALS									SQUAD CHECK											

SCALE .005

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS	:
XX DECIMALS	±.01
XXX DECIMALS	±.005
ANGLES	±0° 15'
BREAK SHARP EDGES	.06 MAX
FINISH	125 UNLESS OTHERWISE SPECIFIED

DRAWING APPROVALS		DATE
DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
:	:	:
:	:	:
:	:	:

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

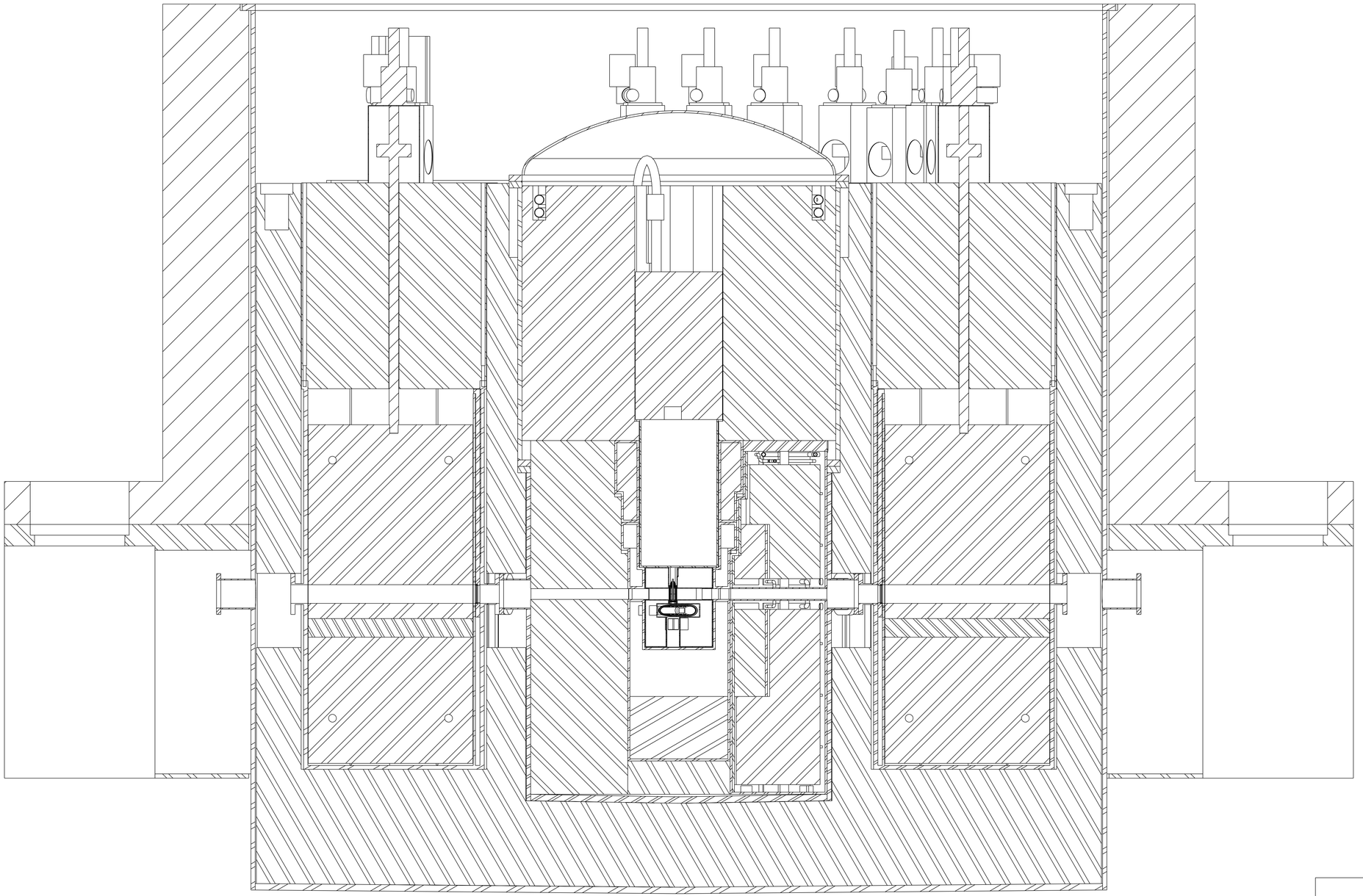
TOTAL TARGET SYSTEMS

I	48	49	50	PLANT	BLDG	FL	SHT	OF	TYPE	CLASS
3	M	E	U				13	16		
51		52		53	M3E087000A002					REV

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

1. INTERPRET DRAWING PER MECHANICAL ENGINEERING DRAFTING STANDARD ES-3.1-2.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



SECTION THRU
BEAM LINES 2 TU & 11 TU

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (MECHANIT)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE					REVISION APPROVALS									SQUAD CHECK											

SCALE .050

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DRAWING APPROVALS		DATE
DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
	:	:
	:	:
	:	:

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
operated for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC-05-84OR21400
Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

1	48	49	50	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
3	M	E	U				14 16		

51 52 53 M3E087000A002 REV

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P THIS DRAWING PRODUCED ON PRO-ENGINEER

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

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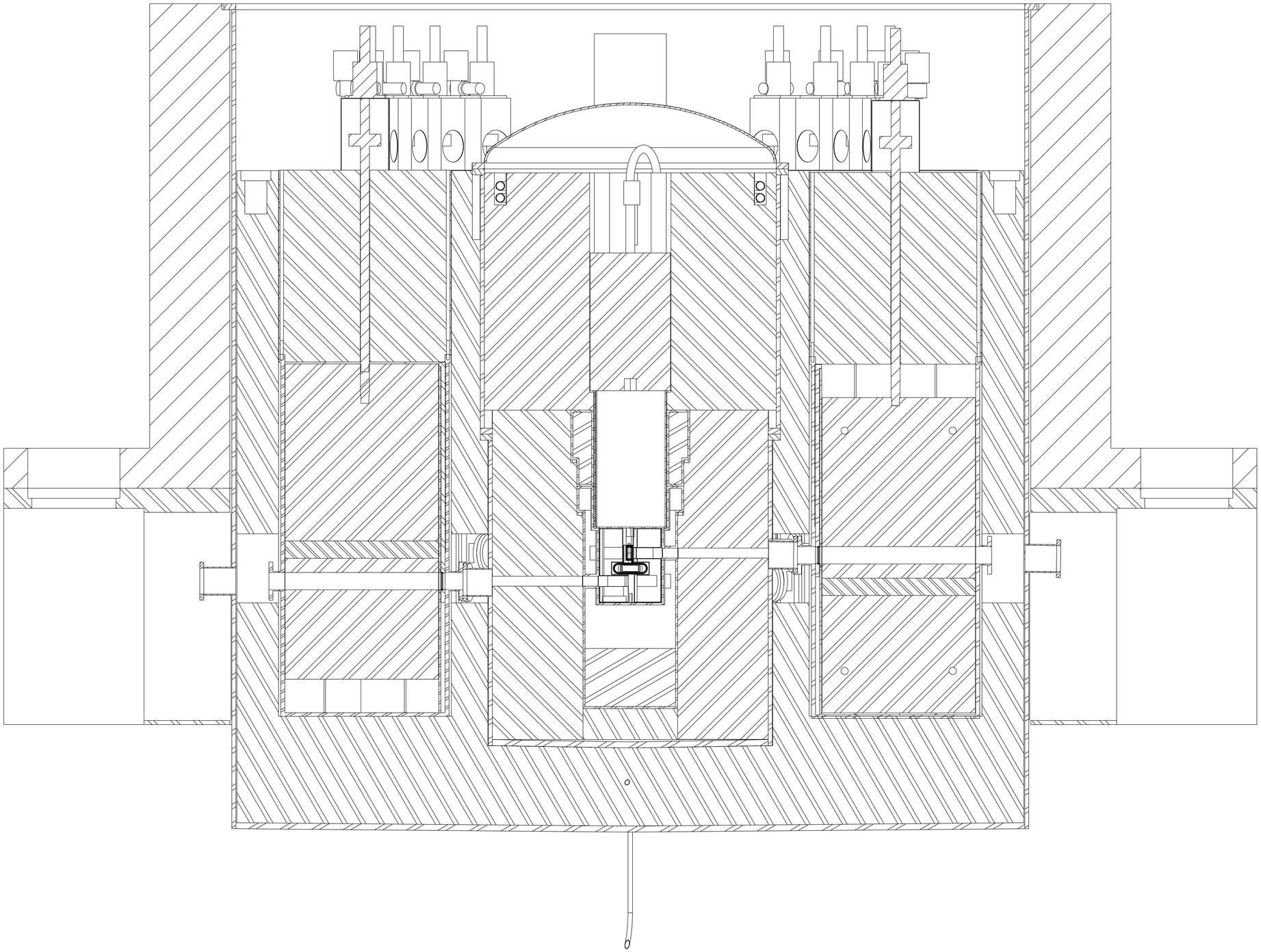
2. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
3. DIMENSIONS ARE IN INCHES.



SECTION THRU
BEAM LINES 5 BD & 14 TD

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (MECHANT)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE					REVISION APPROVALS									SQUAD CHECK											

SCALE .050

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DRAWING APPROVALS		DATE
DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
	:	:
	:	:
	:	:

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
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Oak Ridge, Tennessee • Paducah, Kentucky

PROJECT NAME
SNS

TOTAL TARGET SYSTEMS

1	48	49	50	PLANT	BLDG	FL	SHT	OF	TYPE	CLASS
3	M	E	U				15	16		

51 52 53 M3E087000A002 REV

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CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___

NEXT ASS'Y: | FINAL ASS'Y:

NOTES

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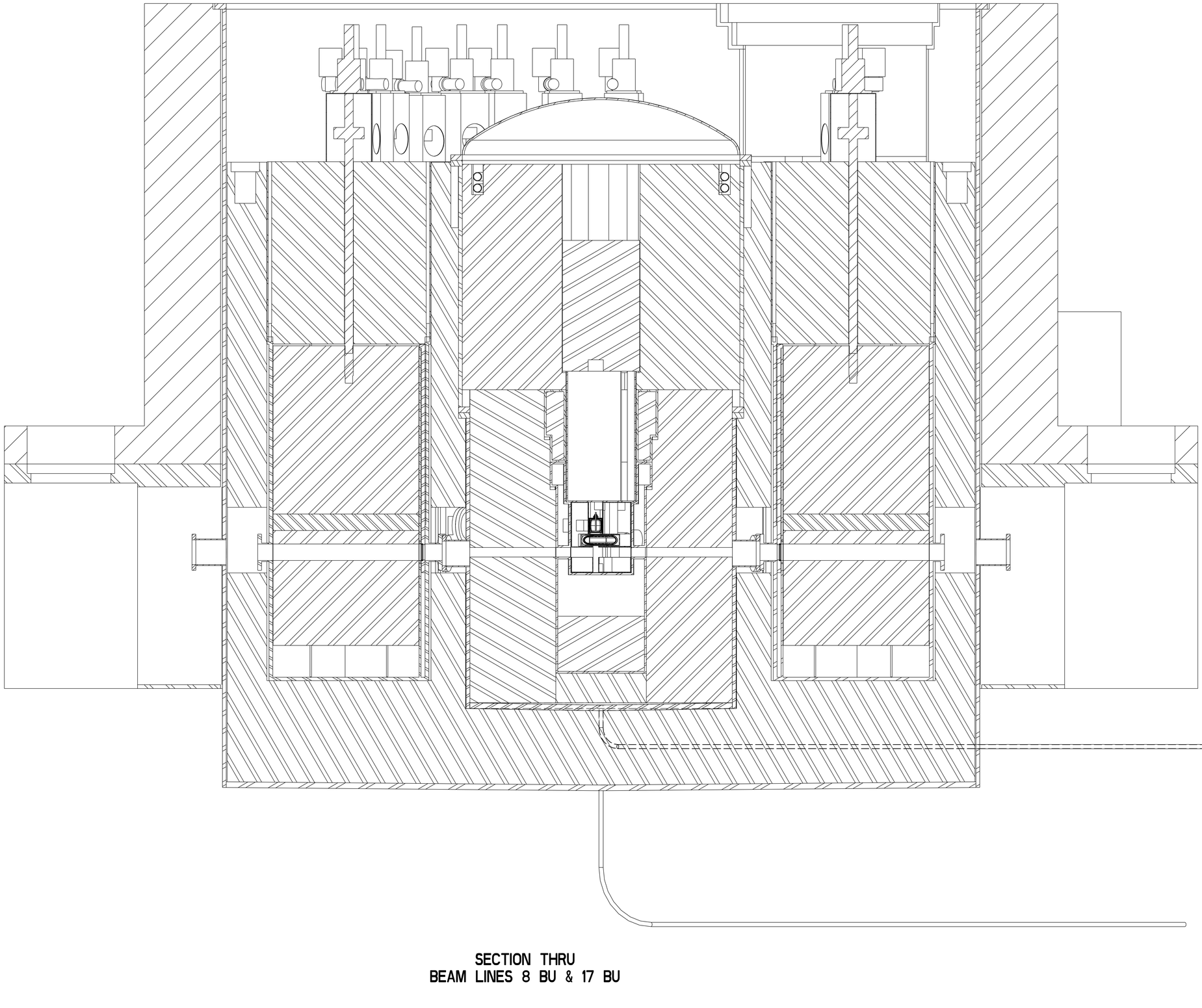

SECTION THRU
BEAM LINES 8 BU & 17 BU

QUALITY VERIFICATION
MECHANICAL AND STRUCTURAL
REFERENCE ORNL QV-001

QV CLAUSE	DOCUMENTS REQUIRED	APPLICABLE TO PART NO *
303	MATERIAL MILL TEST REPORT	X
325	MATERIAL SELLER CERT	X
326	SPECIAL MATERIAL INSPECTION REPORT	X
205	MANUFACTURING, INSPECTION, AND TEST PLAN	X
312	FIELD INSPECTION AND TEST PLAN	X
321	WELD AND BRAZE INSPECTION REPORT	X
322	HEAT TREAT REPORT (MECHANIT)	X
310	LEAK TEST REPORT	X
315	CLEANING CERT	X
318	DEVIATION REQUEST	X
319	NONCONFORMANCE REPORT	X
323	DIMENSIONAL REPORT	X
330	FUNCTIONAL TEST REPORT	X
100	DOCUMENTION	X

* SYMBOL X INDICATES APPLICABLE TO ALL PARTS OR ITEMS

QA COORDINATOR ..... DATE .....

RPE

REV. XX DATE XX/XX/XX

M3E087000A002

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	A-E	BY	CHK	SECT	DEPT	DATE	PE	REQ	DATE	LM-ES	DATE	DOE	DATE	QA	CV	EC	EE	EM	IE	M	PD	SE	ST	XAD	PES
				REVISION OR ISSUE PURPOSE		REVISION APPROVALS												SQUAD CHECK											

SCALE .050

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XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DES		
DRW	R. HUERTO	3-10-99
CHK	:	:
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
	:	:
	:	:
	:	:
	:	DATE

DRAWING APPROVALS

LOCKHEED MARTIN LOCKHEED MARTIN ENERGY SYSTEMS, INC.
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51 52 53 M3E087000A002 REV

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CHANGE CONTROL SYSTEM___XXXX___
ENGINEERING PROCEDURE___XXXX___