

**HI-TECH MANUFACTURING
4637 N. 25TH AVE
SCHILLER PARK, IL 60176
VOC: 847-678-1616
FAX: 847-678-1617**

**OUTLINE COVERING WRITTEN REQUIREMENTS
LISTED IN STATEMENTS OF WORK FOR
DOCUMENT NO. L143-00093
LCLS UNDULATOR SUPPORT
AND
MOTION SYSTEM ASSEMBLY**

**(SECTION 4.2) PROGRAM PLAN
(SECTION 4.4) PROGRAM SCHEDULE
(SECTION 4.8) INSPECTION AND TESTING PLAN
(SECTION 4.9) QUALITY VERIFICATION PLAN**

LIST OF ATTACHED DOCUMENTS

- (01) OUTLINE OF WRITTEN REQUIREMENTS (REV 0)**
- (02) CONTROL PLANS (REV 0)**
- (03) METALEX PROGRAM AND INSPECTION PLAN (REV 0)**
- (04) SHOP ROUTER (REV 0)**
- (05) KEY EMPLOYEE LIST (REV 0)**
- (06) HI-TECH ISO 9001 (2000) QUALITY MANUAL**
- (07) HI-TECH ISO 9001 (2000) QUALITY PROCEDURES**
- (08) INSPECTION CONTROL RECORD**
- (09) AWS WELDER QUALIFICATION TEST RECORD**
- (10) LIST OF APPROVED VENDORS (REV 0)**

Prepared by: Alex Volchek_____ Date _05/29/07

Joseph Bourke_____ Date _05/29/07

(SECTION 4.2)

4.22 Program plan

4.2.2.1 Program Objectives

- (1) Receive and inspect provided components
 - (a) Received per ISO 9001 procedure and documented electronically
- (2) Manufacture required assembly components
 - (a) Processed per ISO 9001 procedure
 - (b) Inspected per ISO 9001 procedure
- (3) Purchase required assembly components
 - (a) Purchased, received and inspected per ISO 9001 procedure
- (4) Manufacture/purchase/provide, tools, gages and fixtures required for the testing and assemble of undulator support and motion system assembly
- (5) Assemble, inspect and document test results
 - (a) Ref. doc L143-00093, L143-00094 and L143-00095
- (6) Package and ship undulator supports and motion system assembly
 - (a) Ref. doc L143-00093

4.2.2.2 Summary Schedule

- (1) Ref. 4.4.2.1 and 4.4.2.2 of this document
- (2) Manufacturing is scheduled to start 05/29/07 and first article to be delivered by

08/03/07

4.2.2.3 Management Program

- (1) Ref. Key Personnel List

4.2.2.4 Key Personnel List

- (1) Ref. Key personnel list with Hi-Tech/ANL personnel interaction/communication

4.2.2.5 Hi-Tech/ANL Communication/Interface Personnel List

- (1) Ref. Key personnel list

4.2.2.6 Information System

- (2) Contract, invoices, vendor invoices are recorded electronically and hard copies are stored in Hi-Techs front office. Inspection and test data, and vendor certification and prints are keep electronically and hard copies are stored in the project office while the contact is still open

4.2.2.7 N/A

4.2.2.8 Subcontractors

- (1) Ref. Metalex Program Plan and Inspection plan
- (2) All raw material, assembly components (hardware) purchased and outside processes performed for this project are class one suppliers under Hi-Tech's ISO 9001, 2000 procedures. Certifications will be required for all raw materials, component purchased and outside processes performed. All lead times are within Industry standards.
- (3) Ref. List of Approved Vendors

4.2.2.9 Resources

- (1) Equipment and personnel
 - (a) For inspection

Three inspectors
Three calibrated CMM measuring machines
One calibrated optical comparator
One calibrated microscope
Assortment of standard gages calibrated per ISO 9001 procedure
(b) For manufacturing
Sixty shop employees
Twenty five vertical CNC milling machines
Seven CNC horizontal milling machines
Fourteen CNC lathe
Four surface grinders
Nine manual milling machine
Four manual lathe machines
Four welding machines
Sixty shop employees

4.2.2.10 Control Plan

- (1) Ref. control plan

(SECTION 4.4)

4.41 Program schedule

4.4.2.1 Major Milestones

- (1) Receive supplied components
Go/no go decision point 05/25/07
Start 05/25/07 completion 12/01/07
- (2) Manufacturing required components
Go/no go decision point 05/25/07
Start 05/25/07 completion 12/01/07
- (3) Purchasing of required components and raw material
Go/no go decision point 05/25/07
Start 05/25/07 completion 12/01/07
- (4) Assembly of Units
Go/no go decision point 06/29/07
Start 06/29/07 completion 01/04/08
- (5) Packaging and shipping of assembled Units
Go/no go decision point 08/03/07
Start 08/01/07 completion 01/17/08

4.4.2.2 Second Level Milestones

- (1) Receive and inspect supplied components
Supplied Component need by 05/25/07
Go/no go decision point 05/25/07
Start 05/25/07 Completion 12/01/07
- (2) Manufacturing required components
Manufacture, inspect, collect data
Go/no go decision point 05/25/07
Start 05/25/07 Completion 12/01/07
- (3) Purchasing of required components and raw material
Order, receive and inspect required assemble components and raw material
Go/no go decision point 05/25/07
Start 05/25/07 Completion 12/01/07
- (4) Purchase required tooling and equipment
Go/no go decision point 05/25/07
Start 05/25/07 Completion 07/01/07

- (5) Train personnel
 - Go/no go decision point 05/25/07
 - Start 05/25/07 Completion 07/01/07
- (6) Assemble, inspect and collect data
 - Go/no go decision point 06/29/07
 - Start 06/29/07 Completion 01/04/08
- (7) Packaging and shipping of assembled Units
 - (a) Design approved packaging
 - Go/no go decision point 07/25/07
 - Start 07/25/07 Completion 01/17/08
 - (b) Package, ship and deliver
 - Go/no go decision point 07/29/07
 - Start 08/01/07 Completion 01/24/08

(SECTION 4.8)

INSPECTION AND TEST PLAN

- (1) Ref. Control plan
- (2) Ref. Inspection control record
- (3) Ref. Shop router (sample)
- (4) Ref. ISO 9001 (2000) Quality manual and Procedures

(SECTION 4.9)

QUALITY ASSURANCE

- (1) Ref. Control plan
- (3) Ref. Inspection control record
- (4) Ref. Shop router (sample)
- (5) Ref. ISO 9001 (2000) Quality manual and Procedures

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0067		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007 Date (Rev.)						
Part Number/Latest Change Level L1430401-200000 3		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A						
General assembly NAME		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A						
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A						
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	PRODUCT/PROCESS SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE			CONTROL METHOD
10	material receiving	n/a		Components	unload truck,put material in incoming inspection area		collect shipping documents	check document. & p.o.	n/a	n/a	count and fillout router	n/a
20	incoming inspection	n/a		Components	check dimensions per P.O.,collect certificate		collect shipping documents	check document. & p.o.Check records per I143-00093 4.5.3.2. Dynamic test L143-00094	lot	lot	incoming insp. Procedure	separate
30	Assemble	Hi-tech		L1430802-200000	Assemble all components per print L1430802-20000 And SOW-L143-000934.7.1.		Assemble all components per print L1430802-20000 And SOW-L143-00093 Marking per SOW 4.1.8.3.	Check all quality records test per SOW I143-00093 4.5.3.1.	every part	every part	Inprocess inspection, final inspection	Separate, adjust for all parameters

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Control Plan Number CP0067		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007		Date (Rev.)				
Part Number/Latest Change Level L1430401-200000 3		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A						
General assembly NAME		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A						
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A						
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	PRODUCT/PROCESS SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE			CONTROL METHOD
40	Packaging	Hi-tech		L1430802- 200000	Create & pack in Specially designed crate		Create & pack in Specially designed crate per SOW 4.1.9.1.	n/a	every part	every part	Inprocess inspection	Separate, adjust for all parameters
110	Final Inspection	Ins. Dep.		L1430802- 200000	Final ins. Per print, Hi-tech ISO9001 proc. SOW L143-00093		Assemble all components per print L1430802-20000 And SOW-L143- 00093 Marking per SOW 4.1.8.3.	final inspection ISO procedure	every part	every part	final inspection ISO procedure SOW I143- 00093	Separate,

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0066		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007 Date (Rev.)						
Part Number/Latest Change Level L1430401-100101 5		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A						
NAME Single cam actuator housing		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A						
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A						
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	PRODUCT/PROCES SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE			CONTROL METHOD
10	material receiving	n/a		raw material	unload truck,put material in incoming inspection area		collect shipping documents	check document. & p.o.	n/a	n/a	count and fillout router	n/a
20	incoming inspection	n/a		raw material	check dimensions per P.O.,collect certificate		4.5" x 5.625" x 10.12" alum. 6061-t6	12" caliper, collect certificates	lot	n/a	incoming insp. Procedure	separate

CONTROL PLAN

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 Production

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Part Number/Latest Change Level L1430401-100101 5		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A						
NAME Single cam actuator housing		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A						
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A						
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG, TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	PRODUCT/PROCESS SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE			CONTROL METHOD
30	Milling.Machi part	CNC-Mill mach.#601 Horizontal		Mach.part In size 25+/-0.1 65+/-0.1 63.5+/-0.1 122+/-0.1 142+0/.05 23+/-0.2 m5x.8 tap 62.5+/- .1 60deg 45deg 90 deg m140x1.5 228+/- .1 45+/- .08 208+/- .08 222+/- .08 18dia 51+/- .08 10 140+/- .08 30+/- .08 102.4 119 224+/- .01 15+/- .08 65+/- .01 95+/- .08 1/4-20 tap	Place part in the jaws & clamp		25+/- 65+/- 0.1 0.1 63.5+/-0.1 122+/-0.1 254+0/.05 23+/-0.2 m5x.8 tap 62.5+/- .1 60deg 45deg 90 deg m140x1.5 228+/- .1 45+/- .08 18dia 51+/- .08 10 140+/- .08 30+/- .08 102.4 224+/- .01 15+/- .08 65+/- .01 .08 tap 142+0.0/- .05	6" caliper 6" caliper 6" caliper CMM Dig. height gage 6 caliper. Thread gage 6" caliper Dig. height gage CMM CMM thread gage 6 caliper. 6 caliper. pin gage 6 caliper. pin gages 6" caliper 6" caliper 6 caliper. 6 caliper. 6 caliper. 6 caliper. 6" caliper thread gage CMM	every3d part	every3d part	Inprocess inspection, final inspection	Separate, adjust for all parameters

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Prototype
 Pre-Launch
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NAME Single cam actuator housing		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A						
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A						
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS				REACTION PLAN		
			NO	PRODUCT		PROCESS	PRODUCT/PROCESS SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE		CONTROL METHOD	
40	Milling.Machi part	CNC-Mill mach.#601 Horizontal		Mach.part In size dia54+/- .08 51.976+/- .015 77.51+ .1/-0 38+/- .08 53+/- .08 46.979+/- 0.013 52+ .1/-0 perp. to D.02 concent..02 perp. to C&D .03 perp. to C.02 m4x.7 22.5 34.8 25.4 flatness C .02	Place part in the jaws & clamp		dia54+/- .08 51.976+/- .015 77.51+ .1/-0 38+/- .08 53+/- .08 46.979+/-0.013 52+ .1/-0 perp. to D.02 concent..02 perp. to C&D .03 perp. to C.02 m4x.7 22.5 34.8 25.4 flatness C .02 engraving accordingly with part#	Bore gage Bore gage. Bore gage 6 caliper. 6 caliper. Bore gage Bore gage Dig. height gage CMM CMM CMM thread gage 6 caliper. 6 caliper. 6" caliper CMM visually	every part	every part	Inprocess inspection	Separate, adjust for all parameters
100	Clear Anodize	Mike's anidize		L1430401- 100101	Clear Anodize Handle with care.		Clear Anodize	check insp.record document. & p.o. Visually	every lot	every lot	final inspection ISO procedure	Separate,

CONTROL PLAN

Prototype
 Pre-Launch
 Production

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NAME Single cam actuator housing		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A						
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A						
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS				REACTION PLAN		
			NO	PRODUCT		PROCESS	PRODUCT/PROCES SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE		CONTROL METHOD	
110	Final Inspection	Ins. Dep.		L1430401-100101	Final ins. Per print, Hi-tech ISO9001 proc. SOW L143-00093		Critical parameters	final inspection ISO procedure	every part	every part	final inspection ISO procedure	Separate,

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0061			Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007		Date (Rev.)			
Part Number/Latest Change Level L1430401-100103 3			Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A					
NAME Cam shaft 1.5mm exentricity			Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A					
Supplier/Plant Hi-Tech Manufacturing		Supplier Code	Other Approval/Date (If Req'd.) N/A				Other Approval/Date (If Req'd.) N/A					
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	RODUCT/PROCES SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE SIZE FREQ.			CONTROL METHOD
10	material receiving	n/a		raw material	unload truck,put material in incoming inspection area		collect shipping documents	check document. & p.o.	n/a	n/a	count and fillout router	n/a
20	incoming inspection	n/a		raw material	check dimensions per P.O.,collect certificate			6" caliper	lot	n/a	incoming insp. Procedure	separate
30	Saw-cut blank of material	Saw-cut mach.#131		Blank of material	Place whole bar in jaws,clamp.		7.25	12" caliper	4	per hr	Counts at end of the lot in router	Adjust
40	Milling.Machi part	CNC-Mill mach.#601		Mach.part center drill excentric 1.5mm	Place part in the fixture & clamp			digital ind.	every3d part	every3d part	Inprocess inspection	Separate, adjust
50	Turning 1 side	CNC-turn mach.Fudgi leave stock 0.25mm for crittical dias.		Mach.part In size 28.15+0.1 27.4+/-0.2 27+/-0.2 24.4+/-0.2 25.2+0.1 23+/-0.2	Place part in the jaws & clamp		28.15+0.1 27.4+/-0.2 27+/-0.2 24.4+/-0.2 25.2+0.1 23+/-0.2 17+/-0.2	micrometer blade microm. 6" caliper blade micr. micrometer blade microm. 6" caliper thread gage	every2nd part	every2nd part	Inprocess inspection	Separate, adjust Separate,adjust Separate,adjust Separate, adjust Separate,adjust Separate,adjust Separate,adjust

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0061		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007 Date (Rev.)						
Part Number/Latest Change Level L1430401-100103 3		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A						
NAME Cam shaft 1.5mm exentricity		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A						
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A						
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS				REACTION PLAN		
			NO	PRODUCT		PROCESS	PRODUCT/PROCESS SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE SIZE FREQ.		CONTROL METHOD	
60	Turning 2nd side	CNC-turn mach.Fudgi leave stock 0.25mm for critical dias.		42+/-0.2 30+/-0.02 16+/-0.2 10+/-0.02 12.7+0.03 35.3+0.25 16.7+/-2 34+/-2 16.0+/ 	Place part in the jaws & clamp		42+/-0.2 30+/-0.02 16+/-0.2 10+/-0.02 12.7+0.03 35.3+0.25 16.7+/-2 34+/-2 16.0+/ 	6" caliper 6" caliper opti.comp. 6" caliper bore gage micrometer bore gage blade micr. 6" caliper	every2nd part	every2nd part	Inprocess inspection	Separate, adjust Separate,adjust Separate,adjust Separate,adjust Separate,adjust Separate,adjust Separate,adjust Separate, adjust
70	Grinding.Comple te part	Grind lap		Grind part In size 34.985 24.988 27.989 safe excentic.	Place part between centers		34.985+/-0.004 24.988+/-0.004 27.989+/-0.004 1.5+/-0.03 mcf 0.8	dig.micromet. dig.micromet. dig.micromet. dial.indicator surface test. check insp.record document. & p.o.	every part	every part	Inprocess inspection, final inspection	Separate, adjust Separate,adjust Separate,adjust

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0061		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007		Date (Rev.)					
Part Number/Latest Change Level L1430401-100103 3		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A							
NAME Cam shaft 1.5mm exentricity		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A							
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A							
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS				REACTION PLAN			
			NO	PRODUCT		PROCESS	RODUCT/PROCES SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE SIZE FREQ.		CONTROL METHOD		
80	Milling.Machi part	CNC-Mill mach.#601		Mach.part flats & key way , mark each shaft with part# and excentric parameters 1.5		Place part in the fixture & clamp		5.0+/- .2 15+/- .2 12+/- .2 3.3+.2 dia M3x .5 thru	set of blocks 6" caliper 6" caliper set of pins thread gage	every3d part	every3d part	Inprocess inspection, final inspection	Separate, adjust
90	EDM	Americut Wire Edm		14.3+0.15/-0 3.18+0.5/-0 symmetry .02 8.0+/- .2 5+/.2		Handle with care. Put proper label for each package		14.3+0.15/-0 3.18+0.5/-0 symmetry .02 8.0+/- .2 5+/.2	check insp.record document. & p.o.	every lot	every lot	final inspection	Separate,
100	Black oxide	Express pl.		Black oxide in accordance with SOW L143-00093 3.2.3		Black oxide in accordance with SOW L143-00093 3.2.3		Black oxide in accordance with SOW L143-00093 3.2.3	check insp.record document. & p.o. Visually	every lot	every lot	final inspection	Separate,

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0061		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007		Date (Rev.)				
Part Number/Latest Change Level L1430401-100103 3		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A						
NAME Cam shaft 1.5mm excentricity		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A						
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A						
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	PRODUCT/PROCESS SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE			CONTROL METHOD
110	Final Inspection	Ins. Dep.		L1430401-100103	Final ins. Per print, Hi-tech ISO9001 proc. SOW L143-00093		34.985+/- .004 24.988+/- .004 27.989+/- .004 1.5+/- .03 mcf 0.8	dig.micromet. dig.micromet. dig.micromet. dial.indicator surface test. check insp.record document.	every part	every part	final inspection	Separate,

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0064		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007 Date (Rev.)						
Part Number/Latest Change Level L1430401-100201 5		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A						
NAME Double cam actuator housing		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A						
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A						
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	PRODUCT/PROCES SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE			CONTROL METHOD
10	material receiving	n/a		raw material	unload truck,put material in incoming inspection area		collect shipping documents	check document. & p.o.	n/a	n/a	count and fillout router	n/a
20	incoming inspection	n/a		raw material	check dimensions per P.O.,collect certificate		4.5" x 5.625" x 10.12" alum. 6061-t6	12" caliper, collect certificates	lot	n/a	incoming insp. Procedure	separate

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0064		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616		Date (Orig.) 5/24/2007 Date (Rev.)
Part Number/Latest Change Level L1430401-100201 5		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)		Customer Engineering Approval/Date (If Req'd.) N/A
NAME Double cam actuator housing		Supplier/Plant Approval/Date 5/24/2007		Customer Quality Approval/Date (If Req'd.) N/A
Supplier/Plant Hi-Tech Manufacturing	Supplier Code	Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A

PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG, TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	PRODUCT/PROCESS SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE			CONTROL METHOD
						SIZE	FREQ.					
30	Milling.Machi part	CNC-Mill mach.#601 Horizontal		Mach.part In size 28.5+0.1 65+/-0.1 63.5+/-0.1 112+/-0.5 254+0/.05 23+/-0.2 m5x.8 tap 62.5+/- .1 60deg 45deg 90 deg m140x1.5 228+/- .1 45+/- .08 208+/- .08 222+/- .08 18dia 51+/- .08 10 140+/- .08 30+/- .08 112 194 224+/- .01 15+/- .08 65+/- .01 95+/- .08 1/4-20 tap	Place part in the jaws & clamp		28.5+0.1 65+/-0.1 63.5+/-0.1 112+/-0.5 254+0/.05 23+/-0.2 m5x.8 tap 62.5+/- .1 60deg 45deg 90 deg m140x1.5 228+/- .1 45+/- .08 208+/- .08 222+/- .08 18dia 51+/- .08 10 140+/- .08 30+/- .08 112 194 224+/- .01 15+/- .08 65+/- .01 95+/- .08 1/4-20 tap	6" caliper 6" caliper 6" caliper CMM Dig. height gage 6 caliper. Bore gage Bore gage Dig. height gage CMM CMM thread gage 6 caliper. 6 caliper. 6 caliper. 6 caliper. pin gages 6" caliper 6" caliper 6 caliper. 6 caliper. 6 caliper. 6 caliper. 6 caliper. thread gage	every3d part	every3d part	Inprocess inspection, final inspection	Separate, adjust for all parameters

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0064		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007		Date (Rev.)				
Part Number/Latest Change Level L1430401-100201 5		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A						
NAME Double cam actuator housing		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A						
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A						
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	PRODUCT/PROCESS SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE			CONTROL METHOD
40	Milling.Machi part	CNC-Mill mach.#601 Horizontal		Mach.part In size dia54+/- .08 51.976+/- .015 77.51+ .1/-0 38+/- .08 53+/- .08 46.979+/- 0.013 52+ .1/- .0 perp. to D.02 concent..02 perp. to C&D .03 perp. to C.02 m4x.7 22.5 34.8 25.4 flatness C .02	Place part in the jaws & clamp		dia54+/- .08 51.976+/- .015 77.51+ .1/-0 38+/- .08 53+/- .08 46.979+/-0.013 52+ .1/- .0 perp. to D.02 concent..02 perp. to C&D .03 perp. to C.02 m4x.7 22.5 34.8 25.4 flatness C .02 112.00+/- .05 engraving accordingly with part#	6" caliper Bore gage. Bore gage 6 caliper. 6 caliper. Bore gage Bore gage Dig. height gage CMM CMM CMM thread gage 6 caliper. 6 caliper. 6" caliper CMM CMM visually	every part	every part	Inprocess inspection	Separate, adjust for all parameters
100	Clear Anodize	Mike's anidize		L1430401- 100201	Clear Anodize Handle with care.		Clear Anodize	check insp.record document. & p.o. Visually	every lot	every lot	final inspection ISO procedure	Separate,

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0064		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007		Date (Rev.)				
Part Number/Latest Change Level L1430401-100201 5		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A						
NAME Double cam actuator housing		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A						
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A						
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	PRODUCT/PROCES SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE			CONTROL METHOD
110	Final Inspection	Ins. Dep.		L1430401-100201	Final ins. Per print, Hi-tech ISO9001 proc. SOW L143-00093		Critical parameters	final inspection ISO procedure	every part	every part	final inspection ISO procedure	Separate,

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0062		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007 Date (Rev.)						
Part Number/Latest Change Level L1430802-200011 3		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A						
Upstream interface plate NAME		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A						
Supplier/Plant Hi-Tech Manufacturing	Supplier Code	Other Approval/Date (If Req'd.) N/A			Other Approval/Date (If Req'd.) N/A							
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS				REACTION PLAN		
			NO	PRODUCT		PROCESS	RODUCT/PROCES SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE SIZE FREQ.		CONTROL METHOD	
20	Assemble & weld	Mig weld.		L1430802-200011	Place components on firxture, secure positions and tack weld. Weld per print & Sow L143-00093 4.1.4 4.1.4.3		76mm 10plcs .25 4 plcs .25 3plcs .25 A.W.S. DI-92	visual	every part	every part	Inprocess inspection, final inspection Per print, Hi-tech ISO9001 proc	Separate, adjust
30	Vibratory stressrelieve	Amecan grinding		L1430802-200011	Stress relieve after welding.		SOW L143-00093 4.1.4.3	check&collect insp.record document. & p.o.	every part	every part	Inprocess inspection, final inspection Per print, Hi-tech ISO9001 proc	Separate, adjust

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0062		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616		Date (Orig.) 5/24/2007 Date (Rev.)
Part Number/Latest Change Level L1430802-200011 3		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)		Customer Engineering Approval/Date (If Req'd.) N/A
Upstream interface plate NAME		Supplier/Plant Approval/Date 5/24/2007		Customer Quality Approval/Date (If Req'd.) N/A
Supplier/Plant Hi-Tech Manufacturing	Supplier Code	Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A

PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG, TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	RODUCT/PROCESS SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE			CONTROL METHOD
								SIZE	FREQ.			
40	Milling.Machi part	CNC-Mill mach.#63		Mach.part 5/8-11 thread 65 16.28 14.86 112 31.8 224 flatness.02 perp. .02 parall.02 142.01 254.00 685.42 85.6 533.4 635 525.5 370.8 215.9 4.8 dia 50.8 dia 87.12 6.353/6.357di 88.9 micr.fin.64 marking accordingly Oil machined surfaces	Place part on the fixture & clamp		5/8-11 thread 65+/- .2 16.28+/- .08 14.86+/- .08 112+/- .2 31.8depth+/- .2 224+/- .2 flatness.02 perp. .02 parall.02 142.01+ .02/-00 254.00+ .02/- .0 685.42+ .02/-0 85.6+/- .08 micr.fin.64 marking 85.6 533.4 635 525.5 370.8 215.9 370.8 215.9 4.8 dia 50.8 dia 87.12 6.353/6.357di 88.9 6.353/6.357di	thread gage 6" caliper Pin micr. Pin micr. 6" caliper 6" caliper 12" caliper CNC63+dial ind CNC63+dial ind CNC63+dial ind Mitutoyo gages Mitutoyo gages Mitutoyo gages Drop indic. surface testor visually CMM CMM CMM CMM CMM CMM CMM CMM set of pins set of pins set of pins	every part	every part	Inprocess inspection, final inspection Per print, Hi- tech ISO9001 proc	Separate, adjust for every parameter.

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0062			Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007 Date (Rev.)					
Part Number/Latest Change Level L1430802-200011 3			Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A					
Upstream interface plate NAME			Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A					
Supplier/Plant Hi-Tech Manufacturing		Supplier Code	Other Approval/Date (If Req'd.) N/A				Other Approval/Date (If Req'd.) N/A					
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	RODUCT/PROCES SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE			CONTROL METHOD
100	Shot blast & paint	Industrial finishing		Primer & paint per L1430802-200011. Mask all holes & mached surfaces.	L1430802-200011 notes 5,6		Primer & paint per L1430802-200011. Mask all holes & mached surfaces.	check insp.record document. & p.o. Visually	every lot	every lot	final inspection	Separate,
110	Final Inspection	Ins. Dep.		L1430802-200011	Final ins. Per print, Hi-tech ISO9001 proc. SOW L143-00093		Flatness.02 perp. .02 parall.02 142.01+.02/-00 254.00+.02/-0 685.42+.02/-0	Inprocess inspection, final inspection Per print, Hi-tech ISO9001 proc sowl143-00093 4.5.2.1.1	every part	every part	final inspection	Separate,

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0063			Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007		Date (Rev.)			
Part Number/Latest Change Level L1430802-200021 3			Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A					
Downstream interface plate NAME			Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A					
Supplier/Plant Hi-Tech Manufacturing		Supplier Code	Other Approval/Date (If Req'd.) N/A				Other Approval/Date (If Req'd.) N/A					
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS				REACTION PLAN		
			NO	PRODUCT		PROCESS	RODUCT/PROCES SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE SIZE FREQ.		CONTROL METHOD	
20	Assemble & weld	Mig weld.		L1430802-200021	Place components on firxture, secure positions and tack weld. Weld per print & Sow L143-00093 4.1.4 4.1.4.3		76mm 8plcs .25 4 plcs .25 3plcs .25 A.W.S. DI-92 .5 parrall	visual 12" caliper	every part	every part	Inprocess inspection, final inspection Per print, Hi-tech ISO9001 proc	Separate, adjust
30	Vibratory stressrelieve	Amecan grinding		L1430802-200021	Stress relieve after welding.		SOW L143-00093 4.1.4.3	check&collect insp.record document. & p.o.	every part	every part	Inprocess inspection, final inspection Per print, Hi-tech ISO9001 proc	Separate, adjust

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0063		Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007 Date (Rev.)					
Part Number/Latest Change Level L1430802-200021 3		Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A					
Downstream interface plate NAME		Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A					
Supplier/Plant Hi-Tech Manufacturing		Supplier Code		Other Approval/Date (If Req'd.) N/A		Other Approval/Date (If Req'd.) N/A					
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS				REACTION PLAN	
			NO	PRODUCT		PROCESS	RODUCT/PROCES SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT/ TECHNIQUE	SAMPLE SIZE FREQ.		CONTROL METHOD
40	Milling.Machi part	CNC-Mill mach.#63		Mach.part 5/8-11 thread 65 18.97 14.86 111.99 31.8 533.4 635 525.5 370.8 215.9 4.8 dia 50.8 dia 87.12 6.353/6.357di 88.9 142.01 457.43 flatness.02 perp..02 parall..02 85.6 engraving part#	Place part on the fixture & clamp		5/8-11 thread 65+/- .2 18.97+/- .08 14.86+/- .08 111.99+/- .2 31.8depth+/- .2 88.9 +/- .2 142.01+/- .02 457.43+/- .08 flatness.02 perp..02 parall..02 85.6 533.4 635 525.5 370.8 215.9 4.8 dia 50.8 dia 87.12 6.353/6.357di	thread gage 6" caliper Pin micr. Pin micr. 6" caliper 6" caliper 12" caliper CNC63+dial ind CNC63+dial ind CNC63+dial ind CNC63+dial ind CNC63+dial ind CMM CMM CMM CMM CMM CMM CMM CMM CMM CMM set of pins set of pins set of pins	every part every part	Inprocess inspection, final inspection Per print, Hi- tech ISO9001 proc	Separate, adjust for every parameter.

CONTROL PLAN

Prototype
 Pre-Launch
 Production

Control Plan Number CP0063			Key Contact/Phone Joe Bourke (Management Rep.) 847-678-1616				Date (Orig.) 5/24/2007 Date (Rev.)					
Part Number/Latest Change Level L1430802-200021 3			Core Team S.Sorshe(Pr.Manag),A Volchek(Estimator),M.Farooqi(Q.C)				Customer Engineering Approval/Date (If Req'd.) N/A					
Downstream interface plate NAME			Supplier/Plant Approval/Date 5/24/2007				Customer Quality Approval/Date (If Req'd.) N/A					
Supplier/Plant Hi-Tech Manufacturing		Supplier Code	Other Approval/Date (If Req'd.) N/A				Other Approval/Date (If Req'd.) N/A					
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS		SPECIAL CHAR. CLASS	METHODS					REACTION PLAN	
			NO	PRODUCT		PROCESS	RODUCT/PROCES SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE SIZE FREQ.			CONTROL METHOD
100	Shot blast & paint	Industrial finishing		Primer & paint per L1430802-200021. Mask all holes & mashed surfaces.	L1430802-200011 notes 5,6		Primer & paint per L1430802-200011. Mask all holes & mashed surfaces.	check insp.record document. & p.o. Visually	every lot	every lot	final inspection	Separate,
110	Final Inspection	Ins. Dep.		L1430802-200021	Final ins. Per print, Hi-tech ISO9001 proc. SOW L143-00093		142.01+/-0.02 457.43+/-0.08 flatness.02 perp..02 parall..02 per SOWI143-00093 4.5.2.1.2	CNC63+dial ind CNC63+dial ind CNC63+dial ind CNC63+dial ind	every part	every part	Inprocess inspection, final inspection Per print, Hi-tech ISO9001 proc	Separate,

HI-TECH MANUFACTURING
P.O. 16185
METALEX JOB 7558

STATEMENT OF WORK
FOR
GIRDER SUPPORT 11430401-100400

May 29, 2007

Metalex has been contracted by Hi-Tech manufacturing to make complete (38) each L1430401-100400 Support Girders. Metalex intends to follow the SOW, Document #L143-00093 provided with the RFQ. Metalex' current delivery schedule is to delivery (4) Girder Supports to Hi-Tech Manufacturing by 7/16/07 and (4) units per month thereafter. At this time, Metalex feels this will meet the program needs. The schedule can be expedited if needed.

Metalex intends to provide complete inspection reports with each complete unit that is shipped to Hi-Tech Manufacturing. A final inspection report will be performed on a CMM inspection equipped and calibrated to ISO 10012-1 standards. A Brown & Sharpe UHA CMM will be used. This is the same machined used to inspect the Undulator Assemblies. Metalex utilizes PCMIS software to support the equipment.

Metalex intends to weld the Girder Supports per IAW 3.2.2 and 4.1.4 of the SOW. All welding will be performed per IAW AWS D1.1. Weld Inspection per AWS D1.1, Section 6.9. All weld qualifications are within AWS D1.1, Section 4, Part C. Post weld full anneal required with certs and charts.

Metalex will paint Girder Supports per IAW SOW Section 4.1.5.1. Metalex' workmanship will be per IAW 4.1.6 of the SOW.

Metalex will mark the Girder Supports per IAW SOW Section 4.1.8.

Metalex will ship completed parts to Hi-Tech Manufacturing per IAW SOW Section 4.1.9. Metalex and Hi-Tech are currently working on a box design that will accommodate the assembly at Hi-Tech.

Metalex will provide inspection data called out in SOW Section 4.5.2.2. for the Girder Assembly.

Metalex is currently working on a formal quality verification plan. It will be submitted in writing and will be per IAW SOW Section 4.9.

Metalex will provide parts to the following schedule:

Hi-Tech Manufacturing
L1430401-100400 Girder Supports
Metalex Job 7558, P.O. 16185

First (4) Girder Supports

<u>Task</u>	Start	Finish
Receive Order		5/18/07
Order Material		5/23/07
Receive Material		5/30/07
Weld Prep	5/30/07	6/6/07
Weld Prep	5/31/07	6/11/07
Heat Treat	6/11/07	6/13/07
Grit Blast	6/13/07	6/14/07
Qualify on Mill	6/15/07	6/15/07
Surface Grind	6/16/07	6/16/07
1st Finish Machine	6/18/07	6/18/07
2nd Finish Machine	6/19/07	6/21/07
3rd Finish Machine	6/22/07	6/25/07
Surface Grind	6/26/07	6/28/07
Deburr	6/29/07	7/2/07
Inspection	7/3/07	7/5/07
Paint	7/6/07	7/10/07
Assembly	7/10/07	7/11/07
Final Inspection	7/11/07	7/12/07
Source Inspection (If Req'd)		7/13/07
Ship		7/13/07

Traveler Job: 54036

Part: 761-0802
 SPINDLE
 Rev: NONE
 Order Qty: 1 / ea
 Make Qty: 1 / ea
 Customer PO: 84445
 Line: 3
 Drawing:
 Order Date: 10-Jan-07
 Est Hours: 9.13

Quote:

Customer
 Haumiller
 445 Renner Dr.
 Elgin, IL 60123
 USA

Ship To
 Haumiller
 445 Renner Dr.
 Elgin, IL 60123
 USA

Contact

Ship Via

Phone
 (847) 695-9111

Fax
 (847) 695-2092

Job Notes:

Materials

Buys

Requirement Key	Vendor	Description	PO	Due Date	Quantity
11544		12L14 ROUND 2.75", CD bar			2.40 ft
			14419	16-Jan-07	6.00

Routing

WC/Vendor Oper/Serv	Operation Key	Sch Start Sch End	Description	Setup	Run Rate	Run
RECEIVING MATERIAL	42708			0.00	0.10 FixedHrs	0.10
INSPECTION INCOMING	42709		Incoming Inspection	0.00	0.10 FixedHrs	0.10
SAW	42710		Cut Blank	0.00	5.00 Min/Part	0.08
083-Victor	42711		Turn per print	0.00	6.30 Hrs/Part	6.30
110-Kondia	42712		Mill per print	0.00	2.20 Hrs/Part	2.20
INSPECTION FINAL	42713		Final Inspection	0.00	0.25 FixedHrs	0.25
SHIPPING	42714			0.00	0.10 FixedHrs	0.10

KEY PERSONNEL LIST

Simon Sorsher (Project Manager)

ANL Contact: Emil Trakhtenberg

- Overall project management
- Supervise assemble
- Supervise manufacturing
- Train required employees
- Design required fixtures
- Maintain schedules and milestones
- Prepare project work area, required tool, gages, and monitoring equipment
- Customer contact about technical requirements

Murtaza Farooqi (QC Manager)

ANL Contact: Emil Trakhtenberg

- Project inspector
- Collect and document required data
- Monitor quality procedure
- Prepare and submit all required reports and documents

Alex Volchek (Estimator/Purchasing)

ANL Contact: Michael Oprondek

- Quote and contract management
- Purchase all required material and components
- Customer contact about technical requirements

Neoma Arcari (Office Manager)

ANL Contact: Michael Oprondek

- Prepare invoices
- Collect vendor invoices

Joe Bourke (Management Rep)

ANL Contact: Michael Oprondek

- Schedule manufacturing of required component
- Manage receiving of component and material
- Manage shipping of completed units

Uncontrolled

Quality Manual

for

Hi-Tech Manufacturing, Inc.

4637 N. 25th Avenue

Schiller Park, Illinois 60176

SECTION 1

QUALITY POLICY

Hi-Tech Manufacturing, Inc. Commits to:

- **Comply With the Requirements of the:**
 - **Customer, and**
 - **Quality Management System, and**

- **Continually Improve the Effectiveness of the Quality Management System.**

It is the Goal of the Business to Use the Quality Management System to Achieve Outstanding Customer Satisfaction, Resulting in Improved:

- **Sales, and**
- **Profitability.**

SECTION 3

TABLE OF CONTENTS

Section Number	Section Description	Page Number
1	Quality Policy	1
2	Revision Record	2
3	Table of Contents	3
4	List of Manual Locations	4
5	System Description and Scope	5
6		6
	Appendix A - Organization Chart	
	Appendix B - Process Model	

SECTION 4

LIST OF MANUAL LOCATIONS

Following is a list of the locations at Hi-Tech Manufacturing, Inc. (hereafter Hi-Tech) where the master (original) and controlled copies of both the Quality Manual and the Quality Management System Procedures (hereafter Procedures) can be found:

- (1) Office Manager (original)
- (2) Inspection Department
- (3) Milling Department
- (4) Manual Machining Department

SECTION 5

SYSTEM DESCRIPTION AND SCOPE

GENERAL

Hi-Tech:

- A. Has adopted the philosophy, mandates and requirements of ISO 9001:2000,
- B. Has developed and documented its Quality Policy, shown on the first page of this manual,
- C. Has prepared Procedures and Work Instructions that support the policy and address the requirements of the standard, and
- D. Maintains, operates and continually improves its Quality Management System.

ASSIGNMENT OF RESPONSIBILITY AND AUTHORITY

It is Hi-Tech's policy that whenever a Procedure or Work Instruction assigns responsibility and authority for the performance of a task, the responsible party may delegate performance of the task to anyone they choose, providing they ensure that the:

- A. Assignment is clear to and understood by the appointee,
- B. Appointee is qualified and competent to perform the task, and
- C. Results of the work performed meet the requirements.

PERMISSIBLE EXCLUSIONS

Currently Hi-Tech only manufactures products to customer part prints and leaves product design solely to the discretion of the customer, the Design and Development requirements (Clause 7.3) of the standard have been excluded from this system. In the event that management changes its direction to include product design the Design and Development requirements will be added to this system.

SECTION 5 SYSTEM DESCRIPTION AND SCOPE

UNCONTROLLED QUALITY MANUALS

An uncontrolled copy of the Quality Manual may be given to anyone, with the understanding that Hi-Tech has the right to revise the manual, at its discretion, without giving them notice.

HOW THE CLAUSES OF THE STANDARD ARE ADDRESSED

Legend

QMS = Quality Management System
P = Procedure

Clause	Clause Description	How the Clause is Addressed
4 Quality Management System		
4.1(a)	<u>The Organization Shall</u> - Identify QMS Processes & Their Application Throughout the Organization	Quality Manual & QMS
4.1(b)	Determine the Sequence & Interaction of Processes	Quality Manual
4.1(c)	Determine Criteria & Methods to Ensure Effective Operation & Control of Processes	Quote Prep & Planning (P7.1)
4.1(d)	Ensure Availability of Resources to Support Operation & Monitoring of Processes	Management Review (P5.3) & Quote Prep & Planning (P7.1)
4.1(e)	Monitor, Measure & Analyze Processes	Management Review (P5.3) & Statistical Techniques (P8.1)
4.1(f)	Implement Actions to Achieve Planned Results & Continually Improve Processes	QMS
4.1 ---	Control Outsourced Processes	Quote Prep & Planning (P7.1)
4.2.1 (a)	<u>The QMS Shall Include</u> - a Documented Quality Policy & Quality Objectives	Quality Policy & Establish Quality Objects (P5.1)
4.2.1(b)	A Quality Manual	Quality Manual
4.2.1(c)	Documented Procedures	QMS Procedures
4.2.1(d)	Documents Needed for Planning, Operation & Control of Processes	QMS
4.2.1(e)	Records Required by the Standard	QMS & Doc & Record Control (P4.2)
4.2.2 (a)	<u>The Organization Shall Establish a Quality Manual that Includes</u> - the QMS Scope & Exclusions	Quality Manual
4.2.2(b)	Procedures or Reference to Them	Quality Manual

SECTION 5

SYSTEM DESCRIPTION AND SCOPE

4.2.2(c)	Interaction Between Processes & the QMS	Quality Manual
4.2.3(a)	<u>The QMS Shall Establish a Documented Procedure to Control Documents to</u> - Include Doc Approval	Doc & Record Control (P4.2)
4.2.3(b)	Include Document Review	Doc & Record Control (P4.2)
4.2.3(c)	Ensure the Identification of Change Revision Status	Doc & Record Control (P4.2)
4.2.3(d)	Ensure Availability of Documents at Point of Use	Doc & Record Control (P4.2)
4.2.3(e)	Ensure that Documents Remain Legible & Readily Identified	Doc & Record Control (P4.2)
4.2.3(f)	Ensure that Documents of External Origin are Identified & Distribution is Controlled	Doc & Record Control (P4.2)
4.2.3(g)	Prevent the Unintended Use of Obsolete Documents & Provide Proper Identification, if They are Retained	Doc & Record Control (P4.2)
4.2.4	<u>The QMS Shall Establish a Documented Procedure to Provide Evidence of Conformity Records</u>	Doc & Record Control (P4.2)

5 Management Responsibility

5.1(a)	<u>Mgmt Shall Demonstrate a Commitment to the QMS</u> - Communicate Importance of Meeting Requirements	Internal Communication (P5.2)
5.1(b)	Establish a Quality Policy	Quality Policy
5.1(c)	Establish Quality Objectives	Establish Quality Objects (P5.1)
5.1(d)	Conduct Management Reviews	Management Review (P5.3)
5.1(e)	Ensure Availability of Resources	Management Review (P5.3)
5.2	Management Shall Ensure that Customer Requirements are Determined & Met	Quote Prep & Planning (P7.1) & Customer Satisfaction (P8.2)
5.3(a)	<u>Management Shall Ensure that the Quality Policy</u> - is Appropriate for the Organization	Quality Policy
5.3(b)	Includes a Commitment to Comply With Requirements & to Continually Improve the QMS	Quality Policy
5.3(c)	Provides a Framework for Establishing & Reviewing Quality Objectives	Quality Policy
5.3(d)	Is Communicated & Understood Within the Organization	Quality Policy
5.3(e)	Reviewed for Continuing Suitability	Quality Policy
5.4.1	Management Shall Ensure that Quality Objectives Needed to Meet Product Req'mts are Established	Establish Quality Objects (P5.1)
5.4.2(a)	<u>Management Shall Ensure</u> - QMS Planning is Carried Out	QMS Procedures
5.4.2(b)	QMS Integrity is Maintained When Changes are Made	QMS Procedures
5.5.1	Management Shall Ensure that Responsibilities & Authorities are Defined & Communicated	QMS Procedures

SECTION 5

SYSTEM DESCRIPTION AND SCOPE

5.5.2(a)	Management Shall <u>Appoint a Management Rep to - Establish, Implement & Maintain the QMS</u>	Organization Chart & Verbally
5.5.2(b)	Report to Management on QMS Performance & Need for Improvement	Organization Chart & Verbally
5.5.2(c)	Ensure Awareness of Customer Requirements Throughout the Organization	Organization Chart & Verbally
5.5.3	Management Shall Ensure that Communication Processes are Established	Internal Communication (P5.2)
5.6.1	Management Shall Review the QMS at Planned Intervals	Management Review (P5.3)
5.6.2(a)	<u>Management Review Inputs Shall Include - Results of Audits</u>	Management Review (P5.3)
5.6.2(b)	Customer Feedback	Management Review (P5.3)
5.6.2(c)	Process Performance & Product Conformity	Management Review (P5.3)
5.6.2(d)	Status of Corrective & Preventive Actions	Management Review (P5.3)
5.6.2(e)	Follow-up Actions from Previous Management Reviews	Management Review (P5.3) & Correct or Prevent Action (P8.8)
5.6.2(f)	Changes that Could Affect the QMS	Management Review (P5.3)
5.6.2(g)	Recommendations for Improvement	Management Review (P5.3)
5.6.3(a)	<u>Management Review Outputs Shall Include Decision & Actions Related to - Improved QMS Effectiveness</u>	Management Review (P5.3)
5.6.3(b)	Improvement of Product Related to Customer Requirements	Management Review (P5.3)
5.6.3(c)	Resource Needs	Management Review (P5.3)

6 Resource Management

6.1(a)	<u>The Organization Shall Determine & Provide Resources to - Implement & Maintain the QMS</u>	Management Review (P5.3) & Quote Prep & Planning (P7.1)
6.1(b)	Enhance Customer Satisfaction	Quote Prep & Planning (P7.1) & Customer Satisfaction (P8.2)
6.2.1(a)	<u>The Organization Shall - Determine the Competence of Personnel Affecting Product Quality</u>	Train'g Review & Plan'g (P6.2)
6.2.1(b)	Provide Training or Other Actions to Satisfy Personnel Needs	Train'g Documentation (P6.1) & Train'g Review & Plan'g (P6.2)
6.2.1(c)	Evaluate the Effectiveness of Training or Other Actions	Train'g Review & Plan'g (P6.2)
6.2.1(d)	Ensure that Personnel are Aware of How They Contribute to the Achievement of Quality Objectives	Train'g Review & Plan'g (P6.2)
6.2.1(e)	Maintain Training Records	Train'g Documentation (P6.1)
6.2.2(a)	<u>The Organization Shall - Determine Competence of Personnel Performing Work Affecting Product Quality</u>	Train'g Review & Plan'g (P6.2)
6.2.2(b)	Provide Training or Take Other Actions to Satisfy These Needs	Train'g Review & Plan'g (P6.2)

SECTION 5

SYSTEM DESCRIPTION AND SCOPE

6.2.2(c)	Evaluate the Effectiveness of the Actions Taken	Train'g Review & Plan'g (P6.2)
6.2.2(d)	Ensure that Personnel are Aware of How They Contribute to Quality Objectives	Quality Policy & Train'g Review & Plan'g (P6.2)
6.2.2(e)	Maintain Records of Education, Training Skills & Experience	Train'g Review & Plan'g (P6.2)
6.3(a)	<u>The Organization Shall Provide the Infrastructure to Achieve Product Conformity - Including Buildings, etc</u>	Quote Prep & Planning (P7.1)
6.3(b)	Process Equipment	Quote Prep & Planning (P7.1)
6.3(c)	Supporting Services	Quote Prep & Planning (P7.1)
6.4	The Organization Shall Determine & Manage the Work Environment to Achieve Product Conformity	Quote Prep & Planning (P7.1)

7 Product Realization

7.1(a)	<u>The Organization Shall Plan & Develop Processes for Product Realization - Determine Quality Req'mts</u>	Quote Prep & Planning (P7.1)
7.1(b)	Determine Processes, Documents & Resources Specific to the Product	Quote Prep & Planning (P7.1)
7.1(c)	Determine Verification, Validation, Monitoring & Inspection Activities Specific to the Product	Quote Prep & Planning (P7.1) & Inspection (P's 8.4, 8.5 & 8.6)
7.1(d)	Determine Records Needed to Provide Evidence that Product Realization Activities Met Requirements	Quote Prep & Planning (P7.1)
7.1 ---	Product Realization Outputs Shall be in a Form Suitable to the Organizations Method of Operation	Quote Prep & Planning (P7.1)
7.2.1(a)	<u>The Organization Shall Determine - Specified Customer Requirements</u>	Quote Prep & Planning (P7.1) & Contract Review (P7.2)
7.2.1(b)	Unspecified Customer Requirements	Quote Prep & Planning (P7.1)
7.2.1(c)	Statutory & Regulatory Requirements	Quote Prep & Planning (P7.1) & Contract Review (P7.2)
7.2.1(d)	Any Additional Requirements	Quote Prep & Planning (P7.1) & Contract Review (P7.2)
7.2.2(a)	<u>Before Acceptance of Customer PO the Organization Shall Ensure - that Prod Requirements are Defined</u>	Contract Review (P7.2)
7.2.2(b)	PO Requirements Differing From Those Quoted are Resolved	Contract Review (P7.2)
7.2.2(c)	The Organization has the Ability to Defined Requirements	Contract Review (P7.2)
7.2.2 ---	PO Review Records are Maintained	Contract Review (P7.2)
7.2.2 ---	When Documented Requirements are not Provided, the Requirements are Confirmed Before Acceptance	Contract Review (P7.2)
7.2.2 ---	PO Changes or Amendments are Properly Reflected in the Appropriate Documentation	Contract Review (P7.2)
7.2.3(a)	<u>The Organization Shall Have Effective Customer Communication Methods Regarding - Product Info</u>	Quote Prep & Planning (P7.1), Contract Review (P7.2) / Verbal
7.2.3(b)	Inquiries, PO's, PO Amendments & PO Handling	Quote Prep & Planning (P7.1), Contract Review (P7.2) / Verbal

SECTION 5

SYSTEM DESCRIPTION AND SCOPE

7.2.3(c)	Customer Feedback, Including Customer Complaints	Verbal & Customer Complaint (P7.10)
7.4.1 ---	The Organization Shall Ensure that Purchased Product Conforms to Specified Requirements	Purchasing (P7.3)
7.4.1 ---	The Organization Shall Evaluate & Select Suppliers Based on Their Ability to Meet Requirements	Purchasing (P7.3) & Supplier Evaluation (P7.4)
7.4.2(a)	<u>Where Appropriate, Purchasing Information Shall Describe – Requirements for Product Approval</u>	Purchasing (P7.3)
7.4.2(b)	Requirements for Qualification of Personnel	Purchasing (P7.3)
7.4.2(c)	QMS Requirements	Purchasing (P7.3)
7.4.3	The Organization Shall Establish Inspection Activities to Ensure that Product Meets Requirements	Receiving Inspection (P8.4)
7.5.1(a)	<u>Production Shall Occur Under Controlled Conditions - i.e. Available Info to Describe Product Characteristics</u>	Quote Prep & Planning (P7.1)
7.5.1(b)	Availability of Work Instructions, as Necessary	Quote Prep & Planning (P7.1)
7.5.1(c)	Use of Suitable Equipment	Quote Prep & Planning (P7.1) & Preventive Maintenance (P7.5)
7.5.1(d)	Availability & Use of Monitoring & Measuring Devices	Quote Prep & Planning (P7.1) & Gage Calibration (P7.8)
7.5.1(e)	Implementation of Monitoring & Measurement	Quote Prep & Planning (P7.1) & Inspection (P's 8.4, 8.5 & 8.6)
7.5.1(f)	Implementation of Release, Delivery & Post Delivery Activities	Quote Prep & Planning (P7.1)
7.5.2(a)	<u>Validation of Production Processes Shall Include - Defined Criteria for Review & Approval</u>	Quote Prep & Planning (P7.1)
7.5.2(b)	Approval of Equipment & Qualification of Personnel	Quote Prep & Planning (P7.1)
7.5.2(c)	Use of Specific Methods & Procedures	Quote Prep & Planning (P7.1)
7.5.2(d)	Requirements for Records	Quote Prep & Planning (P7.1)
7.5.2(e)	Revalidation	Quote Prep & Planning (P7.1)
7.5.3	Where Appropriate, the Organization Shall Identify Product / Status Throughout the Production Process	Prod Ident & Preserve (P7.7)
7.5.4	The Organization Shall Identify, Verify, Protect & Safeguard Customer Property	Quote Prep & Planning (P7.1) & Receiving (P7.6)
7.5.5	The Organization Shall Preserve Product Conformity During Internal Processing	Prod Ident & Preserve (P7.7)
7.6(a)	<u>Measuring & Monitoring Equipment Shall be - Calibrated Against International Standards</u>	Gage Calibration (P7.8)
7.6(b)	Adjusted as Necessary	Gage Calibration (P7.8)
7.6(c)	Identified to Enable Calibration Status	Gage Calibration (P7.8)
7.6(d)	Safeguarded from Adjustments that Would Invalidate Measurement Results	Gage Calibration (P7.8)
7.6(e)	Protected from Damage & Deterioration	Gage Calibration (P7.8)

SECTION 5 SYSTEM DESCRIPTION AND SCOPE

8 Measurement, Analysis & Improvement

8.1(a)	<u>Monitoring, Measurement, Analysis & Improvement Processes Shall - Demonstrate Product Conformity</u>	Inspection (P's 8.4, 8.5 & 8.6) & Statistical Techniques (P8.1)
8.1(b)	Ensure QMS Conformity	Management Review (P5.3) & Statistical Techniques (P8.1)
8.1(c)	Continually Improve the Effectiveness of the QMS	Management Review (P5.3) & Statistical Techniques (P8.1)
8.2.1	The Organization Shall Monitor Customer Perception of the Organization	Customer Satisfaction (P8.2)
8.2.2(a)	<u>The Organization Shall Conduct Internal Audits to Determine if the QMS - Conforms With Plans</u>	Internal Audits (P8.3)
8.2.2(b)	Is Effectively Implemented & Records are Maintained	Internal Audits (P8.3)
8.2.3	Where Applicable, the Organization Shall Monitor the QMS for Compliance With Plans	Management Review (P5.3) & Internal Audits (P8.3)
8.2.4 ---	<u>The Organization Shall - Monitor & Measure Product Characteristics to Ensure Compliance With Specs</u>	Inspection (P's 8.4, 8.5 & 8.6)
8.2.4 ---	Maintain Records of Product Conformity	Inspection (P's 8.4, 8.5 & 8.6)
8.3(a)	<u>The Organization Shall - Take Action to Eliminate Detected Nonconformities</u>	Control of Noncon Prod (P8.7)
8.3(b)	Authorize Product Use, Release or Concession by Relevant Authority, or by the Customer	Control of Noncon Prod (P8.7)
8.3(c)	Take Action to Preclude its Original Intended Use or Application	Control of Noncon Prod (P8.7)
8.3 ---	Maintain Records of the Nature of the Nonconformity & Subsequent Actions Taken	Control of Noncon Prod (P8.7)
8.3 ---	Re-Verify Product Conformity After Nonconforming Product Has Been Corrected	Inspection (P's 8.4, 8.5 & 8.6)
8.3 ---	Take Appropriate Action When Nonconforming Product Has been Detected After delivery or Use	Control of Noncon Prod (P8.7)
8.4(a)	<u>The Use & Analysis of Data Shall Provide Information Related to - Customer Satisfaction</u>	Management Review (P5.3) & Customer Satisfaction (P8.2)
8.4(b)	Conformity to Product Requirements	Inspection (P's 8.4, 8.5 & 8.6) & Control of Noncon Prod (P8.7)
8.4(c)	Characteristics & Trends of Processes & Products Including Opportunities for Preventive Action	Inspection (P's 8.4, 8.5 & 8.6) & Control of Noncon Prod (P8.7)
8.4(d)	Suppliers	Supplier Evaluation (P7.4)
8.5.1	The Organization Shall Continually Improve the Effectiveness of the QMS	Management Review (P5.3)
8.5.2(a)	<u>Action Shall be Taken to Eliminate the Cause of Nonconformities by - Reviewing Them</u>	Correct or Prevent Action (P8.8)
8.5.2(b)	Determining Their Cause	Correct or Prevent Action (P8.8)
8.5.2(c)	Evaluating the Need for Action to Ensure that They Do Not Recur	Correct or Prevent Action (P8.8)
8.5.2(d)	Determining & Implementing Action Needed	Correct or Prevent Action (P8.8)

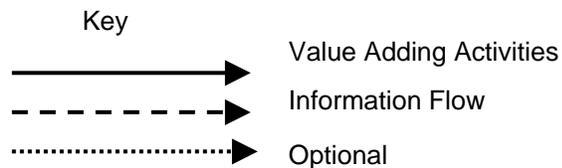
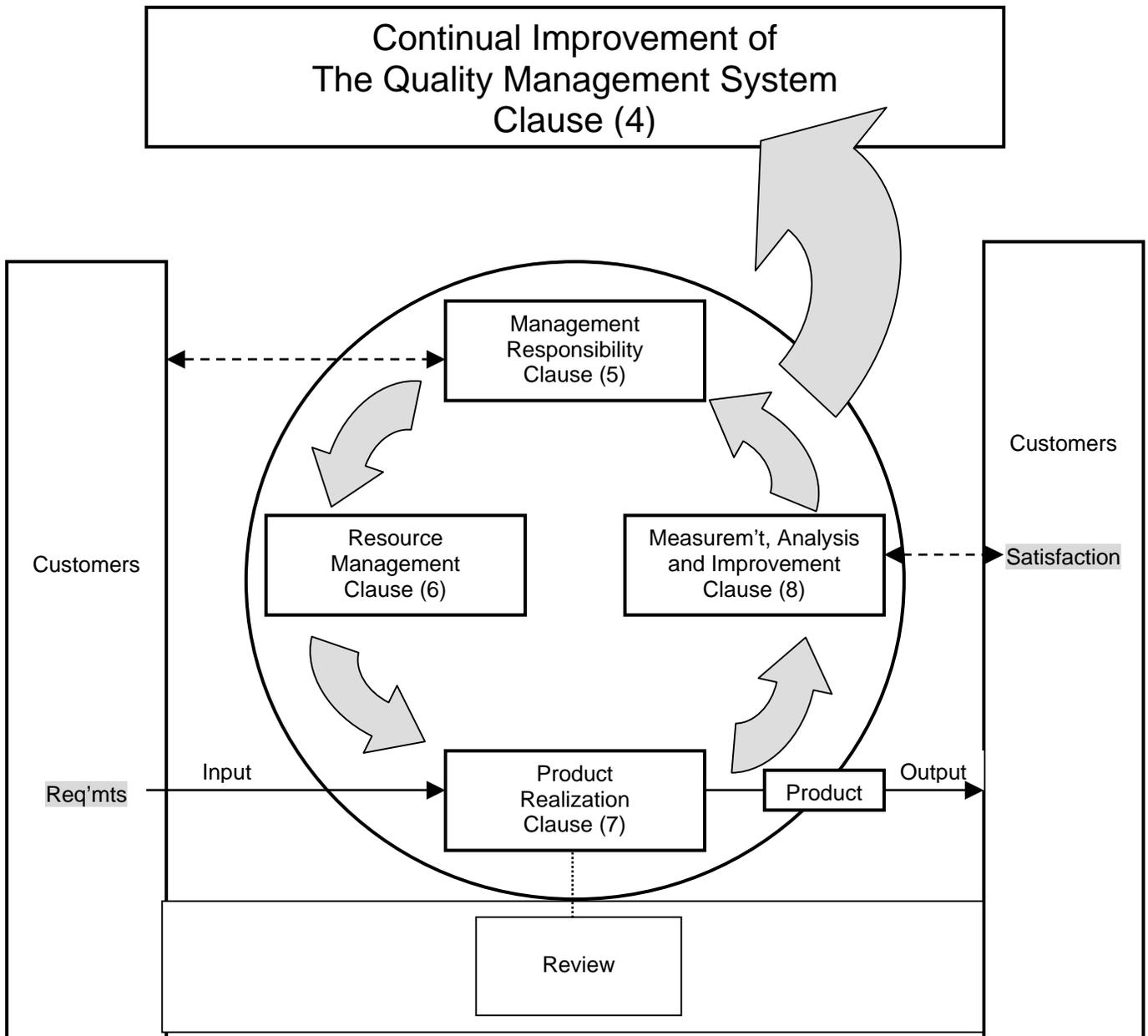
SECTION 5

SYSTEM DESCRIPTION AND SCOPE

8.5.2(e)	Maintaining Records of Action Taken	Correct or Prevent Action (P8.8)
8.5.2(f)	Reviewing Corrective Action Taken	Correct or Prevent Action (P8.8)
8.5.3(a)	<u>Action Shall be Taken to Eliminate the Cause of Potential Nonconformities by - Determining Them</u>	Correct or Prevent Action (P8.8)
8.5.3(b)	Evaluating the Need to Prevent Their Occurrence	Correct or Prevent Action (P8.8)
8.5.3(c)	Determining & Implementing Action Needed	Correct or Prevent Action (P8.8)
8.5.3(d)	Maintaining Records of Action Taken	Correct or Prevent Action (P8.8)
8.5.3(e)	Reviewing Preventive Action Taken	Correct or Prevent Action (P8.8)

SECTION 5 SYSTEM DESCRIPTION AND SCOPE

SYSTEM DESIGN AND INTERACTION OF THE CLAUSES



SECTION 5

SYSTEM DESCRIPTION AND SCOPE

Customer Requirements

- (7.1) Quote Preparation and Planning
- (7.2) Contract Review

Product Realization

- (7.3) Purchasing
- (7.4) Supplier Evaluation
- (7.5) Preventive Maintenance
- (7.6) Receiving
- (7.7) Product Identification and Preservation
- (7.9) Shipping
- (8.4) Receiving Inspection
- (8.5) In-Process Inspection
- (8.6) Final Inspection
- (8.7) Control of Nonconforming Product

Measurement, Analysis and Improvement

- (7.8) Gage Calibration
- (8.1) Statistical Techniques

Management Responsibility

- (4.1) Procedure Writing, Revision and Implementation
- (4.2) Document and Record Control
- (4.3) List of Controlled Documents and Records
- (5.1) Establishing Quality Objectives and Continual Improvement
- (5.2) Internal Communication
- (5.3) Management Review
- (8.3) Internal Audits
- (8.8) Corrective or Preventive Action

Resource Management

- (6.1) Training Documentation
- (6.2) Training Review and Planning

Customer Satisfaction

- (7.10) Customer Complaint
- (8.2) Customer Satisfaction-Measurement and Monitoring

SECTION 5

SYSTEM DESCRIPTION AND SCOPE

Interaction between Processes

	Quote Plan & Prep	Contract Review	Purchasing	Supplier Evaluation	Prev. Maint.	Receiving	Prod. ID & Pres.	Shipping	Recv. Insp.	In Process Insp.	Final Insp.	Control NCP	Gage Calibration	Stat. Tech.	Proc. W Rev. Insp.	Doc. Control	List of Records	C-I	Internal Comm.	Management Review	Internal Audit	CA or PA	Training Doc.	Train. Rev. & Plan	Cust. Comp	Cust. Satis.
Quote Plan & Prep		H	H	H	L	H	H	H	H	H	H	H	L	H	L	H	H	H	H	H	H	H	L	H	H	H
Contract Review	H		H	H	L	H	H	H	H	H	H	H	H	L	L	H	H	H	H	H	H	H	L	H	H	H
Purchasing	H	H		H	H	H	H	H	H	H	H	H	H	L	H	H	H	H	H	H	H	H	L	H	H	H
Supplier Evaluation	H	H	H		H	H	L	H	H	H	H	H	H	L	H	H	H	H	H	H	H	H	L	L	H	H
Prev. Maint.	L	L	H	H		H	H	H	H	H	H	H	H	L	H	H	H	H	H	H	H	H	H	H	H	H
Receiving	H	H	H	H	H		H	H	H	H	H	L	H	L	H	H	H	H	H	H	H	H	L	L	H	H
Prod. ID & Pres.	H	H	H	L	H	H		H	H	H	H	L	L	L	H	H	H	H	H	H	H	H	L	H	H	H
Shipping	H	H	H	H	H	H	H		H	H	H	L	H	L	H	H	H	H	H	H	H	H	L	H	H	H
Recv. Insp.	H	H	H	H	H	H	H	H		H	H	H	H	L	H	H	H	H	H	H	H	H	L	H	H	H
In Process Insp.	H	H	H	H	H	H	H	H	H		H	H	H	L	H	H	H	H	H	H	H	H	L	H	H	H
Final Insp.	H	H	H	H	H	H	H	H	H	H		H	H	L	H	H	H	H	H	H	H	H	L	H	H	H
Control NCP	H	H	H	H	H	H	H	H	H	H	H		H	L	H	H	H	H	H	H	H	L	H	H	H	H
Gage Calibration	L	H	H	H	H	H	L	H	H	H	H	H		H	L	H	H	H	H	H	H	L	H	H	H	H
Stat. Tech.	H	L	H	H	H	H	L	H	H	H	H	H	H		H	H	H	H	H	H	H	H	H	H	H	H
Proc. W Rev. Insp.	L	L	L	L	L	L	L	L	L	L	L	L	L	H		H	H	H	H	H	H	H	L	H	H	H
Doc. Control	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H	H	H	H	H	H	H	H	H	H
List of Records	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H	H	H	H	H	H	H	H	H
C-I	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H	H	H	H	H	H	H	H
Internal Comm.	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H	H	H	H	H	H	H
Management Review	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H	H	H	H	H	H
Internal Audit	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H	H	H	H	H
CA or PA	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H	H	H
Training Doc.	L	L	L	L	H	L	L	L	L	L	L	L	L	H	L	H	H	H	H	H	H	H	H		H	H
Train. Rev. & Plan	H	H	H	L	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H	H
Cust. Comp	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H
Cust. Satis.	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H		H

(H) – HIGH interaction

(L) – LOW interaction

LIST OF PROCEDURES

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep.

Approval _____

Procedure Series	Procedure	Description
4		Quality Management System
	4.1	Procedure Writing, Revision and Implementation
	4.2	Document and Record Control
	4.3	List of Controlled Documents and Records
5		Management Responsibility
	5.1	Establishing Quality Objectives and Continual Improvement
	5.2	Internal Communication
	5.3	Management Review and Analysis of Data
6		Resource Management
	6.1	Training Documentation
	6.2	Training Review and Planning
7		Product Realization
	7.1	Quote Preparation and Planning
	7.2	Contract Review
	7.3	Purchasing
	7.4	Supplier Evaluation
	7.5	Preventive Maintenance
	7.6	Receiving
	7.7	Product Identification and Preservation
	7.8	Gage Calibration
	7.9	Shipping
	7.10	Customer Complaint
8		Measurement, Analysis and Improvement
	8.1	Statistical Techniques
	8.2	Customer Satisfaction-Measurement and Monitoring
	8.3	Internal Audits
	8.4	Receiving Inspection
	8.5	In-Process Inspection
	8.6	Final Inspection
	8.7	Control of Nonconforming Product
	8.8	Corrective or Preventive Action

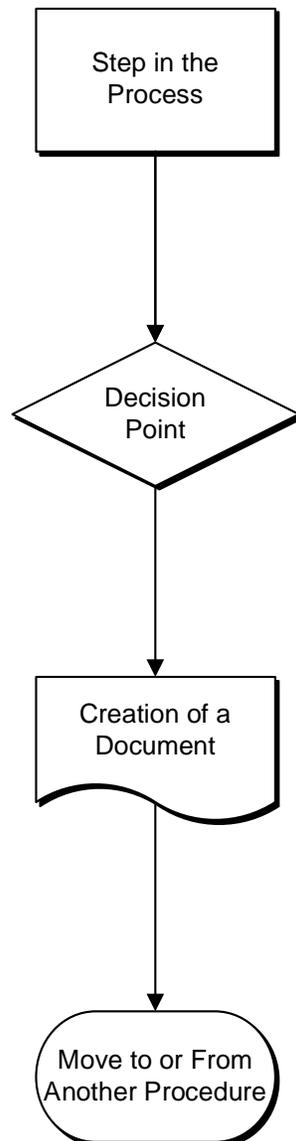
LEGEND OF PROCESS CHART (FLOWCHART) SYMBOLS

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep.

Approval



PROCEDURE SERIES 4

QUALITY MANAGEMENT

SYSTEM

PROCEDURE WRITING, REVISION AND IMPLEMENTATION (PROCEDURE 4.1)

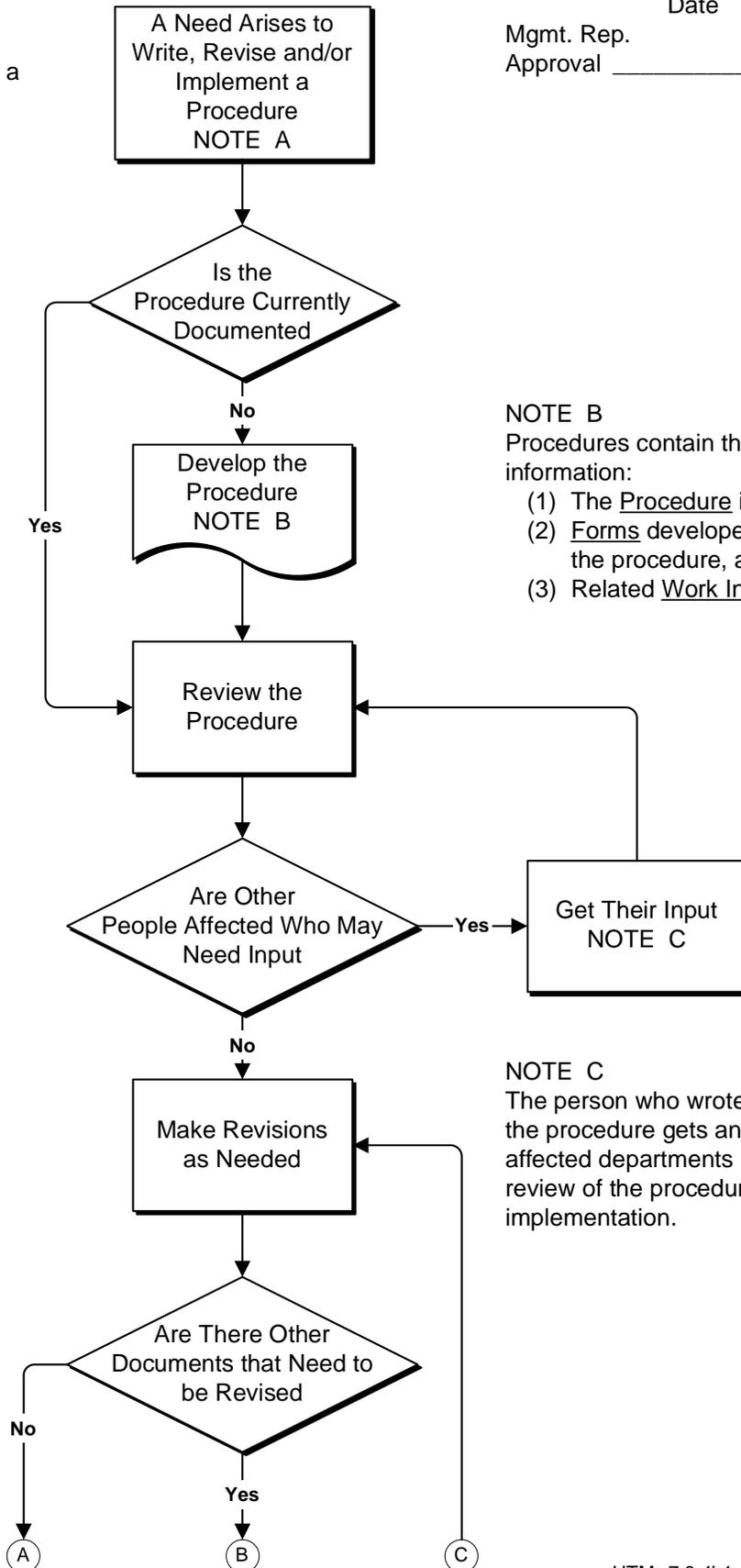
NOTE A
The President assigns a person or a team to document, revise and/or implement a company procedure.

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

Approval _____



NOTE B
Procedures contain the following information:
(1) The Procedure itself,
(2) Forms developed as part of the procedure, and
(3) Related Work Instructions.

NOTE C
The person who wrote or revised the procedure gets any and all other affected departments involved, in a review of the procedure, prior to its implementation.

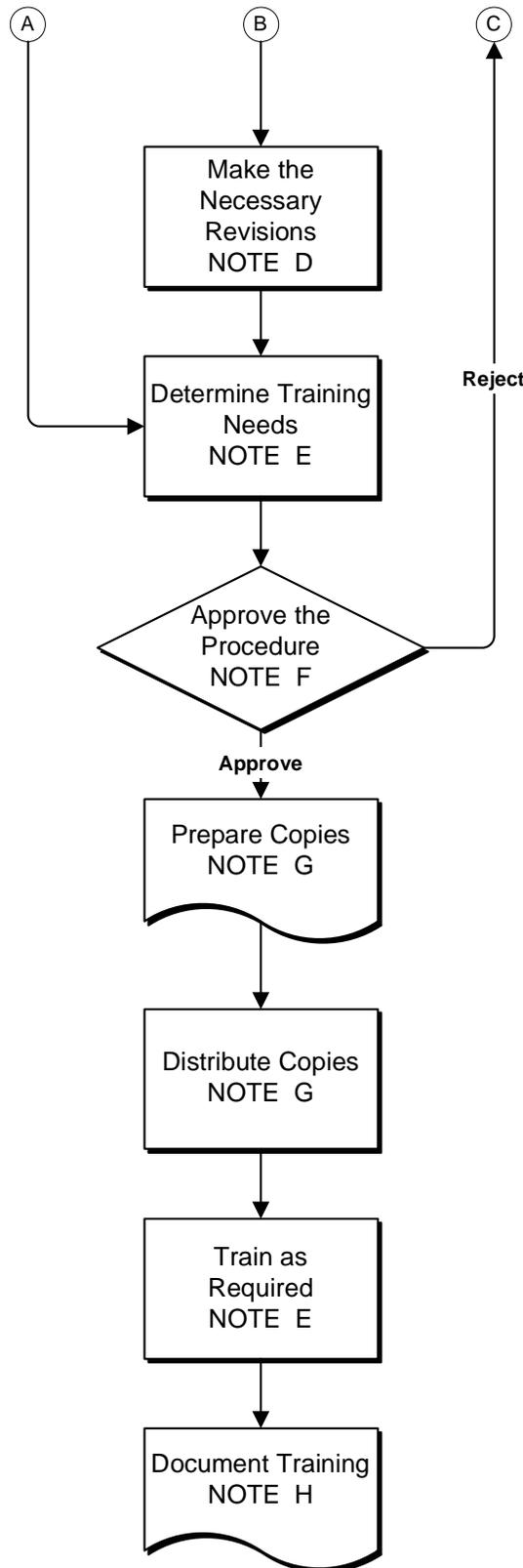
NOTE D

The person who wrote or revised the procedure:

- (1) Determines if there are other documents or forms (i.e. Procedures, Work Instructions, etc.) that need to be revised as a result of the new or revised procedure, and
- (2) Revises them or notifies the department manager most affected, by whatever means they deem appropriate.

NOTE F

After approving the procedure the Management Representative ensures that the President's approval is obtained if required.



NOTE E

The person who wrote or revised the procedure determines the training plan, with consideration given to:

- (1) Who will be trained,
- (2) How,
- (3) When, and
- (4) By whom.

NOTE G

The Management Representative ensures that all controlled copies of the Quality Manual and Procedures are updated, as they are revised, and that the obsolete pages are retrieved. The obsolete originals are handled as described in the Document and Record Control Procedure (4.2).

NOTE H

Refer to the Training Documentation Procedure (6.1).

DOCUMENT AND RECORD CONTROL (PROCEDURE 4.2)

NOTE A

The documentation system consists of three levels of documentation. They are:

- Level (1) Quality Manual, including the Quality Policy,
- Level (2) Procedures, and
- Level (3) Quality Records, including Work Instructions, which are controlled by the appropriate manager.

NOTE B

Document and Record review is described in the relevant procedure. The President and Management Representative approve:

- (1) Implementation of the Quality Manual, (which is designated as Revision A), and
- (2) All subsequent revisions.

The Management Representative approves:

- (1) Implementation of all of the Procedures, (which are designated as Revision A), and
- (2) All subsequent revisions.

If there is any question about the control of Documents or Records the Management Representative resolves it.

NOTE C

Some Documents or Records require duplication and distribution prior to being filed. Examples are:

- (1) The Quality Manual, and
- (2) Procedures.

NOTE E

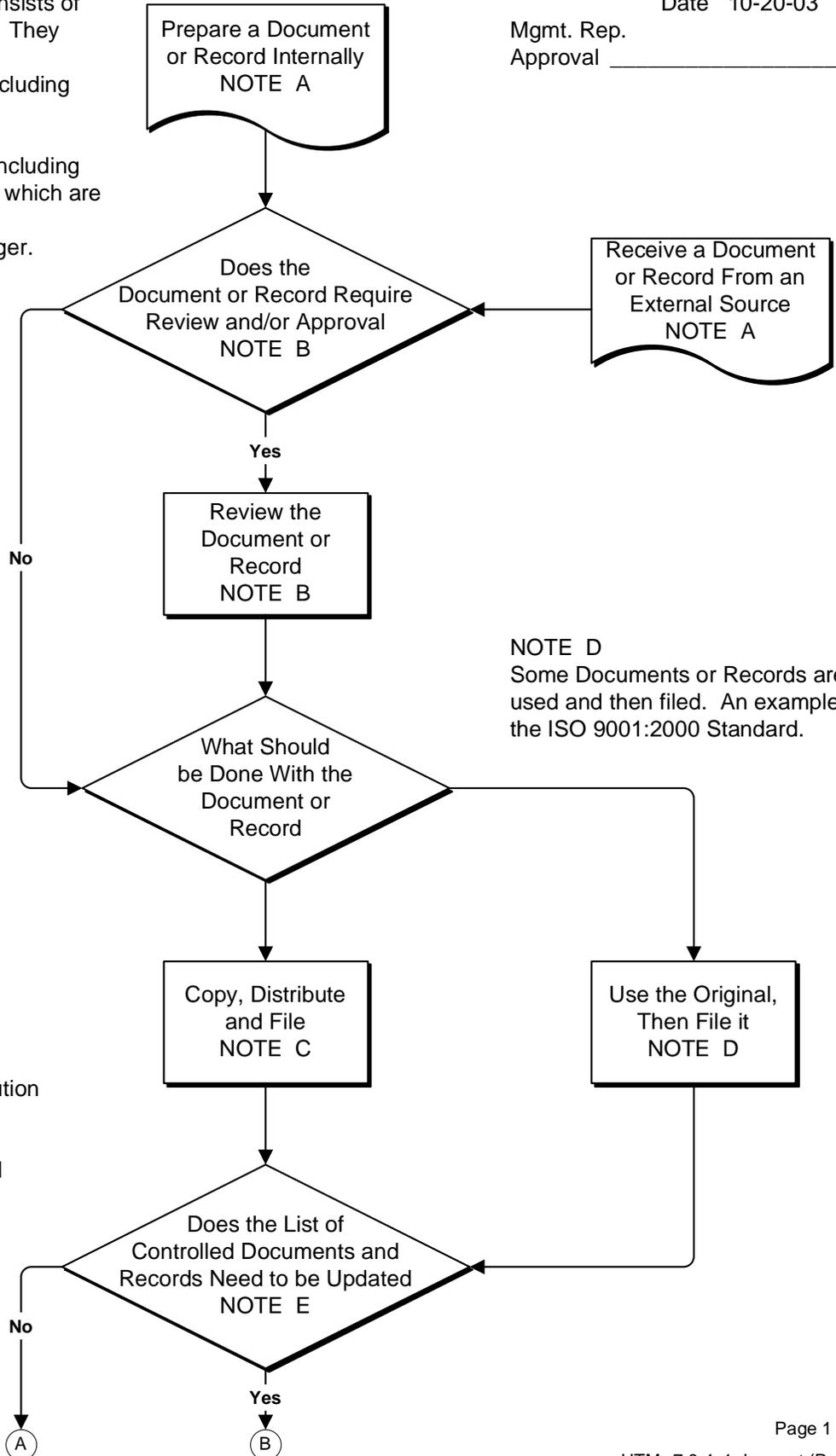
A List of Controlled Documents and Records follows this procedure and is identified by the number (4.3).

APPROVAL RECORD

Date 10-20-03

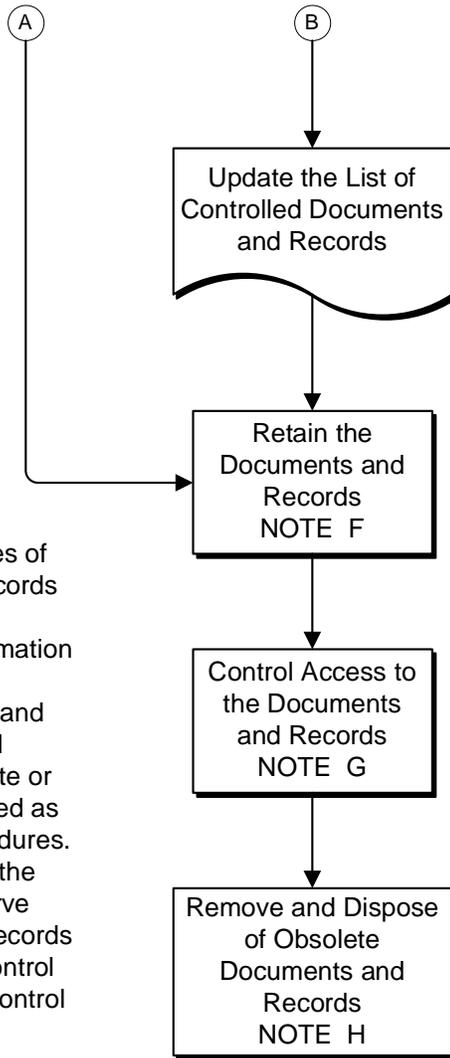
Mgmt. Rep. _____

Approval _____



NOTE D

Some Documents or Records are used and then filed. An example is the ISO 9001:2000 Standard.



NOTE G

Access to active working copies of controlled Documents and Records is readily available to those employees that need the information to perform their jobs. Access to original Documents and Records, or to Documents and Records that are either obsolete or not currently in use, is controlled as described in the various procedures. Since it is the responsibility of the department manager to preserve the original Documents and Records appropriately, the degree of control exercised and the method of control used is left to their discretion.

NOTE F

Storage retention responsibility for the various Documents or Records, that are in use, obsolete or currently inactive, is described in the relevant procedure.

NOTE H

Should permanently obsoleted Documents or Records be retained in the system, they are handled as follows:

- (1) If they are in hard copy form, they are identified as obsolete by stamping or writing the word obsolete, on the face of them, along with the date that they were obsoleted and the name or initials of the person who obsoleted them, and
- (2) If they are computerized, they are retained in a secured computer.

LIST OF CONTROLLED DOCUMENTS AND RECORDS (4.3)

Doc Level	Document / Record Name	Doc / Record Identification	Revision Date
1	<p>Quality Manual (Shown by Section)</p> <ul style="list-style-type: none"> 1 Quality Policy 2 Revision Record 3 Table of Contents 4 List of Manual Locations 5 System Description and Scope <ul style="list-style-type: none"> Appendix A -Organization Chart Appendix B - Process Model List of Procedures Legend 	<p>HTM v7.6-1c1 quality manual (Rev B).doc</p> <p>HTM v7.6-1d1 org chart (Rev A).vsd HTM v7.6-1e1 proc model (Rev B).vsd HTM v7.6-2b1 list of procedures (Rev A).doc HTM v7.6-2c1 legend (Rev A).vsd</p>	<p>12-4-03</p> <p>10-20-03 10-20-03 12-4-03 10-20-03</p>
2	<p>Procedures and Forms</p> <p>Quality Management System (Clause 4) Procedure Writing, Revision & Implementation Procedure (4.1) Document and Record Control Procedure (4.2) List of Controlled Documents and Records (4.3)</p> <p>Management Responsibility (Clause 5) Establishing Quality Objectives and Continual Improvement Procedure (5.1) Action Plan Quality Objectives and Continual Improvement Meeting Attend Record Internal Communication Procedure (5.2) Communication Record Communication Log Management Review and Analysis of Data Procedure (5.3) Management Review Record</p> <p>Resource Management (Clause 6) Training Documentation Procedure (6.1) New Employee Training & Probation Work Sheet Training Review and Planning Procedure (6.2)</p>	<p>HTM v7.6-4b1 proc write (Rev A).vsd HTM v7.6-4c1 doc contrl (Rev A).vsd HTM v7.6-4d1 list of controlled docs (Rev A).doc</p> <p>HTM v7.6-5b1 objectives (Rev A).vsd HTM v7.6-5b2 action plan (Rev A).doc HTM v7.6-5b3 object attend record (Rev A).doc HTM v7.6-5c1 inter com (Rev A).vsd HTM v7.6-5c2 commun record (Rev A).doc HTM v7.6-5c3 commun log (Rev A).doc HTM v7.6-5d1 mgmt rev (Rev A).vsd HTM v7.6-5d2 mgmt review record (Rev B).doc</p> <p>HTM v7.6-6b1 train docs (Rev A).vsd HTM v7.6-6b2 training work sheet (Rev A).doc HTM v7.6-6c1 train rev (Rev A).vsd</p>	<p>10-20-03 10-20-03 10-20-03</p> <p>10-20-03 10-20-03 10-20-03 10-20-03 10-20-03 10-20-03 10-20-03 12-4-03</p> <p>10-20-03 10-20-03 10-20-03</p>

Attach additional pages as required
 Ref. Procedure 4.2

HTM v7.6-4d1 list of controlled docs (Rev A)
 Rev Date 10-20-03

LIST OF CONTROLLED DOCUMENTS AND RECORDS (4.3)

Doc Level	Document / Record Name	Doc / Record Identification	Revision Date
	Product Realization (Clause 7)		
	Quote Preparation and Planning Procedure (7.1)	HTM v7.6-7b1 quote (Rev A).vsd	10-20-03
	Contract Review Procedure (7.2)	HTM v7.6-7c1 contr rev (Rev A).vsd	10-20-03
	Purchasing Procedure (7.3)	HTM v7.6-7d1 purch (Rev A).vsd	10-20-03
	Supplier Evaluation Procedure (7.4)	HTM v7.6-7e1 sup eval (Rev A).vsd	10-20-03
	Add or Remove Supplier Record	HTM v7.6-7e2 add or remove suppliers (Rev A).doc	10-20-03
	Approved Supplier Review Record	HTM v7.6-7e3 supplier review record (Rev A).doc	10-20-03
	Preventive Maintenance Procedure (7.5)	HTM v7.6-7f1 prev maint (Rev A).vsd	10-20-03
	Receiving Procedure (7.6)	HTM v7.6-7g1 receiving (Rev A).vsd	10-20-03
	Product Identification and Preservation Procedure (7.7)	HTM v7.6-7h1 prod ident (Rev A).vsd	10-20-03
	Gage Calibration Procedure (7.8)	HTM v7.6-7i1 gage cal (Rev A).vsd	10-20-03
	Shipping Procedure (7.9)	HTM v7.6-7j1 shipping (Rev A).vsd	10-20-03
	Customer Complaint Procedure (7.10)	HTM v7.6-7k1 cust comp (Rev A).vsd	10-20-03
	Measurement, Analysis and Improvement (Clause 8)		
	Statistical Techniques Procedure (8.1)	HTM v7.6-8b1 stat techs (Rev A).vsd	10-20-03
	Customer Satisfaction-Measurement and Monitoring Procedure (8.2)	HTM v7.6-8c1 cust satis (Rev A).vsd	10-20-03
	Customer Satisfaction Survey	HTM v7.6-8c2 customer survey (Rev A).doc	10-20-03
	Customer Satisfaction Evaluation Record	HTM v7.6-8c3 satis eval record (Rev A).doc	10-20-03
	Internal Audits Procedure (8.3)	HTM v7.6-8d1 audits (Rev A).vsd	10-20-03
	Audit Schedule and Plan	HTM v7.6-8d2 audit schedule and plan (Rev A).doc	10-20-03
	Audit Finding	HTM v7.6-8d3 audit finding (Rev A).doc	10-20-03
	Receiving Inspection Procedure (8.4)	HTM v7.6-8e1 rec insp (Rev A).vsd	10-20-03
	In-Process Inspection Procedure (8.5)	HTM v7.6-8f1 proc insp (Rev A).vsd	10-20-03
	Final Inspection Procedure (8.6)	HTM v7.6-8g1 final insp.vsd	10-20-03
	Control of Nonconforming Product Procedure (8.7)	HTM v7.6-8h1 noncon (Rev A).vsd	10-20-03
	Nonconforming Material Notice	HTM v7.6-8h2 noncon notice (Rev A).doc	10-20-03
	Corrective or Preventive Action Procedure (8.8)	HTM v7.6-8i1 cor action (Rev B).vsd	12-4-03
	Corrective or Preventive Action Record	HTM v7.6-8i2 correct action record (Rev B).doc	12-4-03
	Corrective or Preventive Action Log	HTM v7.6-8i3 correct action log (Rev B).doc	12-4-03

LIST OF CONTROLLED DOCUMENTS AND RECORDS (4.3)

Doc Level	Document / Record Name	Doc / Record Identification	Revision Date
3	Work Instructions and Records Work Instructions are controlled by the department manager where they are created or used. Records are subject to the control and handling described in the Document and Record Control Procedure (4.2) and the various Procedures where such records are created.		

PROCEDURE SERIES 5

MANAGEMENT RESPONSIBILITY

ESTABLISHING QUALITY OBJECTIVES AND CONTINUAL IMPROVEMENT (PROCEDURE 5.1)

GENERAL NOTE

Quality Objectives are product or process related Quality goals, consistent with the Quality Policy.

Continual Improvement is the ongoing process of enhancing the effectiveness of the Quality Management System to achieve improvement in performance.

NOTE C

Quality Objectives that have not been achieved and Continual Improvement Projects that have not been completed may be:

- (1) Carried over into the new plan, as they are,
- (2) Revised and put into the new plan, or
- (3) Dropped (only after having been properly documented).

NOTE D

The Management Representative ensures that each:

- (1) Objective, and
- (2) Continual Improvement Project,

is documented on an Action Plan (HTM v7.6-5b2 action plan.doc).

NOTE E

Those who participate in preparation of the Action Plans ensure that all necessary information is communicated, by whatever means they deem appropriate, to those people in their area of responsibility, whose help is needed in achievement of the plan.

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

Approval _____

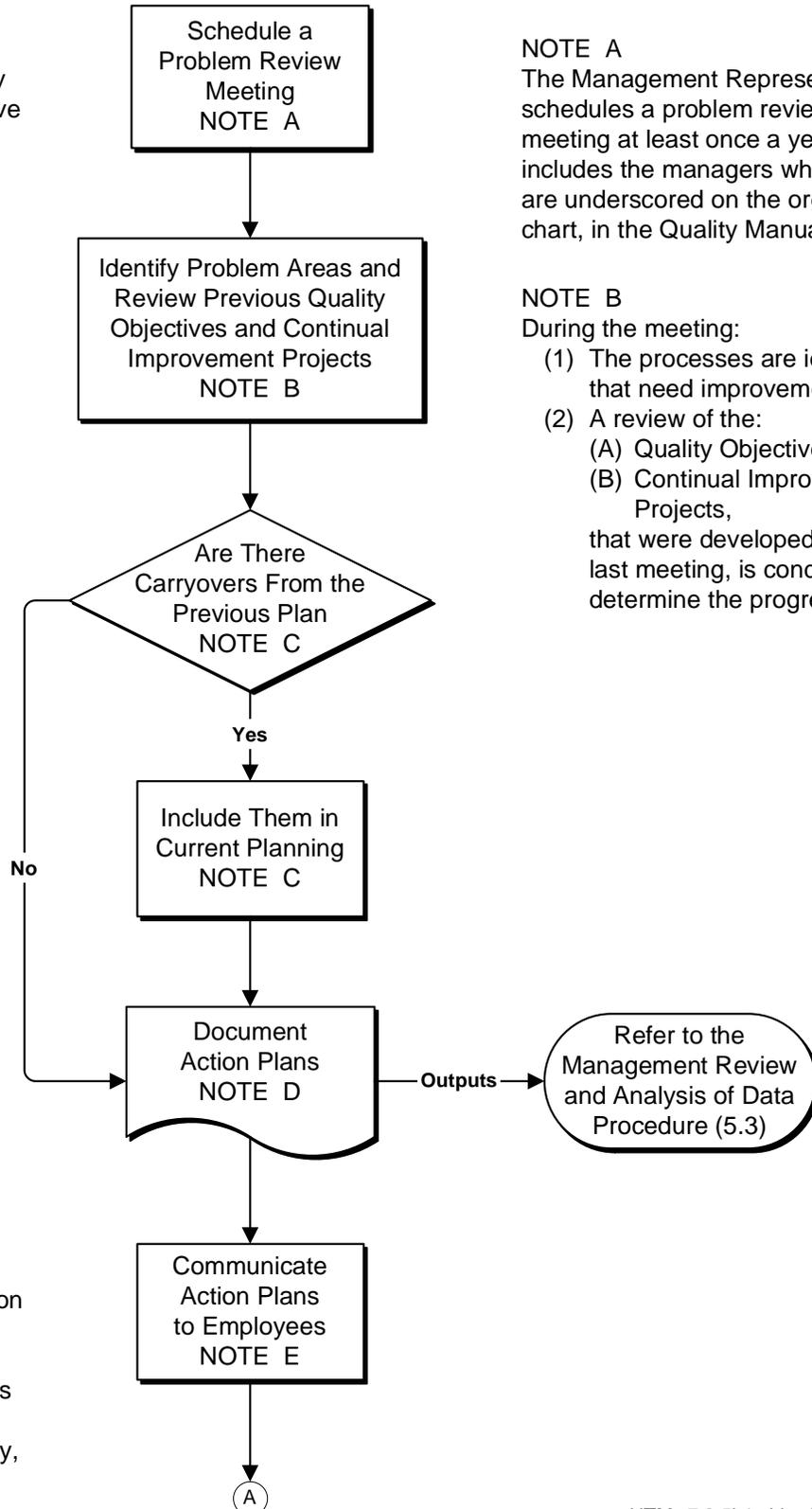
NOTE A

The Management Representative schedules a problem review meeting at least once a year and it includes the managers whose titles are underscored on the organization chart, in the Quality Manual.

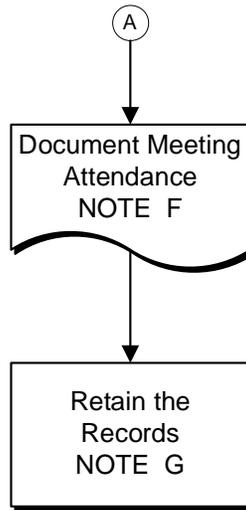
NOTE B

During the meeting:

- (1) The processes are identified that need improvement, and
- (2) A review of the:
 - (A) Quality Objectives, and
 - (B) Continual Improvement Projects,
 that were developed at the last meeting, is conducted to determine the progress made.



NOTE F
The Management Representative ensures that meeting attendance is documented on the Quality Objectives and Continual Improvement Meeting Attendance Record (HTM v7.6-5b3 object attend record.doc).



NOTE G
The Management Representative ensures that Action Plans and Meeting Attendance Records are retained, for a minimum of 3 years.

ACTION PLAN

(1) Description of the Problem

(2) Quality Objective or Continual Improvement Goal - (What is to be Accomplished)

(3) Action Plan - (Consider Responsibilities, Time Frames, Resources, Milestones, etc).

Action Plan
Prepared by _____ Date _____

(4) Results

ACTION PLAN

-

-

-

-

-

-

Results Documented,
Monitored and
Measured by _____ Date _____

QUALITY OBJECTIVES AND CONTINUAL IMPROVEMENT MEETING ATTENDANCE RECORD

The following members of management were present and participated in the establishing of:

- (1) Quality Objectives, and
- (2) Continual Improvement Projects.

Name	_____	Title	_____
Name	_____	Title	_____
Name	_____	Title	_____
Name	_____	Title	_____
Name	_____	Title	_____
Name	_____	Title	_____
Name	_____	Title	_____
Name	_____	Title	_____
Prepared by	_____	Title	_____
Date	_____		

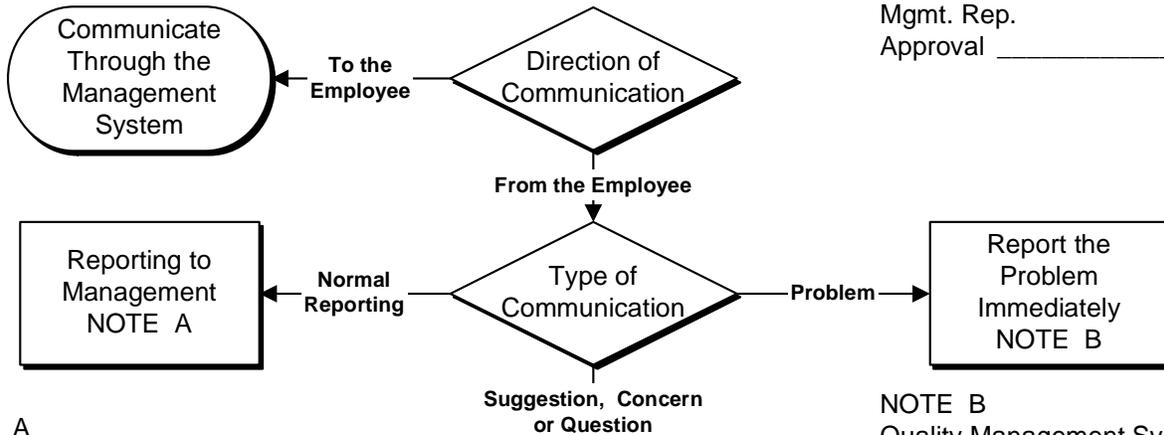
INTERNAL COMMUNICATION (PROCEDURE 5.2)

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

Approval _____



NOTE A

Normal reporting to management is handled as described in specific procedures where reporting requirements are identified.

NOTE C

While all employees are encouraged to discuss quality suggestions, concerns or questions with any member of management, only those that are submitted to the Management Representative, on the Communication Record (HTM v7.6-5c2 commun record.doc), can be sure of a formal review and response.

NOTE E

The Management Representative ensures that:

- (1) Communication Records are reviewed,
- (2) A written response is prepared, and
- (3) It is documented on the Communication Record.

NOTE G

The Management Representative ensures that a copy of the Communication Record is returned to the employee.

NOTE H

The Management Representative ensures that Communication Records are retained, for a minimum of 3 years.

NOTE B

Quality Management System problems (either actual or potential) are handled through the Corrective or Preventive Action Procedure (8.8). Product quality problems are identified through the Inspection Procedures (8.4, 8.5 or 8.6) and handled through the Control of Nonconforming Product Procedure (8.7).

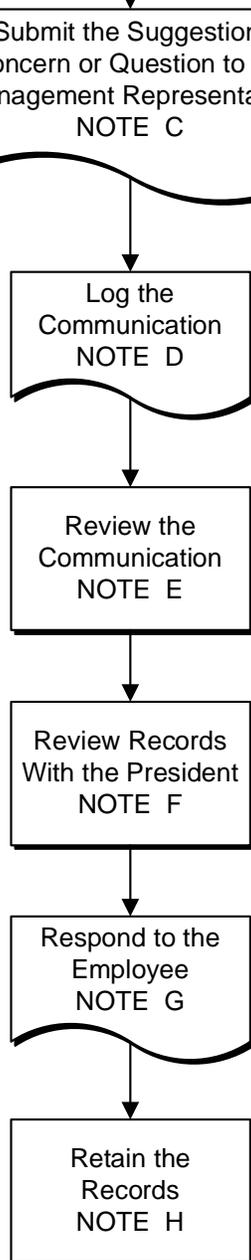
NOTE D

The Management Representative ensures that:

- (1) Communication Records are logged on the Communication Log (HTM v7.6-5c3 commun log.doc), which includes assignment of an identification number, and
- (2) The Communication Log is maintained, on an ongoing basis.

NOTE F

The Management Representative ensures that Communication Records are reviewed with the President.



COMMUNICATION RECORD

Communication Identification No. _____ (assigned by the Management Representative)

-

-

-

-

-

-

Management Representative _____ Date _____

Results Reviewed with the President by _____ Date _____

MANAGEMENT REVIEW AND ANALYSIS OF DATA (PROCEDURE 5.3)

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

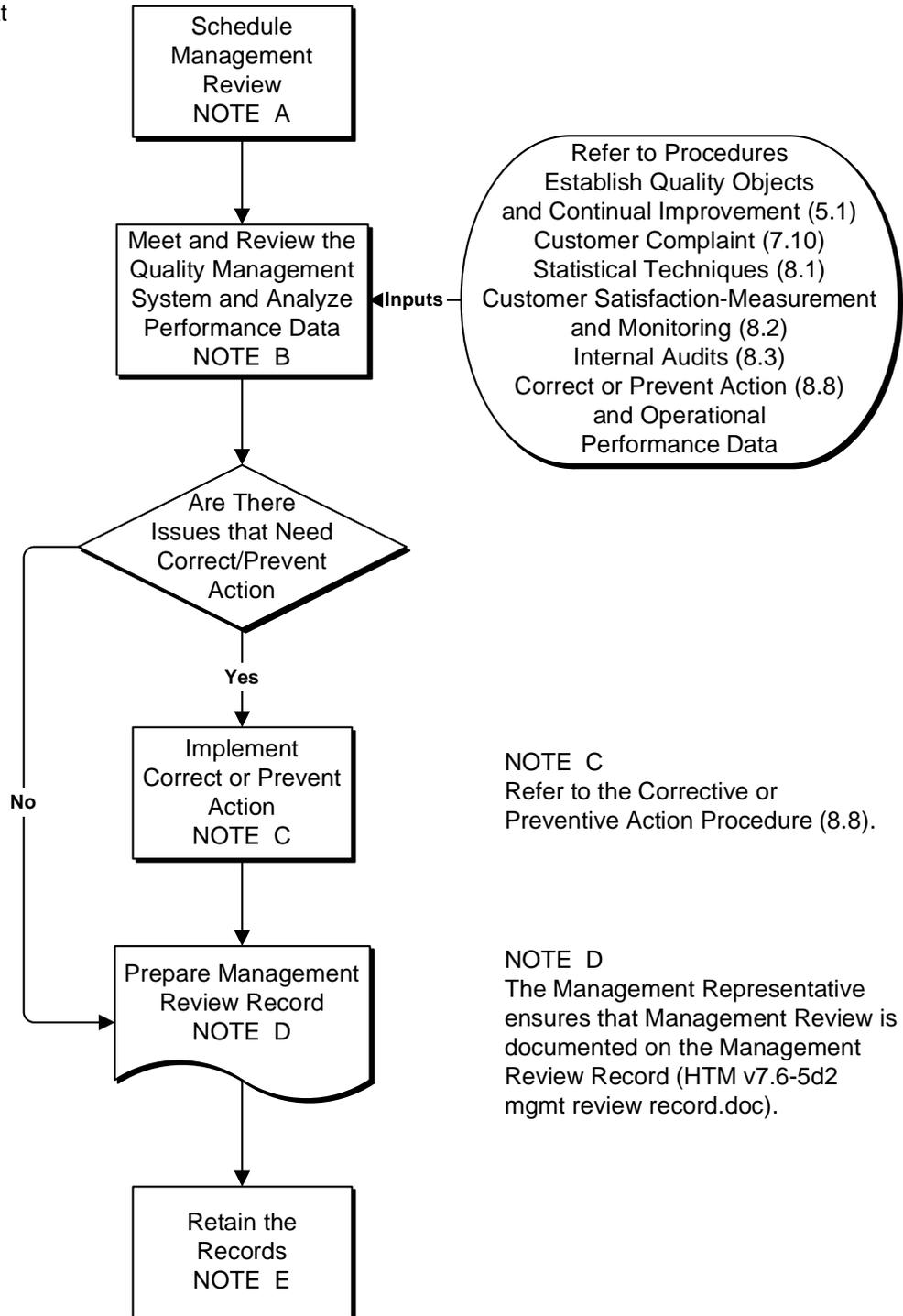
Approval _____

NOTE A

The Management Representative schedules Management Review, at least once a year, and it includes the managers whose titles are underscored on the organization chart, in the Quality Manual.

NOTE B

The Quality Management System and related Operational Performance Data, shown on the Management Review Record described below, are reviewed.



NOTE C

Refer to the Corrective or Preventive Action Procedure (8.8).

NOTE D

The Management Representative ensures that Management Review is documented on the Management Review Record (HTM v7.6-5d2 mgmt review record.doc).

NOTE E

The Management Representative ensures that Management Review Records are retained, for a minimum of 3 years.

MANAGEMENT REVIEW RECORD

Review Topics	Procedure and Form Identification	Suitable, Adequate & Effective	Summary of Each Review Topic
---------------	-----------------------------------	--------------------------------	------------------------------

NOTE: It is only necessary to review the items listed below from the date of the last review to the present time.

Quality Manual (including Quality Policy)	(Procedure) None (Form) None	Yes / No	
Action Plans	(Procedure) 5.1 (Form) HTM v7.6-5b2 action plan.doc	Yes / No	
Customer Complaints	(Procedure) 7.10 (Form) None	Yes / No	
Statistical Data (when available)	(Procedure) 8.1 (Form) None	Yes / No	
Customer Satisfaction Surveys	(Procedure) 8.2 (Form) HTM v7.6-8c2 customer survey.doc	Yes / No	
Customer Satisfaction Evaluation Records	(Procedure) 8.2 (Form) HTM v7.6-8c3 satis eval record.doc	Yes / No	

MANAGEMENT REVIEW RECORD

Audit Schedule and Plans	(Procedure) 8.3 (Form) HTM v7.6-8d2 audit schedule and plan.doc	Yes / No	
Audit Findings	(Procedure) 8.3 (Form) HTM v7.6-8d3 audit finding.doc	Yes / No	
Corrective or Preventive Action Records	(Procedure) 8.8 (Form) HTM v7.6-8i2 correct action record.doc	Yes / No	
Corrective or Preventive Action Log	(Procedure) 8.8 (Form) HTM v7.6-8i3 correct action log.doc	Yes / No	

Operational Performance Data Review Topics	Summary of Each Operational Performance Data Topic
Sales	
Profit as a % of Sales	
Summary of Production Process Performance	

MANAGEMENT REVIEW RECORD

Summary of Product Conformity	

The above Quality Management System Topics and Operational Performance Data were:

- (1) Reviewed for Suitability, Adequacy and Effectiveness, and
- (2) The Results were Summarized in the appropriate boxes, in the Right Hand column.

Name _____ Title _____ Name _____ Title _____

Prepared by _____ Title _____ Date _____

PROCEDURE SERIES 6

RESOURCE MANAGEMENT

TRAINING DOCUMENTATION (PROCEDURE 6.1)

NOTE A

There are five ways that a training need arises. They are:

- (1) A new employee is hired and is given an introductory policy and procedure review, which is documented on the New Employee Training & Probation Work Sheet (HTM v7.6-6b2 training work sheet.doc),
- (2) Proactive training is planned by management,
- (3) There is a change in the Quality Manual, Quality Policy, a Procedure or a Work Instruction,
- (4) An employee deficiency is discovered, or
- (5) An employee changes jobs.

APPROVAL RECORD

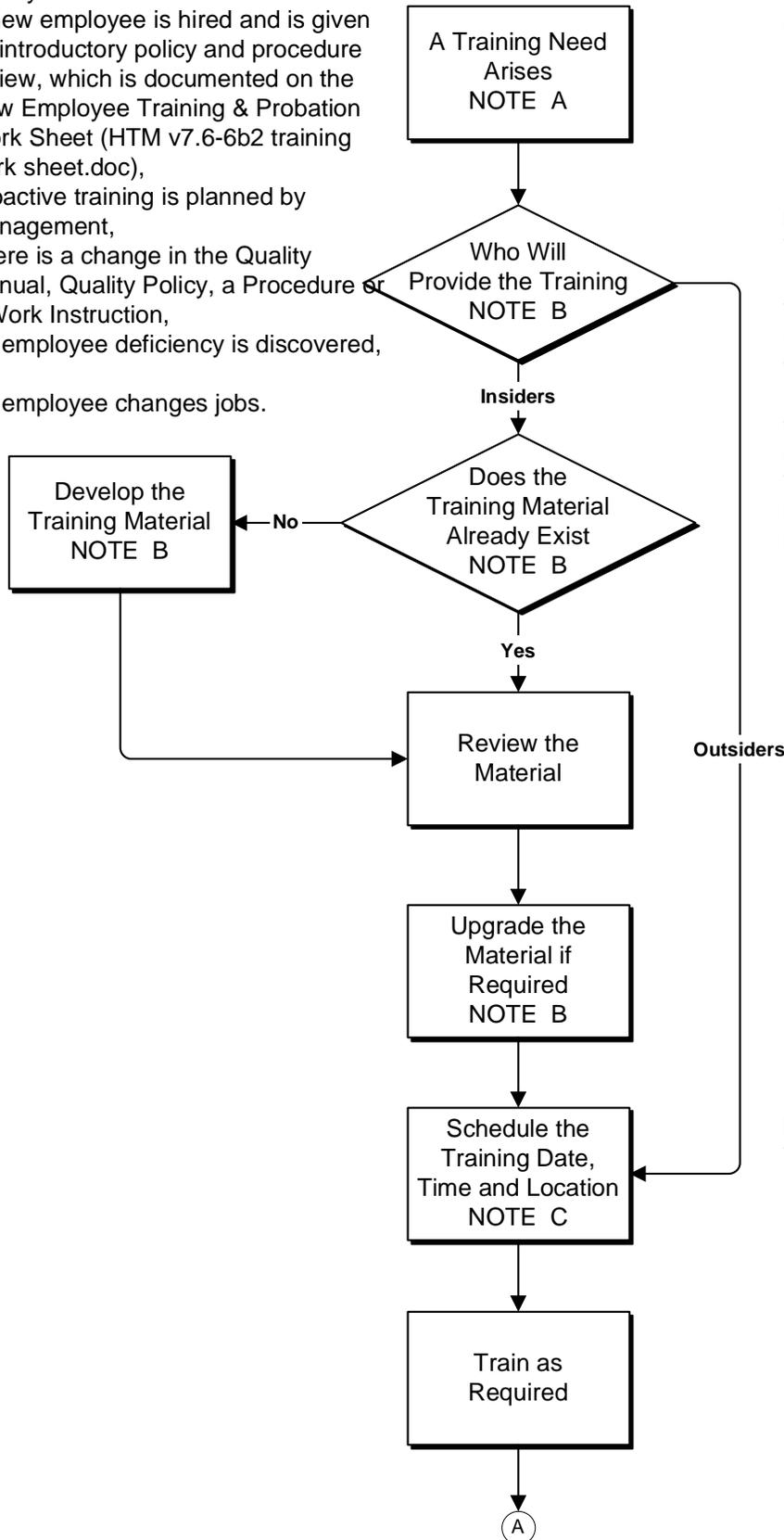
Date 10-20-03

Mgmt. Rep. _____

Approval _____

NOTE B

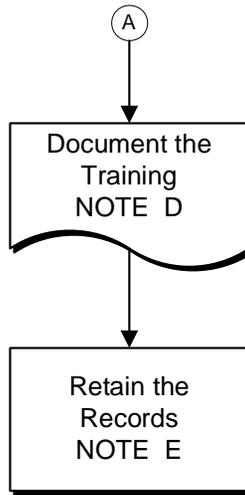
The Management Representative determines who performs the training and who develops or upgrades the training material, since they ensure that the training is effectively implemented (i.e. the training is understood and put into use by those who are trained). Training material usually consists of Procedures and/or Work Instructions and related Forms.



NOTE C

The Management Representative schedules the training date, time and location.

NOTE D
Training is documented on the employees Training Matrix which is retained, for at least the duration of employment.



NOTE E
The Management Representative ensures that Training Records are retained as described in NOTE D.

- Hi-Tech Employee
- Temp Employee

NEW EMPLOYEE TRAINING & PROBATION WORK SHEET

(Must be completed on Employee's first day of work and submitted to Office Manager.)

Employees Name: _____ Start Date: _____

Department: _____ Responsible Supervisor: _____

Employee's job title: _____

Check boxes of items discussed/explained with the above named employee:

- How to clock-in and clock-out.**
- Who to call and the telephone number to report absences.**
- Where to put personal belongings.**
- Discussed what time breaks and lunch are and whether the Employee can leave the building at those times.**
- Indicated location of refrigerators, microwaves and restrooms.**
- Indicated the fire exits.**
- Explained what to do if he/she is hurt.**
- Explained the 30 day probation policy.**
- Gave employee "new hire" paperwork and ensured its return.**
- Explained when payday is and how checks are distributed.**
- Indicated employee's work area and explained/pointed out "off limits" areas.**
- Introduced the employee to the others in the department.**
- Discussed with him/her what to do if they have a problem understanding or completing their work or if they should experience a problem on the job during work hours.
Explained who he/she should report to if the Responsible Supervisor was absent.**

- Explained MSDS program.
- Explained personal safety equipment required.
- Trained on company Quality Policy.

Identify immediate training needs for this employee(include staff needed to meet training needs):

SIGNATURES:

Employee: _____ Date: _____

Responsible Supervisor: _____ Date: _____

TO BE FILED AFTER 30 DAYS

Probation Completed? **Yes** **No**

Signature _____

Employee _____

Form NEW

TRAINING REVIEW AND PLANNING (PROCEDURE 6.2)

APPROVAL RECORD

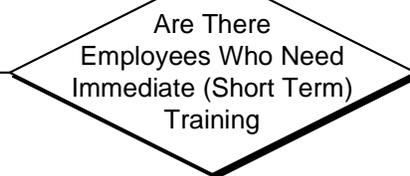
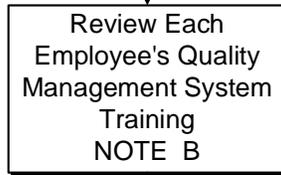
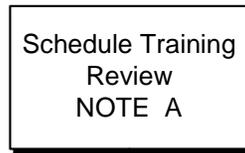
Date 10-20-03

Mgmt. Rep. _____

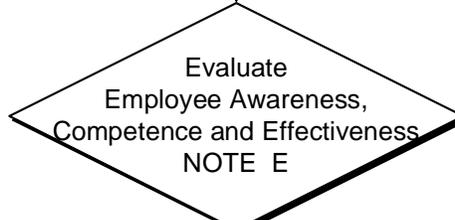
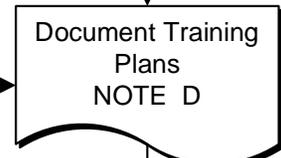
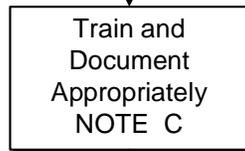
Approval _____

NOTE A

At least once a year the Management Representative ensures that each department manager is notified of the need for Training Review.



Yes



Unaware,
Incompetent or
Ineffective

(A)

Aware,
Competent
and Effective

(B)

NOTE B

A review of the training records is conducted to ensure that each employee, whose work may create a significant impact on quality, is properly trained.

NOTE C

Those people found to be in need of immediate (short term) training are trained as required and their training is documented on the Training Matrix, as described in the Training Documentation Procedure (6.1).

NOTE D

The Management Representative ensures that training needs are documented on the Training Matrix.

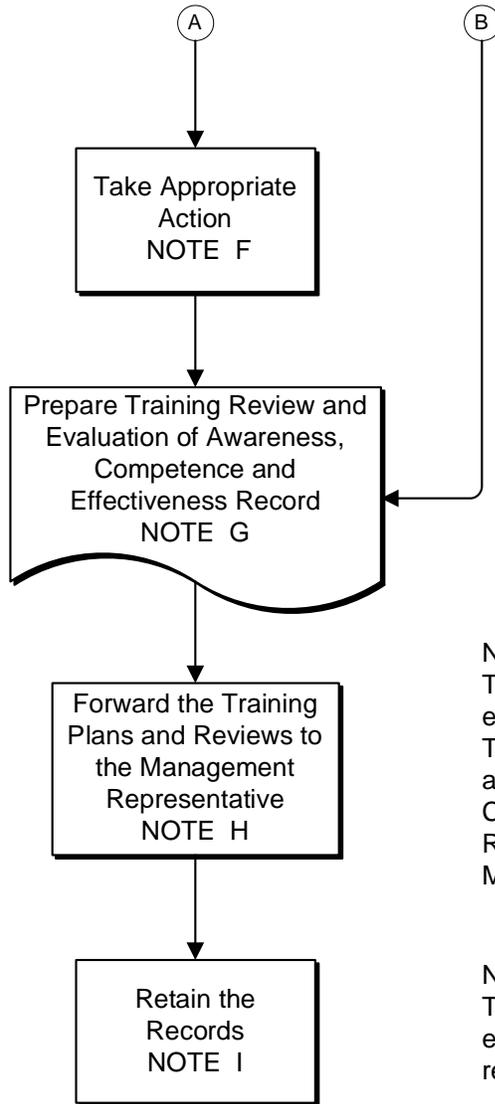
NOTE E

The Management Representative ensures that each employee, whose work may create a significant impact on quality is:

- (1) Aware of:
 - (A) The importance of conforming with the Quality Policy and all aspects of the Quality System,
 - (B) The significant impacts of their work activities on quality,
 - (C) The benefits of improved personal performance,
 - (D) Their roles and responsibilities in conformance with the Quality System, and
 - (E) The potential consequences of departure from specified procedures;
- (2) Competent on the basis of education, training, skills and/or experience, and
- (3) Effective in their job performance.

NOTE F
Refer to the Corrective and Preventive Action Procedure (8.8).

NOTE G
The person reviewing employee training (i.e. awareness, competence and effectiveness) ensures that it is documented on the Training Matrix.



NOTE H
The Management Representative ensures that their completed Training Plans and Training Review and Evaluation of Awareness, Competence and Effectiveness Records are forwarded to the Management Representative.

NOTE I
The Management Representative ensures that the Training Matrix is retained on an ongoing basis.

PROCEDURE SERIES 7

PRODUCT REALIZATION

QUOTE PREPARATION AND PLANNING (PROCEDURE 7.1)

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

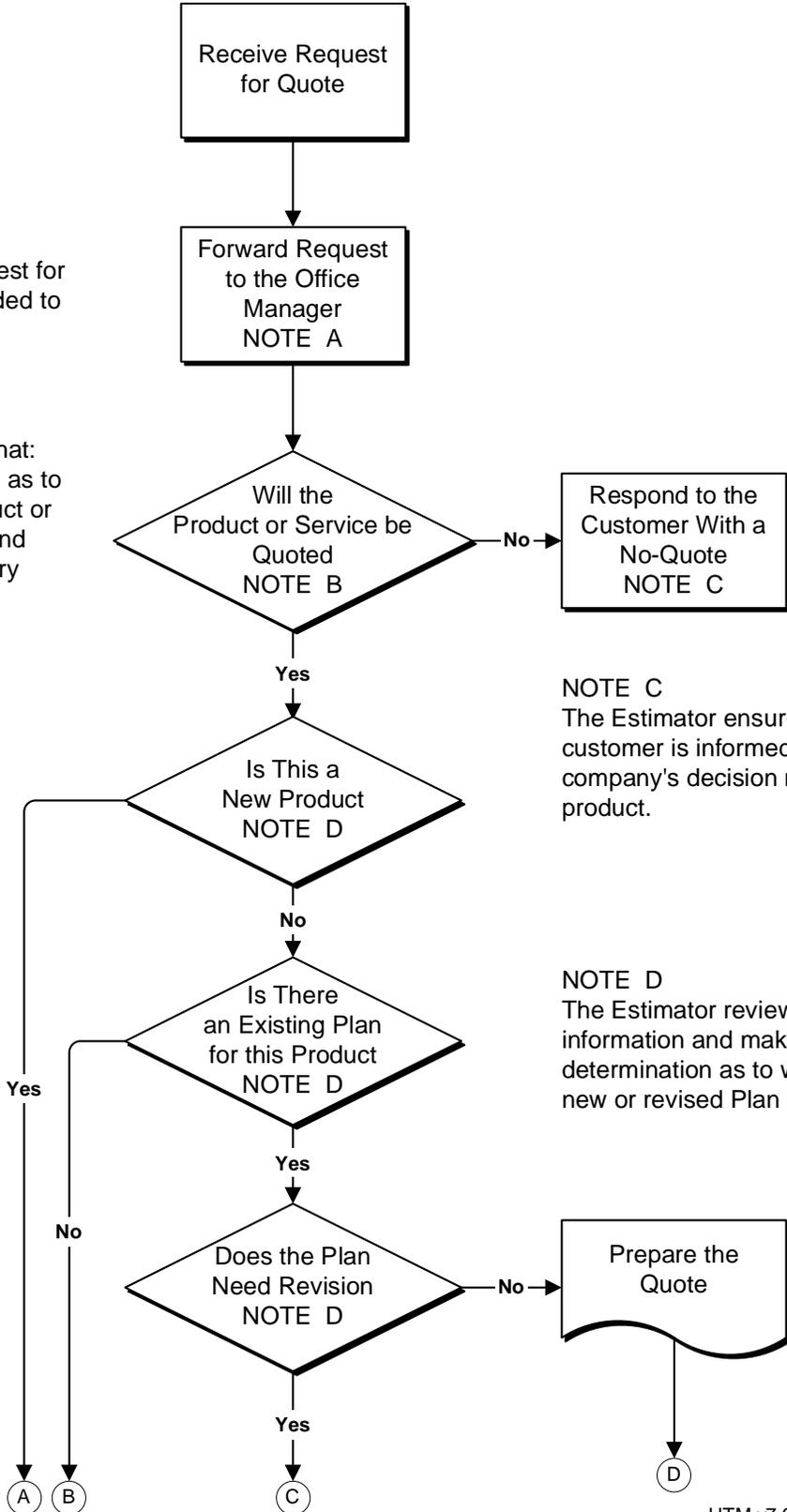
Approval _____

NOTE A

The person receiving the request for quote ensures that it is forwarded to the Office Manager.

NOTE B

The Office Manager ensures that:
 (1) A determination is made as to whether or not the product or service will be quoted, and
 (2) Confidential or proprietary customer information is protected.



NOTE C

The Estimator ensures that the customer is informed of the company's decision not to quote the product.

NOTE D

The Estimator reviews the Planning information and makes a determination as to whether or not a new or revised Plan is needed.

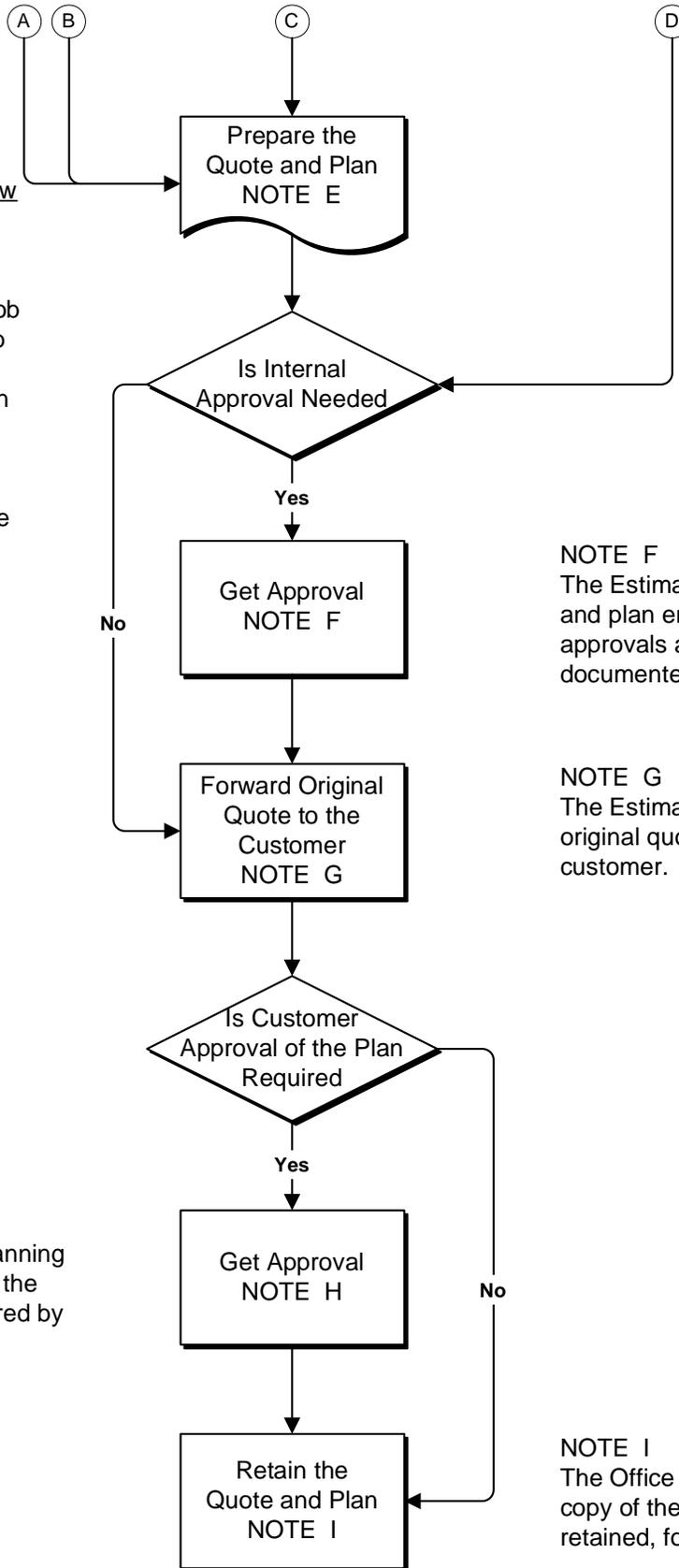
NOTE E

The Estimator ensures that quotes and related plans are prepared.
The Plan is simply documentation that defines how customer requirements will be met.

The Plan can consist of:

- (1) Work Instructions (ex. Job Folder (including the Job Router), etc.), and
- (2) Any other documentation deemed appropriate.

Participation in Planning is not restricted to company employees. If outsiders can be helpful, they may be invited to participate.



NOTE F

The Estimator preparing the quote and plan ensures that all necessary approvals are obtained and documented appropriately.

NOTE G

The Estimator ensures that the original quote is forwarded to the customer.

NOTE H

The Estimator ensures that planning documentation is submitted to the customer for approval, if required by the contract.

NOTE I

The Office Manager ensures that a copy of the quote and plan are retained, for a minimum of 3 years.

CONTRACT REVIEW (PROCEDURE 7.2)

GENERAL NOTE

This procedure applies to amendments or changes to a contract as well as to the original contract.

NOTE A

The person who receives a contract or related phone call ensures that it is forwarded to the Office Manager.

NOTE B

The Estimator ensures that:

- (1) The contract is reviewed,
- (2) Customer requirements are clearly defined,
- (3) All issues are resolved prior to acceptance of the contract, and
- (4) Confidential or proprietary customer information is protected.

NOTE C

The Estimator ensures that the plan which was developed in the plan which developed Quote Preparation and Planning Procedure (7.1), is reviewed to ensure that:

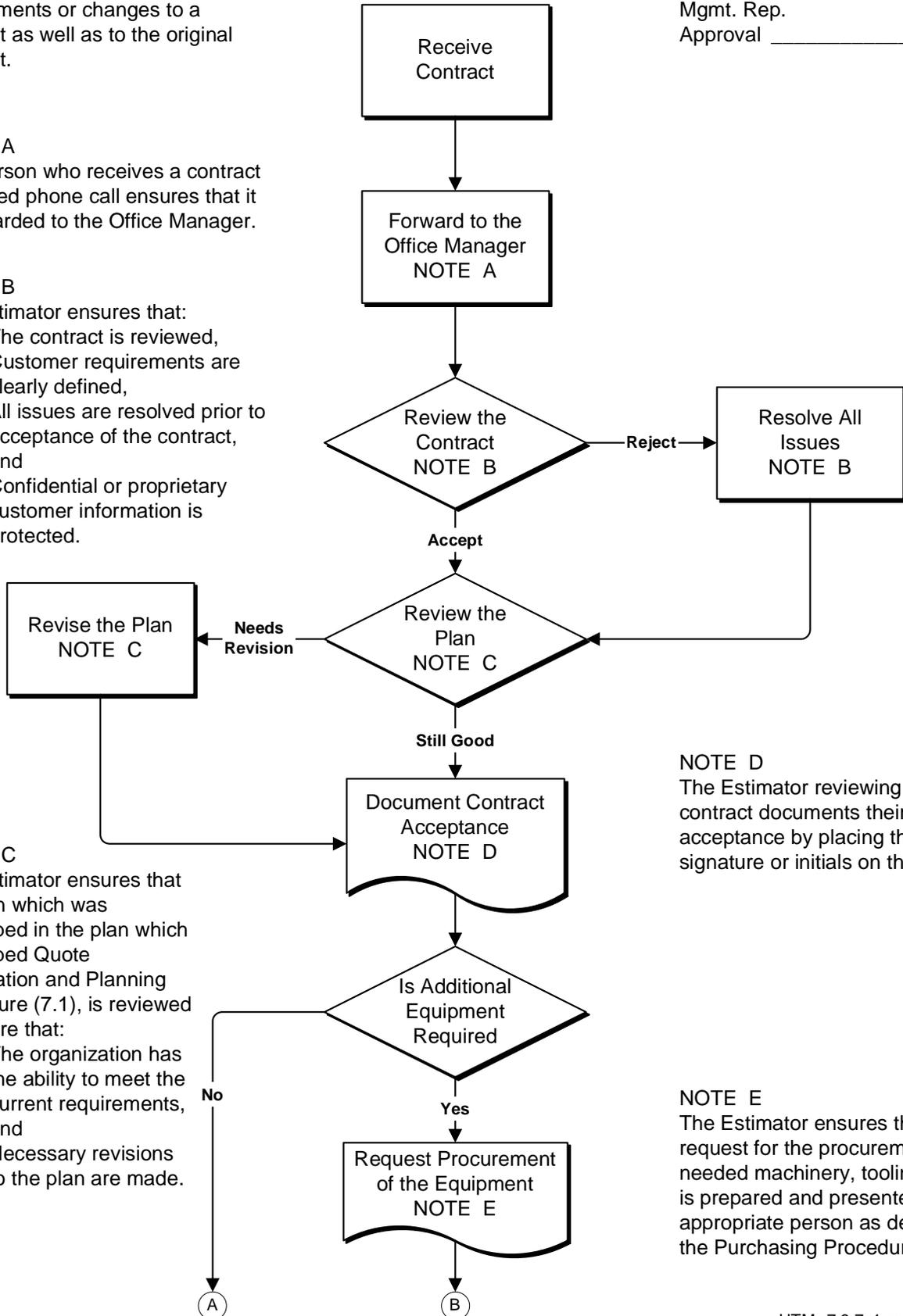
- (1) The organization has the ability to meet the current requirements, and
- (2) Necessary revisions to the plan are made.

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

Approval _____

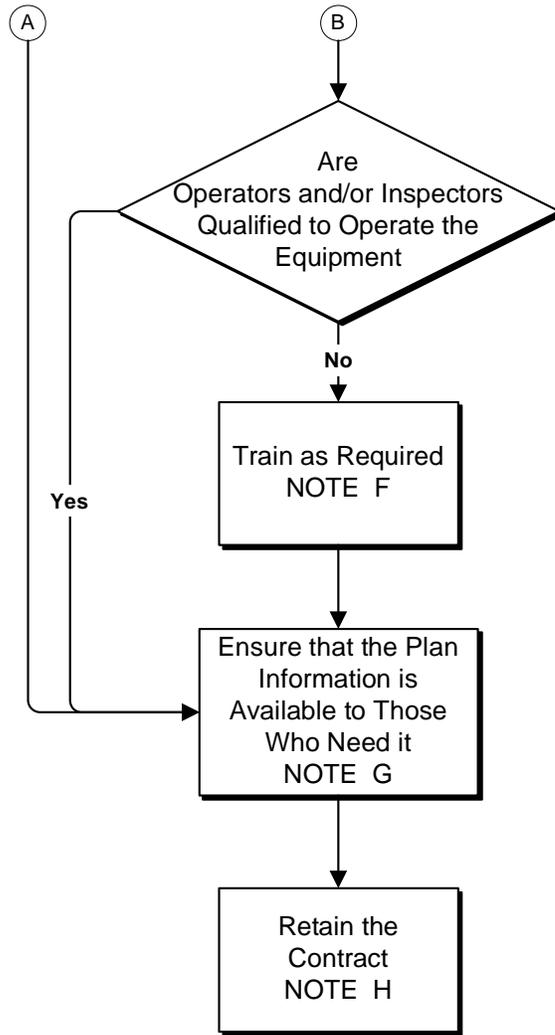


NOTE D

The Estimator reviewing the contract documents their acceptance by placing their signature or initials on the contract.

NOTE E

The Estimator ensures that a request for the procurement of any needed machinery, tooling or gages is prepared and presented to the appropriate person as described in the Purchasing Procedure (7.3).



NOTE F
Operators and/or Inspectors are trained and their training is documented as described in the Training Documentation Procedure (6.1).

NOTE G
The Estimator ensures that the resulting Plan information is made available to those individuals who need it.

NOTE H
The Office Manager ensures that the original contract is retained, for a minimum of 3 years.

PURCHASING (PROCEDURE 7.3)

GENERAL NOTE

Selected employees who have a company credit card, access to petty cash or are permitted to use a company expense report may purchase Class 2 services or supplies, as described below, without adherence to this procedure.

APPROVAL RECORD

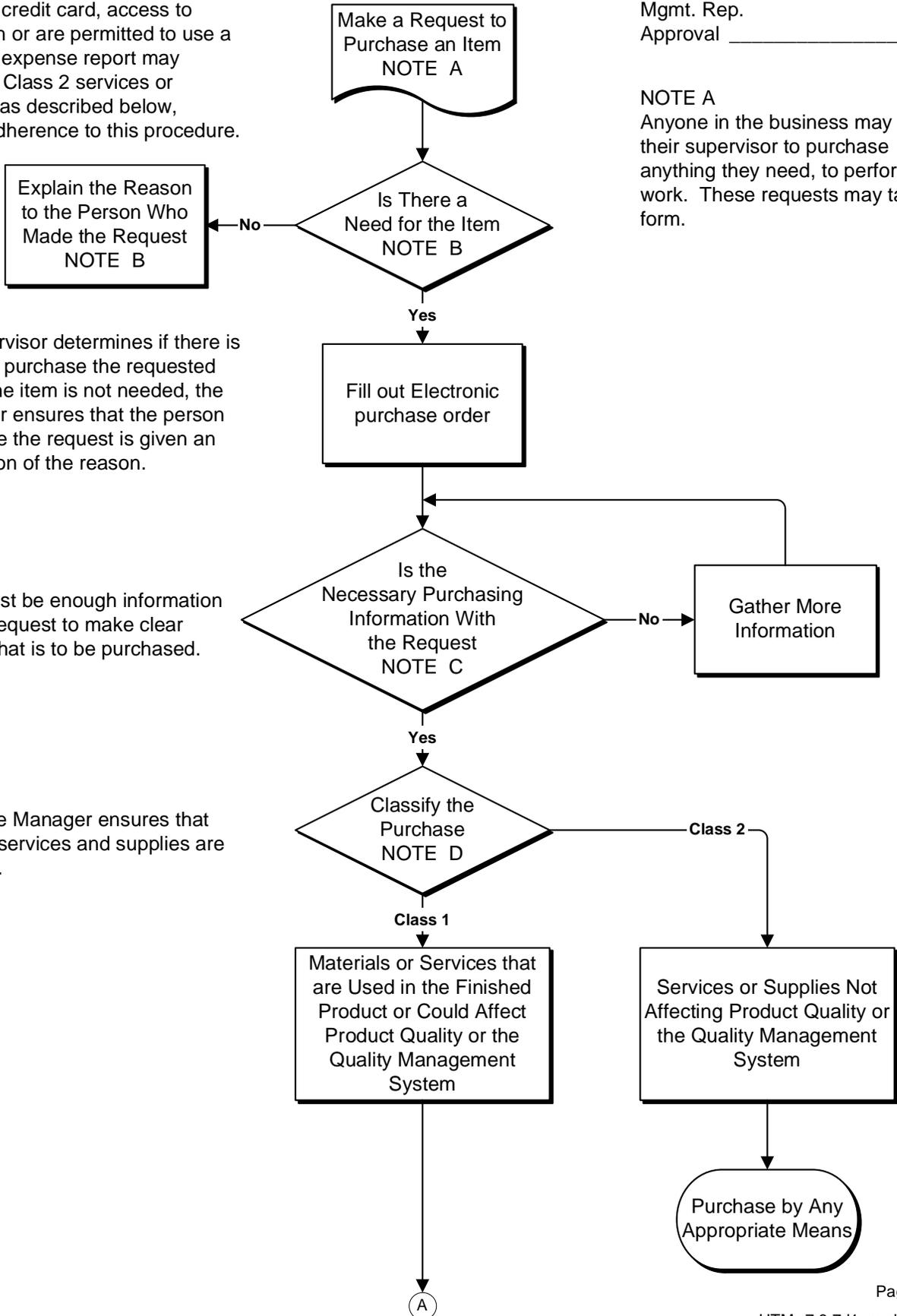
Date 10-20-03

Mgmt. Rep. _____

Approval _____

NOTE A

Anyone in the business may request their supervisor to purchase anything they need, to perform their work. These requests may take any form.



NOTE B

The supervisor determines if there is a need to purchase the requested item. If the item is not needed, the supervisor ensures that the person who made the request is given an explanation of the reason.

NOTE C

There must be enough information with the request to make clear exactly what is to be purchased.

NOTE D

The Office Manager ensures that material, services and supplies are classified.

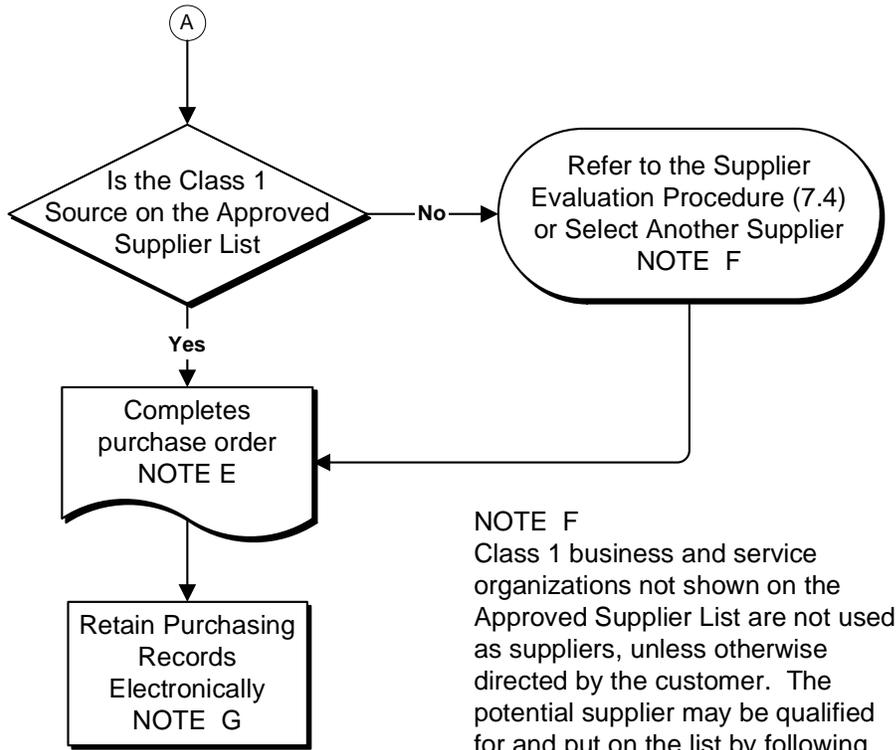
NOTE E

The Supervisor ensures that:

- (1) A Purchase Order is prepared,
- (2) The Purchase Order is placed with a supplier who is,
 - (A) Shown on the Approved Supplier List (this requirement applies to Class 1 suppliers only), and
 - (B) In the proper classification for the material, service or supply being purchased.

NOTE G

The Office Manager ensures that purchasing records are retained, for a minimum of 3 years in a secured computer.



NOTE F

Class 1 business and service organizations not shown on the Approved Supplier List are not used as suppliers, unless otherwise directed by the customer. The potential supplier may be qualified for and put on the list by following the steps described in the Supplier Evaluation Procedure (7.4) or another supplier shown on the list may be selected.

SUPPLIER EVALUATION (PROCEDURE 7.4)

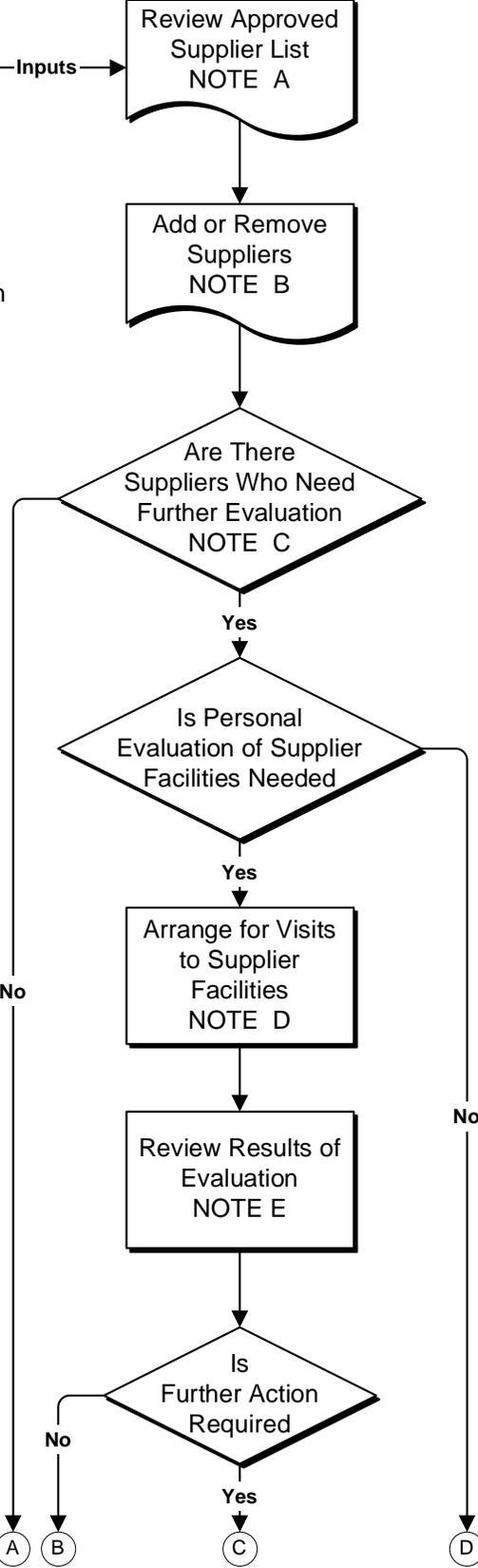
APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

Approval _____

Refer to the Control of Nonconforming Product Procedure (8.7)



NOTE B

The Quality Manager ensures that:

- (1) A supplier is added to the list or removed from the list, within 10 days of receipt of an approved Add or Remove Supplier Record (HTM v7.6-7e2 add or remove suppliers.doc), and
- (2) These records are retained, for a minimum of 3 years.

NOTE A

The Quality Manager ensures that an Approved Supplier List (for Class 1 suppliers only):

- (1) Has been developed in the computer, and
- (2) Is updated and maintained, on an ongoing basis.

Refer to the Purchasing Procedure (7.3) for the distinction between Class 1 & Class 2 suppliers.

Evaluation criteria may include:

- (1) Quality of Shipments received,
- (2) On Time Deliveries, and
- (3) Product Cost.

NOTE C

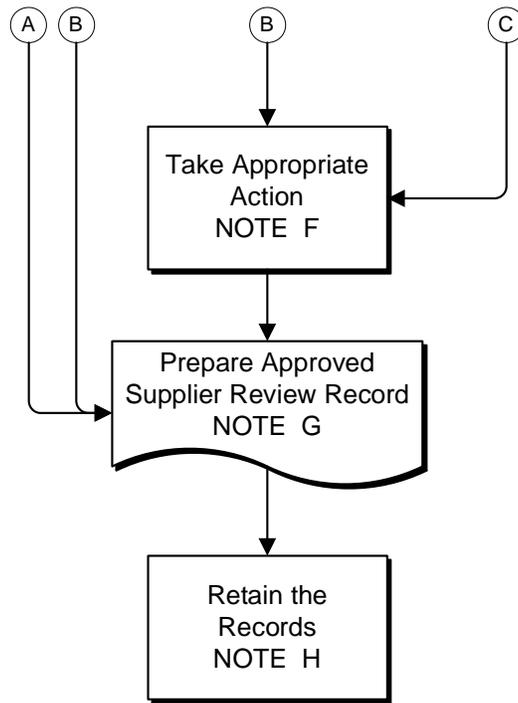
The Quality Manager determines whether or not further evaluation is necessary.

NOTE D

The Quality Manager determines who will make the necessary supplier visits and schedules them.

NOTE E

The Quality Manager reviews the results of the visits to the selected supplier facilities.



NOTE F
 During the review the Quality Manager determines the appropriate action to take, to correct any problem found. Refer to Corrective or Preventive Action Procedure (8.8).

NOTE G
 Documented evidence of Supplier Review is prepared by the Quality Manager on the Approved Supplier Review Record (HTM v7.6-7e3 supplier review record.doc).

NOTE H
 The Quality Manager ensures that Approved Supplier Review Records are retained, for a minimum of 3 years.

ADD OR REMOVE SUPPLIER RECORD

(1) Supplier Information

Name _____	Contact Person _____
Address _____	Title _____
_____	Phone No. _____
_____	Fax No. _____

(2) Material, Product or Service Offered or Currently Provided

Complete Either Evaluation (3) or (4) Below

(3) Circle or Highlight the Reason for Adding the Supplier to the Approved Supplier List

Sole Source Recommended by a Customer	Name _____
Site Survey Conducted	Performed by _____
Phone Survey Conducted (i.e. This Form)	Prepared by _____
ISO, QS, AS 9000 or TS 16949 Registered Demonstrated Capability Other	_____

(4) Reason for Removal of the Supplier from the Approved Supplier List

ADD OR REMOVE SUPPLIER RECORD

-

-

-

-

Prepared by _____ Date _____

Office Manager Approval _____ Date _____

APPROVED SUPPLIER REVIEW RECORD

Prepared by _____ Title _____

Date _____

PREVENTIVE MAINTENANCE (PROCEDURE 7.5)

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

Approval _____

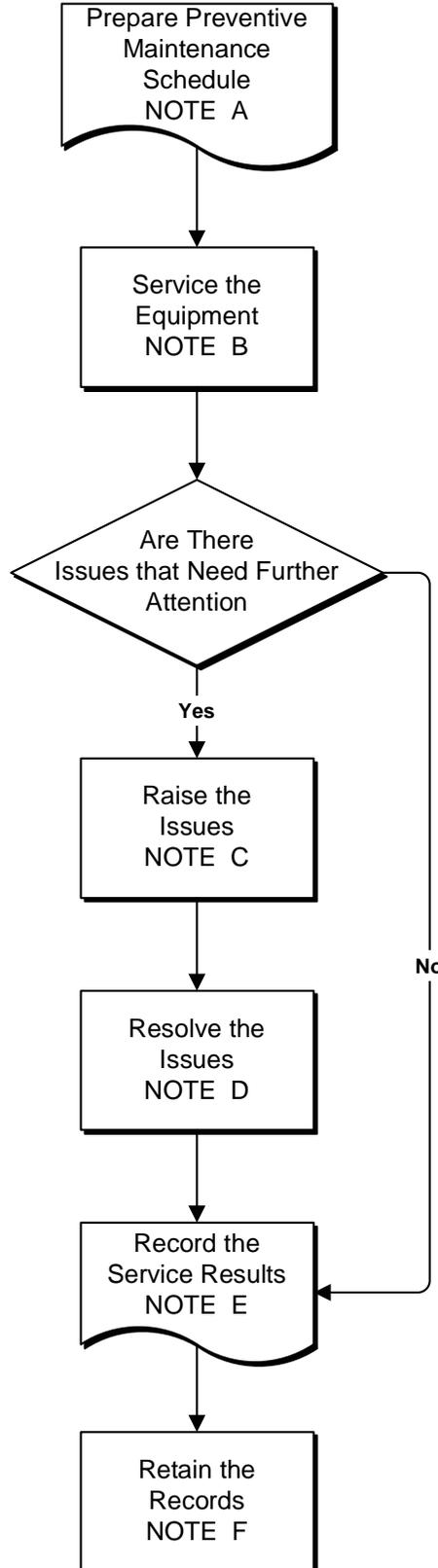
NOTE A

The Plant Manager ensures that a Preventive Maintenance Schedule is prepared in the computer.

NOTE B

The Plant Manager ensures that:

- (1) A Maintenance Mechanic is assigned to maintain the equipment, and
- (2) The assigned person adheres to the Preventive Maintenance Schedule.



NOTE D

Preventive Maintenance issues are usually resolved between the Plant Manager and the Maintenance Mechanic but if the Plant Manager determines that it is necessary, they may put the issue into the Corrective or Preventive Action Procedure (8.8).

NOTE C

The Maintenance Mechanic ensures that Preventive Maintenance issues are raised to the Plant Manager.

NOTE E

The Maintenance Mechanic ensures that Preventive Maintenance service results are documented in the computer.

NOTE F

The Plant Manager ensures that Preventive Maintenance records are retained, in the computer, for at least the life of the equipment.

RECEIVING (PROCEDURE 7.6)

NOTE A

The Shipping/Receiving Clerk ensures that the documentation accompanying the material is reviewed. The documentation may consist of the Packing List, Bill of Lading, Material Certifications, MSDS Sheets, Inspection Records, etc. Each day receiving records for customer supplied material and material certifications and inspection records are forwarded to the Office Manager where they are kept in the Job Folder for a minimum of 3 years. MSDS sheets are forwarded to maintenance department. All remaining receiving documents are kept in the shipping department for a minimum of six months.

NOTE C

Refer to the Product Identification and Preservation Procedure (7.7).

Handle as Directed by the Customer
NOTE D

NOTE D

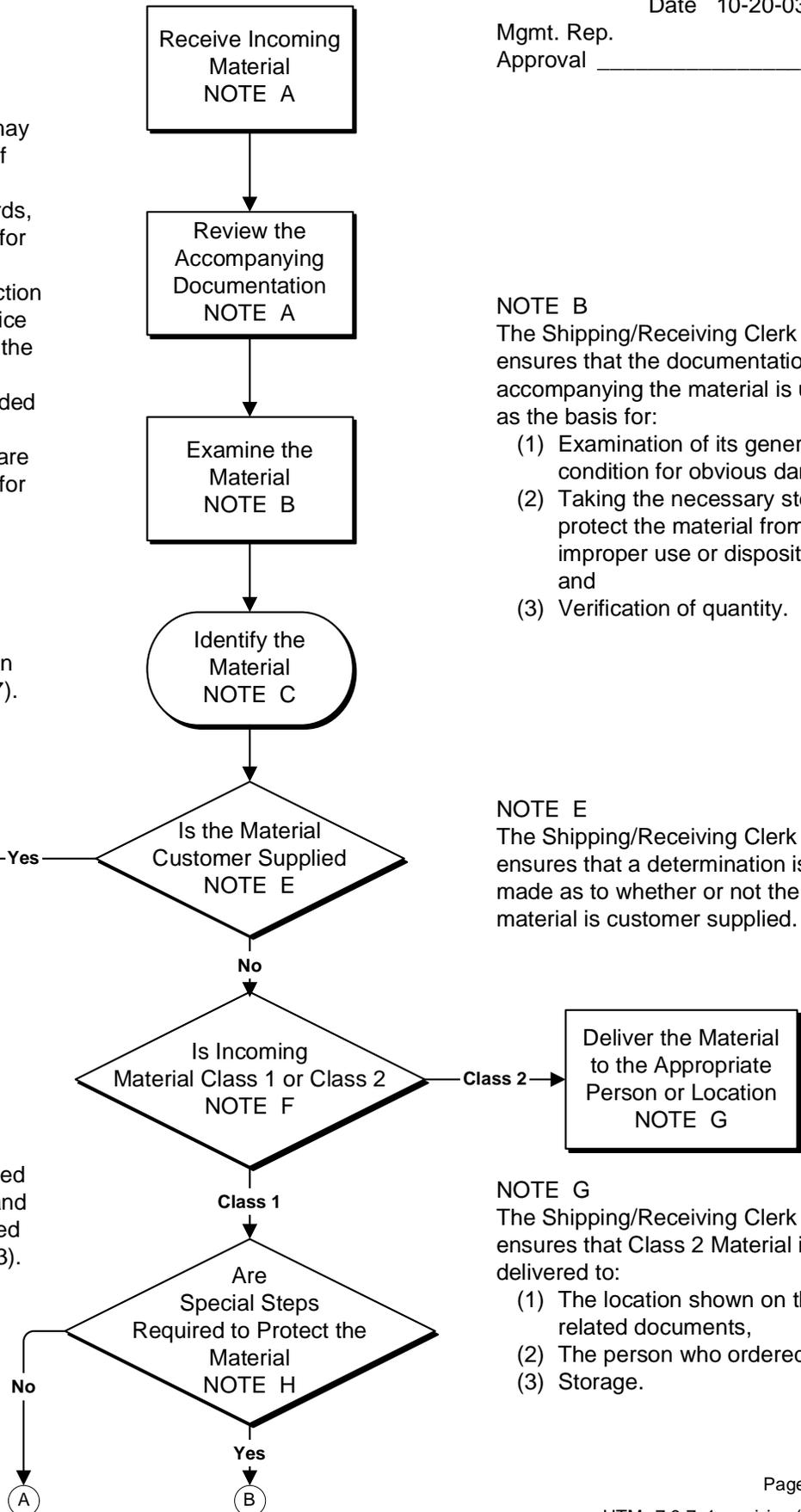
The Shipping/Receiving Clerk ensures that the customers instructions are followed.

NOTE F

The Shipping/Receiving Clerk ensures that the documentation accompanying the material is used to distinguish between Class 1 and Class 2 material, as it is described in the Purchasing Procedure (7.3).

NOTE H

Special steps required to protect the material from adverse change or deterioration and special inspection instructions are explained in the product identification documentation.



APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

Approval _____

NOTE B

The Shipping/Receiving Clerk ensures that the documentation accompanying the material is used as the basis for:

- (1) Examination of its general condition for obvious damage,
- (2) Taking the necessary steps to protect the material from improper use or disposition, and
- (3) Verification of quantity.

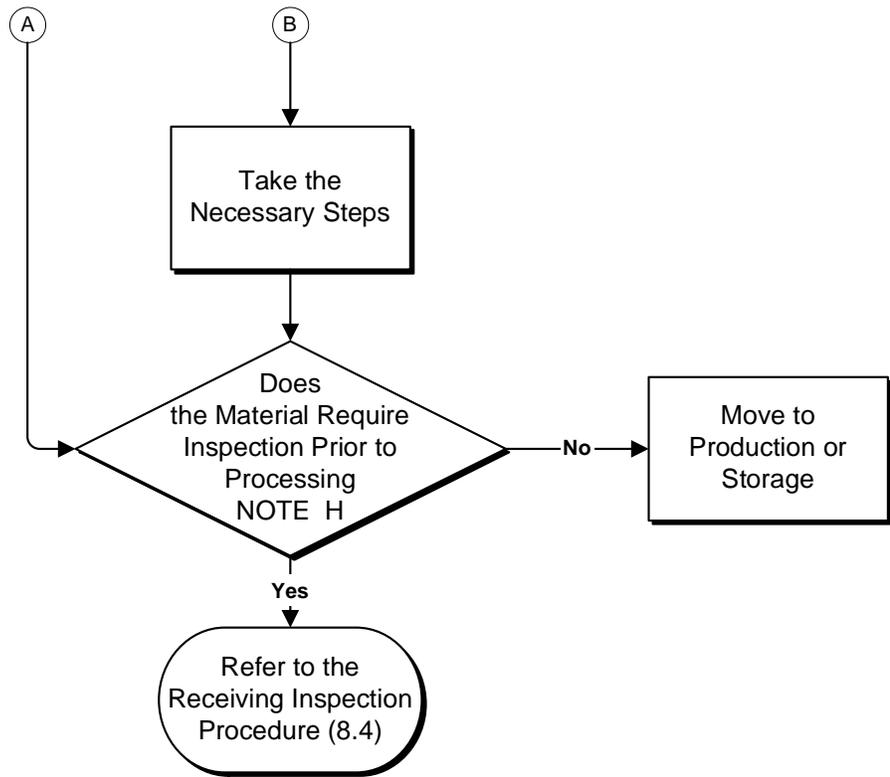
NOTE E

The Shipping/Receiving Clerk ensures that a determination is made as to whether or not the material is customer supplied.

NOTE G

The Shipping/Receiving Clerk ensures that Class 2 Material is delivered to:

- (1) The location shown on the related documents,
- (2) The person who ordered it, or
- (3) Storage.



PRODUCT IDENTIFICATION AND PRESERVATION (PROCEDURE 7.7)

GENERAL NOTE

The word "Product" is used throughout to refer to:

- (1) Raw Material,
- (2) In-Process Product, and
- (3) Finished Product.

Normal preservation of product is done in such a way as to prevent damage or deterioration. When preserving product, company employees consider the potential adverse affects that could occur through excess vibration, shock, abrasion, corrosion, etc. and take the appropriate steps to ensure that these problems don't occur.

NOTE B

CUSTOMER TRACEABILITY
If special product traceability is required or traceability after the product is shipped, that is done according to the requirements of the contract.

NOTE C

Completed product is moved to shipping as directed by the Plan.

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

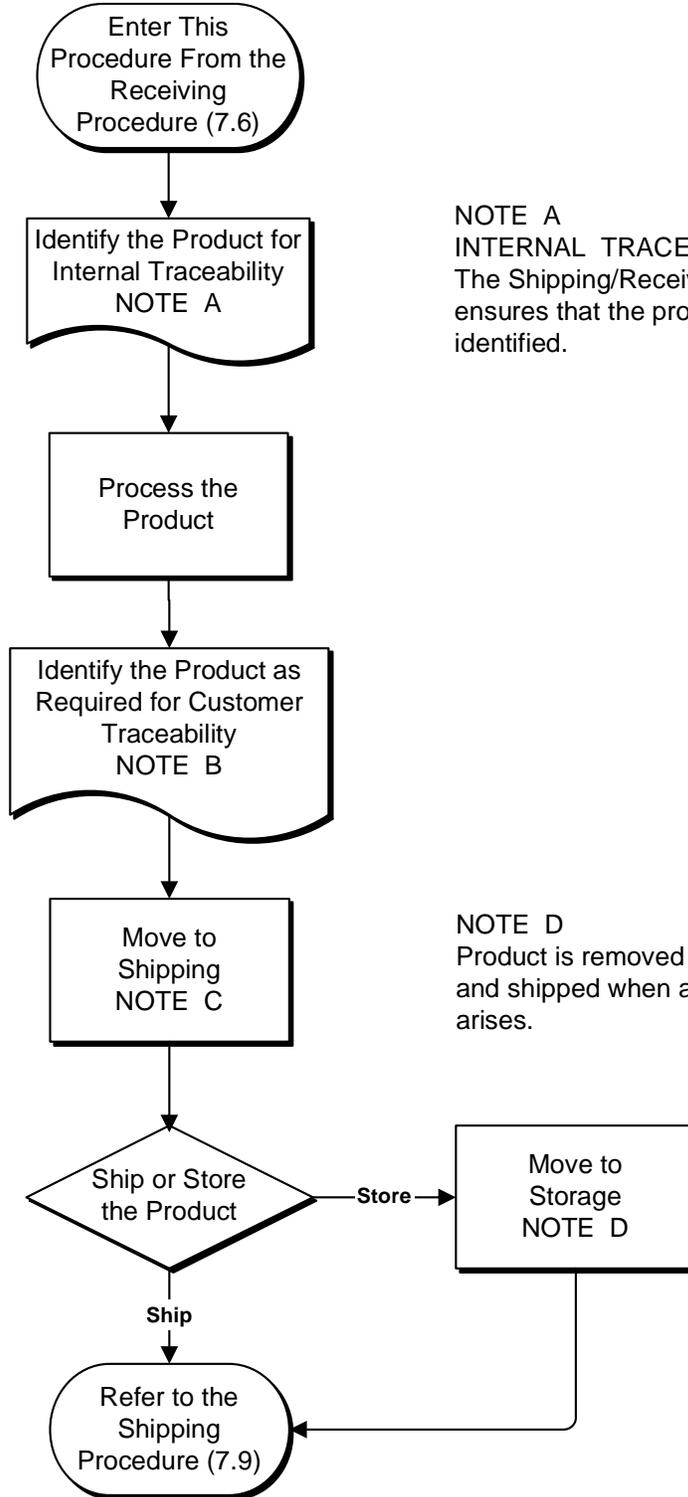
Approval _____

NOTE A

INTERNAL TRACEABILITY
The Shipping/Receiving Clerk ensures that the product is identified.

NOTE D

Product is removed from storage and shipped when a customer need arises.



GAGE CALIBRATION (PROCEDURE 7.8)

GENERAL NOTE

In this procedure the word "Gage" is used in place of "Measuring and Monitoring Devices."

NOTE A

The Quality Manager ensures that:

- (1) A complete list of all gages used for product acceptance is maintained, on an ongoing basis, in the computer, and
- (2) It is reviewed at least once a month.

APPROVAL RECORD

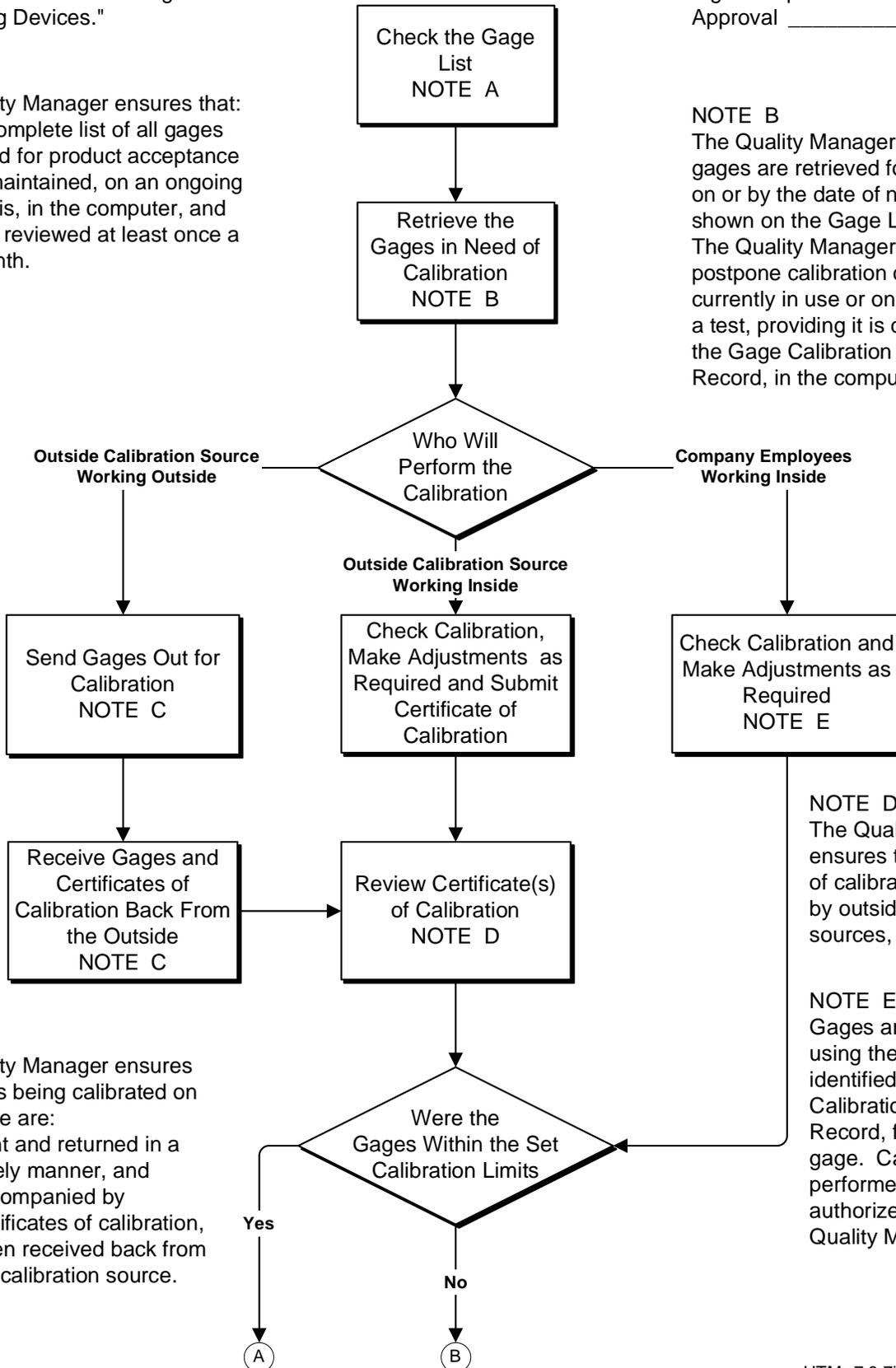
Date 10-20-03

Mgmt. Rep. _____

Approval _____

NOTE B

The Quality Manager ensures that gages are retrieved for calibration on or by the date of next calibration, shown on the Gage List. The Quality Manager may delay or postpone calibration of any gage not currently in use or one being used in a test, providing it is documented on the Gage Calibration History Record, in the computer.



NOTE C

The Quality Manager ensures that gages being calibrated on the outside are:

- (1) Sent and returned in a timely manner, and
- (2) Accompanied by certificates of calibration, when received back from the calibration source.

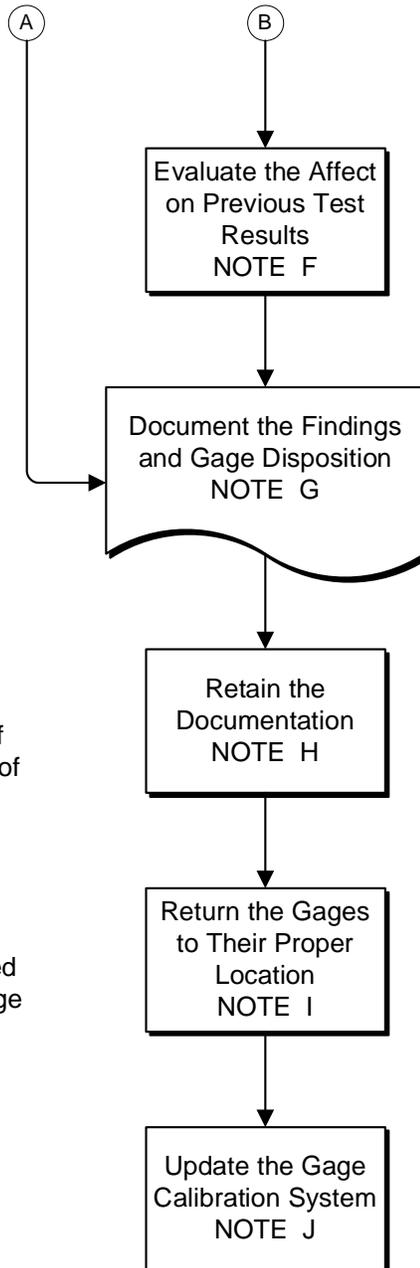
NOTE D
The Quality Manager ensures that certificates of calibration, prepared by outside calibration sources, are reviewed.

NOTE E
Gages are calibrated using the procedure, identified on the Gage Calibration History Record, for the specific gage. Calibration is performed by personnel authorized by the Quality Manager.

NOTE F
Whenever a gage is found to be out of calibration the Quality Manager ensures that an assessment is made to determine the validity of previous test results. Whether he delegates the responsibility, makes the assessment himself or involves higher management, depends on the risks involved.

NOTE H
The Quality Manager ensures that the Gage Calibration History Records and outside certificates of calibration are retained for the life of the gage.

NOTE I
The Quality Manager ensures that after calibration, gages are returned to the job site or appropriate storage location.



NOTE G
The Quality Manager ensures that:

- (1) Assessments are documented in the Gage Calibration History Record, for all gages that are found to be out of calibration, and
- (2) Appropriate gage calibration information is recorded in the Gage Calibration History Record, during the gage calibration process, for gages calibrated inside.

NOTE J
The Quality Manager ensures that the Gage List is updated, if necessary, as the result of gage calibration findings.

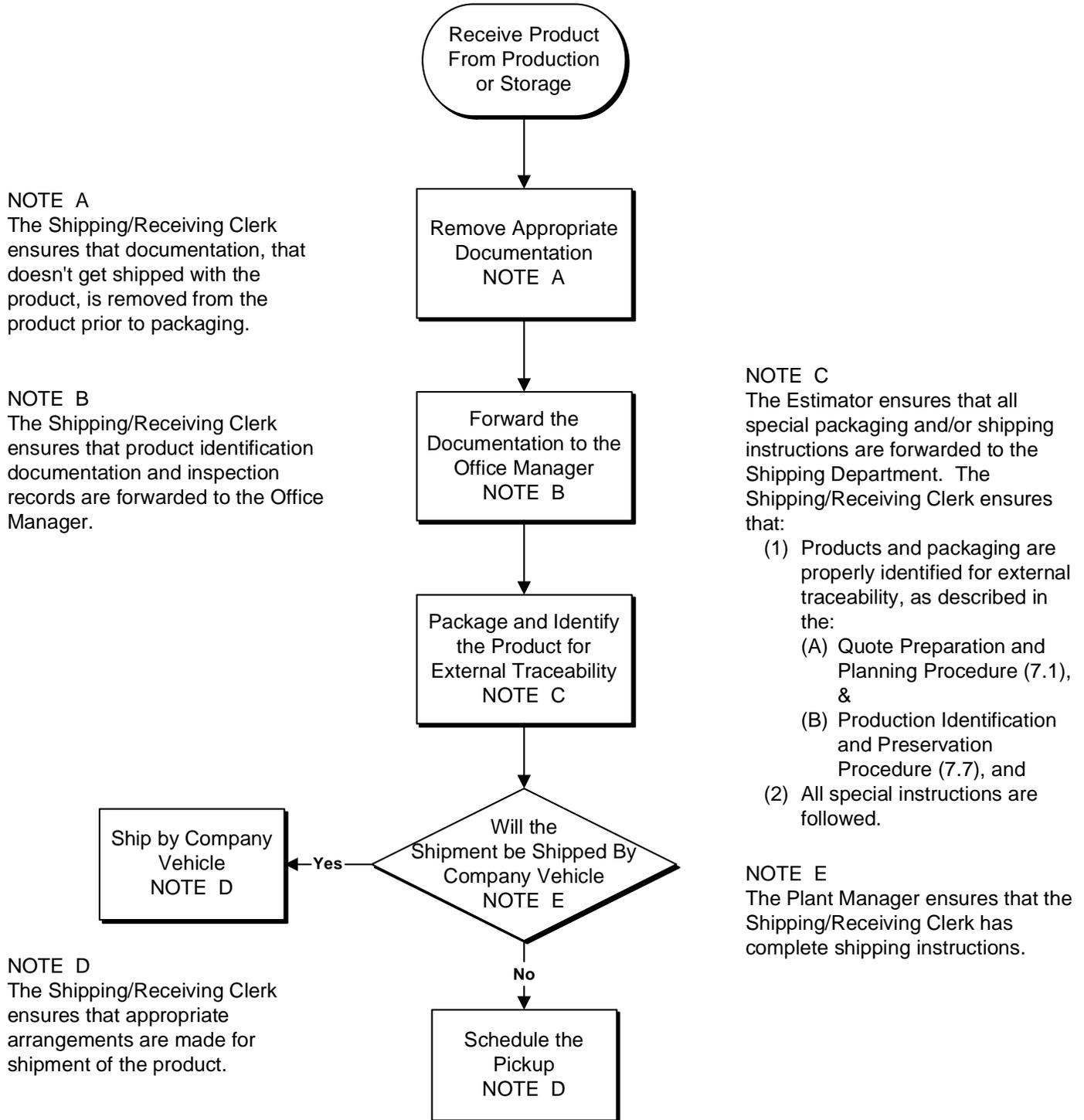
SHIPPING (PROCEDURE 7.9)

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep.

Approval _____



CUSTOMER COMPLAINT (PROCEDURE 7.10)

APPROVAL RECORD

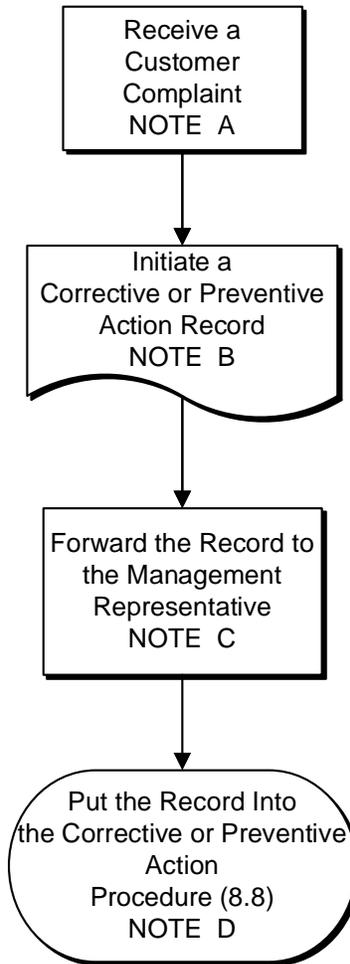
Date 10-20-03

Mgmt. Rep.

Approval _____

NOTE A

Any employee may receive a Customer Complaint and the complaint may take any form.



NOTE C

The person who Initiates the Corrective or Preventive Action Record ensures that it and all related documents are forwarded to the Management Representative.

NOTE B

The person who receives the complaint ensures that a Corrective or Preventive Action Record, described in the Corrective or Preventive Action Procedure (8.8), is initiated and either the original or a copy of the complaint, if in hard copy form, is attached.

NOTE D

The Management Representative ensures that the Corrective or Preventive Action Record and all related documents are entered into the Corrective or Preventive Action Procedure (8.8), at the step described in NOTE E, of that procedure.

PROCEDURE SERIES 8

MEASUREMENT, ANALYSIS

and IMPROVEMENT

STATISTICAL TECHNIQUES (PROCEDURE 8.1)

NOTE A

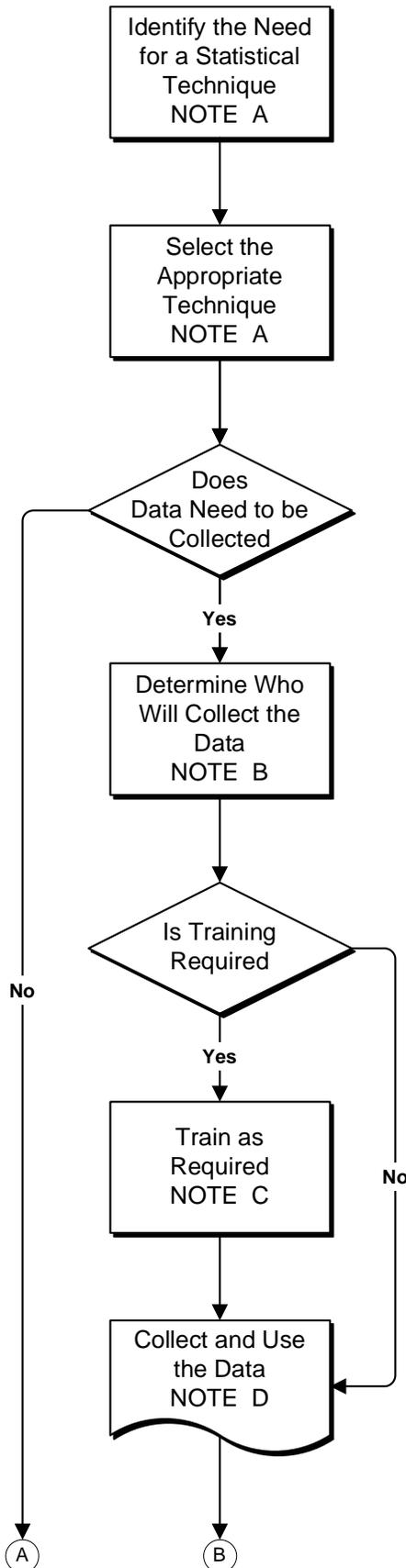
The identification of a need for the use of a statistical technique and selection of the appropriate technique is made by the Quality Manager and/or the customer.

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

Approval _____



NOTE B

The Quality Manager determines who will collect the needed data, how it will be collected, where and how it will be used and when and where it will be filed. While data collection may be assigned to any person or function, it is usually collected by the person who is working the process or performing the statistical technique.

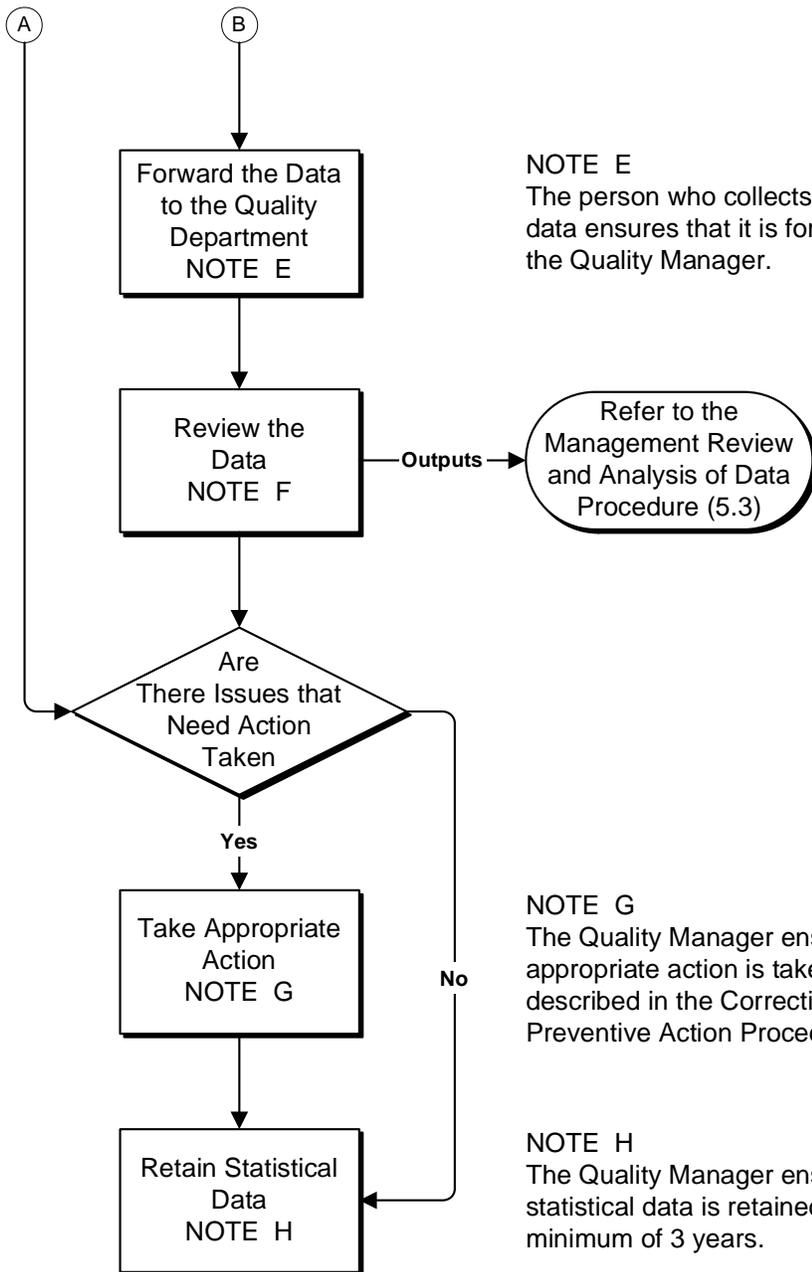
NOTE C

People are trained and their training is documented as described in the Training Documentation Procedure (6.1).

NOTE D

The person collecting statistical data, looks at it and acts on it, should there be a need for a process adjustment. If the person collecting statistical data is not the appropriate person to make a process adjustment, then they determine who is and they ensure that the person is notified.

NOTE F
 The data is reviewed by the Quality Manager who looks for:
 (1) Developing trends or patterns, and
 (2) Areas where action is needed.
 From this review the Quality Manager determines which, if any, statistical data needs to be presented at the next Management Review, in order to help management measure and monitor business processes.



NOTE E
 The person who collects statistical data ensures that it is forwarded to the Quality Manager.

NOTE G
 The Quality Manager ensures that appropriate action is taken, as described in the Corrective or Preventive Action Procedure (8.8).

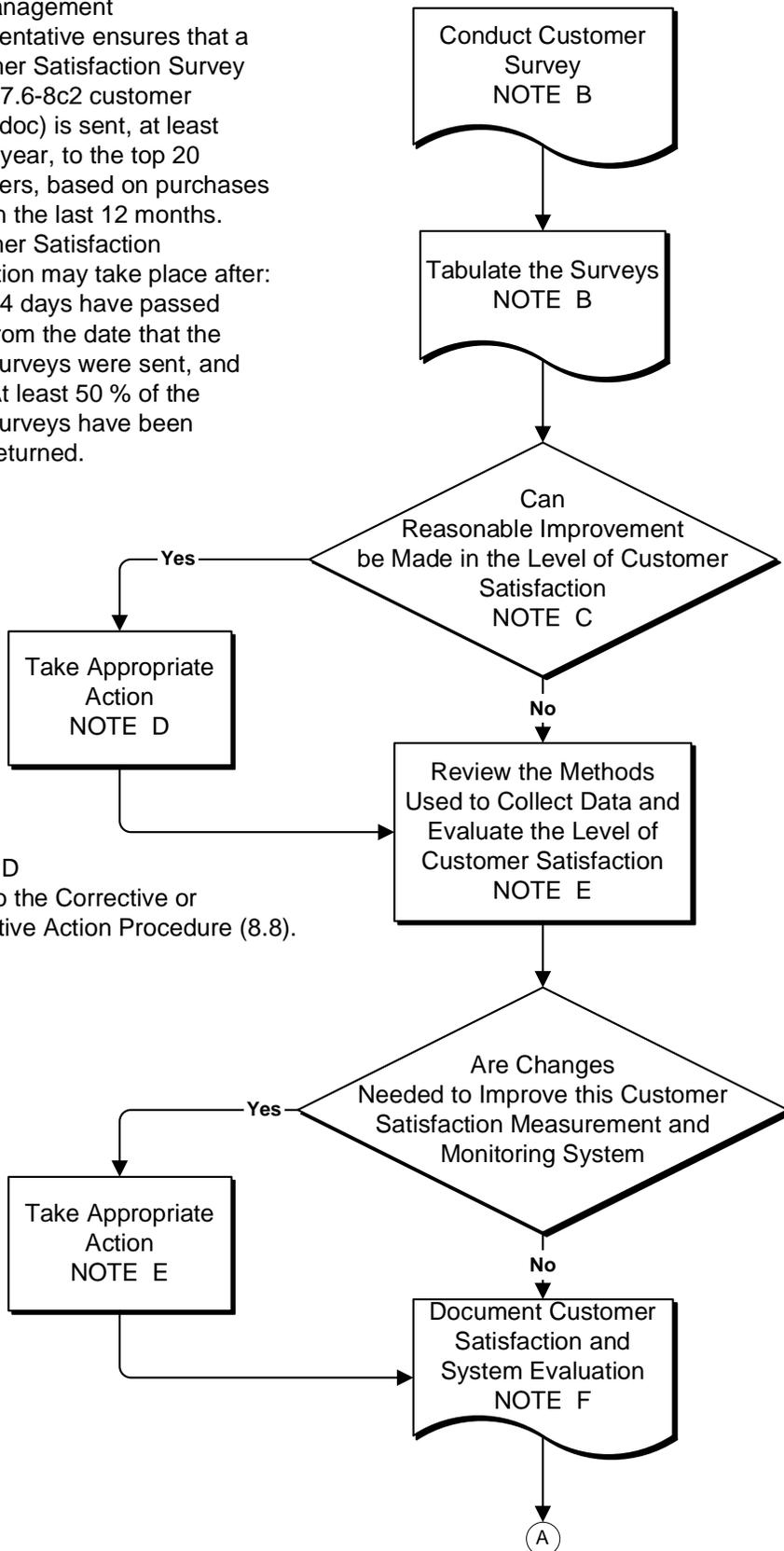
NOTE H
 The Quality Manager ensures that statistical data is retained, for a minimum of 3 years.

CUSTOMER SATISFACTION - MEASUREMENT AND MONITORING (PROCEDURE 8.2)

NOTE A
The Management Representative ensures that a Customer Satisfaction Survey (HTM v7.6-8c2 customer survey.doc) is sent, at least once a year, to the top 20 customers, based on purchases made in the last 12 months. Customer Satisfaction Evaluation may take place after:

- (1) 14 days have passed from the date that the surveys were sent, and
- (2) At least 50 % of the surveys have been returned.

APPROVAL RECORD
Date 10-20-03
Mgmt. Rep. _____
Approval _____



NOTE D
Refer to the Corrective or Preventive Action Procedure (8.8).

NOTE B
The Management Representative ensures that customer survey data is tabulated, on the Customer Satisfaction Evaluation Record (HTM v7.6-8c3 satis eval record.doc).

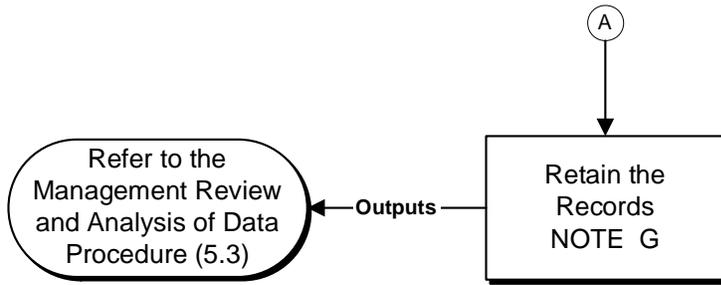
NOTE C
The Management Representative ensures that a determination is made as to whether or not it is reasonable, under the current circumstances, to attempt to improve customer satisfaction, (i.e. Customer Satisfaction Evaluation), either all customers as a group or individual customers, beyond the present level.

NOTE E
The Management Representative ensures that the methods used to collect and evaluate customer satisfaction information (i.e. System Evaluation) are reviewed, to ensure that they are:

- (1) Providing useful information, and
- (2) Accurate and reliable.

NOTE F
The Management Representative ensures that the:

- (1) Customer Satisfaction Evaluation, and
- (2) System Evaluation, are documented on the Customer Satisfaction Evaluation Record.



NOTE G

The Management Representative ensures that:

- (1) Customer supplied evaluation data,
 - (2) Customer Satisfaction Surveys, and
 - (3) Customer Satisfaction Evaluation Records,
- are retained, for a minimum of 3 years.

HI-TECH MANUFACTURING, INC. CUSTOMER SATISFACTION SURVEY

To help us better understand your level of satisfaction with our products and services we would appreciate it if you would complete this one page Customer Satisfaction Survey and return it to us, within ten days.

Customer _____

Contact _____ Date _____

Please circle the number that you feel best describes how we are performing in each of the following areas:

	Poor		Average		Excellent
1 Product Quality	1	2	3	4	5
2 Service Quality	1	2	3	4	5
3 On Time Delivery	1	2	3	4	5
4 Our Response When Contacted	1	2	3	4	5
5 Technical Service	1	2	3	4	5
6 Performance Compared to Competitors	1	2	3	4	5
7 Value of Product / Service	1	2	3	4	5
8 Quote Response Time	1	2	3	4	5
9 Quote Competitiveness	1	2	3	4	5

Additional Comments

Survey Completed by

Title

Date

Please return this survey by mail or fax to:

Sales Department
Hi-Tech Manufacturing, Inc.
4637 N. 25th Avenue
Schiller Park, IL 60176
Fax (847) 678-1617

Attach additional pages as required
Ref. Procedure 8.2

Please feel free to make direct contact with:

Mr. Mario Arcari, President
Phone (847) 678-1616
Fax (847) 678-1697

HTM v7.6-8c2 customer survey (Rev A)
Rev Date 10-20-03

INTERNAL AUDITS (PROCEDURE 8.3)

GENERAL NOTE

Auditors are selected based on their:

- (1) Freedom from bias and influences that could affect their objectivity,
- (2) Independence and integrity {i.e. their normal work assignments are independent of the area(s) being audited},
- (3) Special skills, and/or
- (4) Education, training or experience as an auditor.

NOTE A

The Management Representative ensures that:

- (1) An Audit Schedule and Plan is prepared, on the Audit Schedule and Plan (HTM v7.6-8d2 audit schedule and plan.doc),
- (2) All procedures are audited at least once a year,
- (3) Audits are scheduled on all shifts, and
- (4) Audit Schedules and Plans are retained, for a minimum of 3 years.

The Audit Schedule and Plan is designed to be flexible in order to permit changes in emphasis and timing. If they need to be revised, the revisions are documented on the original, by the Management Representative.

NOTE C

The Management Representative ensures that the auditors and the manager of the department being audited are notified of the audit date, at least 7 days prior to the audit. The notification may take any form.

NOTE E

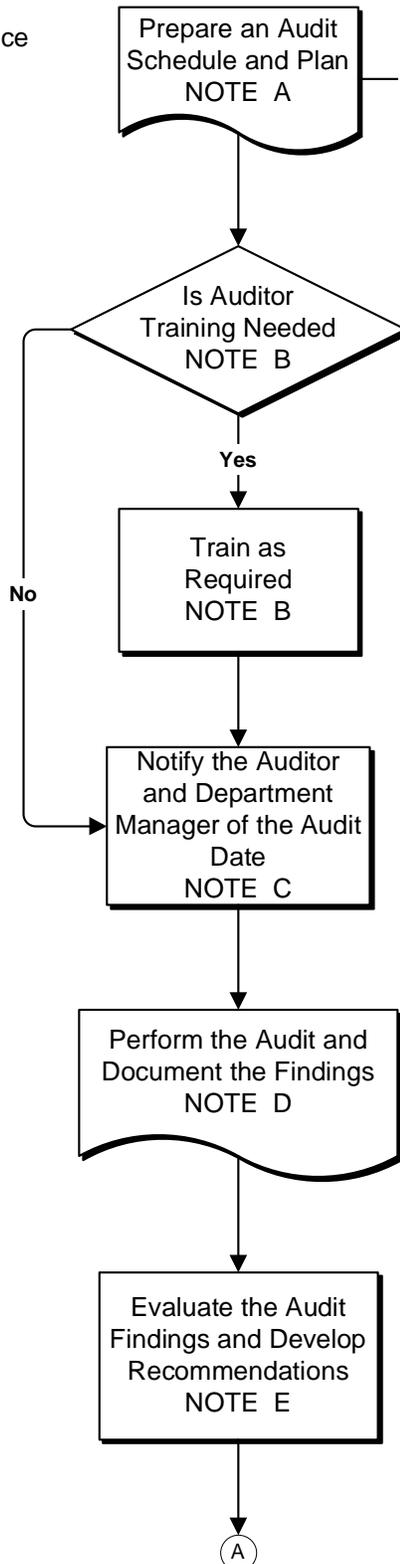
The Management Representative and auditors discuss the Audit Findings and formulate recommendations for appropriate action, which are documented on the Audit Finding.

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

Approval _____



NOTE B

The Management Representative determines whether auditors need training, prior to conducting an audit. Training and its documentation are handled as described in the Training Documentation Procedure (6.1).

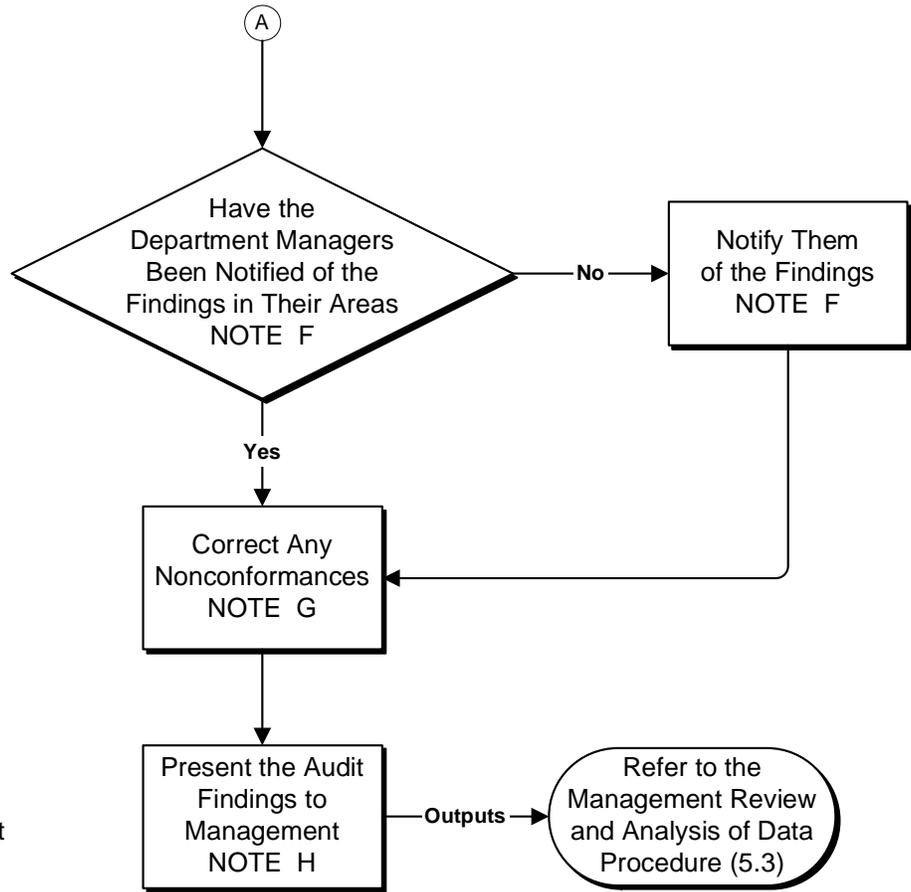
NOTE D

Audits are performed using the Audit Schedule and Plan, Procedure and reference documents being audited, as the basis. Auditors collect evidence through interviews, examination of documents and observation of activities. Information gathered through interviews is tested, where practical, by acquiring the same information from other independent sources, such as physical observation, measurements and records. Each Audit Finding is documented on an Audit Finding (HTM v7.6-8d3 audit finding.doc), by the auditor making the finding. Note: Ideas for improvement may be documented on the back of the Audit Finding Form. If an Audit reveals that a procedure is functioning as documented, the Auditor records that finding on an Audit Finding form, as well. The Management Representative ensures that all Audit Findings are retained, for a minimum of 3 years.

NOTE F
After the findings are summarized and the recommendations are documented the Management Representative ensures that department managers are notified of both the findings and recommendations. The notification may take any form.

NOTE G
Nonconformances are handled as described in the Corrective or Preventive Action Procedure (8.8).

NOTE H
The Management Representative ensures that Audit Findings are presented at the next Management Review.



AUDIT SCHEDULE AND PLAN

Plan Made For Year _____

AUDIT SCOPE		AUDIT SCHEDULE												AUDIT PLAN	
Procedures to be Audited		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Assigned Auditor	Reference Documents to be Used (If Any)
No.	Name														
4.1	Procedure Write, Revise and Implement														
4.2	Document and Record Control														
4.3	List of Controlled Documents and Records														
5.1	Establishing Quality Objects and Cont Improv														
5.2	Internal Communication														
5.3	Management Review and Analysis of Data														
6.1	Training Documentation														
6.2	Training Review and Planning														
7.1	Quote Preparation and Planning														
7.2	Contract Review														
7.3	Purchasing														
7.4	Supplier Evaluation														
7.5	Preventive Maintenance														
7.6	Receiving														
7.7	Product Identification and Preservation														
7.8	Gage Calibration														
7.9	Shipping														

AUDIT SCHEDULE AND PLAN

Plan Made For Year _____

AUDIT SCOPE		AUDIT SCHEDULE												AUDIT PLAN	
Procedures to be Audited		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Assigned Auditor	Reference Documents to be Used (If Any)
No.	Name														
7.10	Customer Complaint														
8.1	Statistical Techniques														
8.2	Customer Satisfaction – Measure & Monitor														
8.3	Internal Audits														
8.4	Receiving Inspection														
8.5	In-Process Inspection														
8.6	Final Inspection														
8.7	Control of Nonconforming Product														
8.8	Corrective or Preventive Action														

Prepared by _____ Title _____ Date _____

AUDIT FINDING

-

-

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-

-

-

Auditor _____

Date _____

RECEIVING INSPECTION (PROCEDURE 8.4)

APPROVAL RECORD

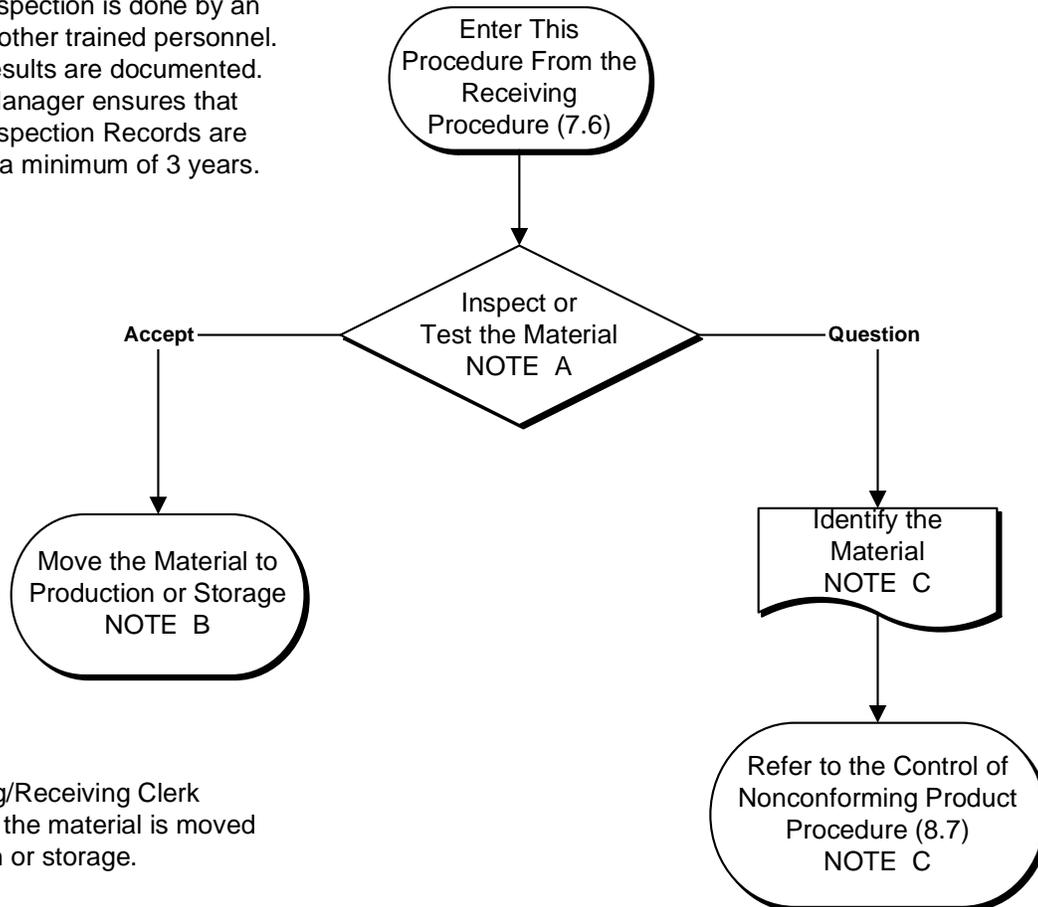
Date 10-20-03

Mgmt. Rep.

Approval _____

NOTE A

Receiving Inspection is done by an Inspector or other trained personnel. Inspection results are documented. The Office Manager ensures that Receiving Inspection Records are retained, for a minimum of 3 years.



NOTE B

The Shipping/Receiving Clerk ensures that the material is moved to production or storage.

NOTE C

Suspect material is identified with a Reject Tag and is put into the Control of Nonconforming Product Procedure (8.7). Suspect material may be processed further, prior to receipt of test results, (i.e. material that is released for urgent production purposes), but the Quality Manager must ensure that it is properly identified, in order to permit immediate recall and replacement if a nonconformance is found later.

IN-PROCESS INSPECTION (PROCEDURE 8.5)

NOTE A

The Plant Manager determines:
 (1) Who delivers the product to the Production Operator for processing, and
 (2) Where the product comes from (i.e. the Receiving Department or storage.

NOTE B

First Piece Inspection is done by the Production Operator or Inspector. Inspection results are documented. The Office Manager ensures that First Piece Inspection records are retained, for a minimum of 3 years.

NOTE C

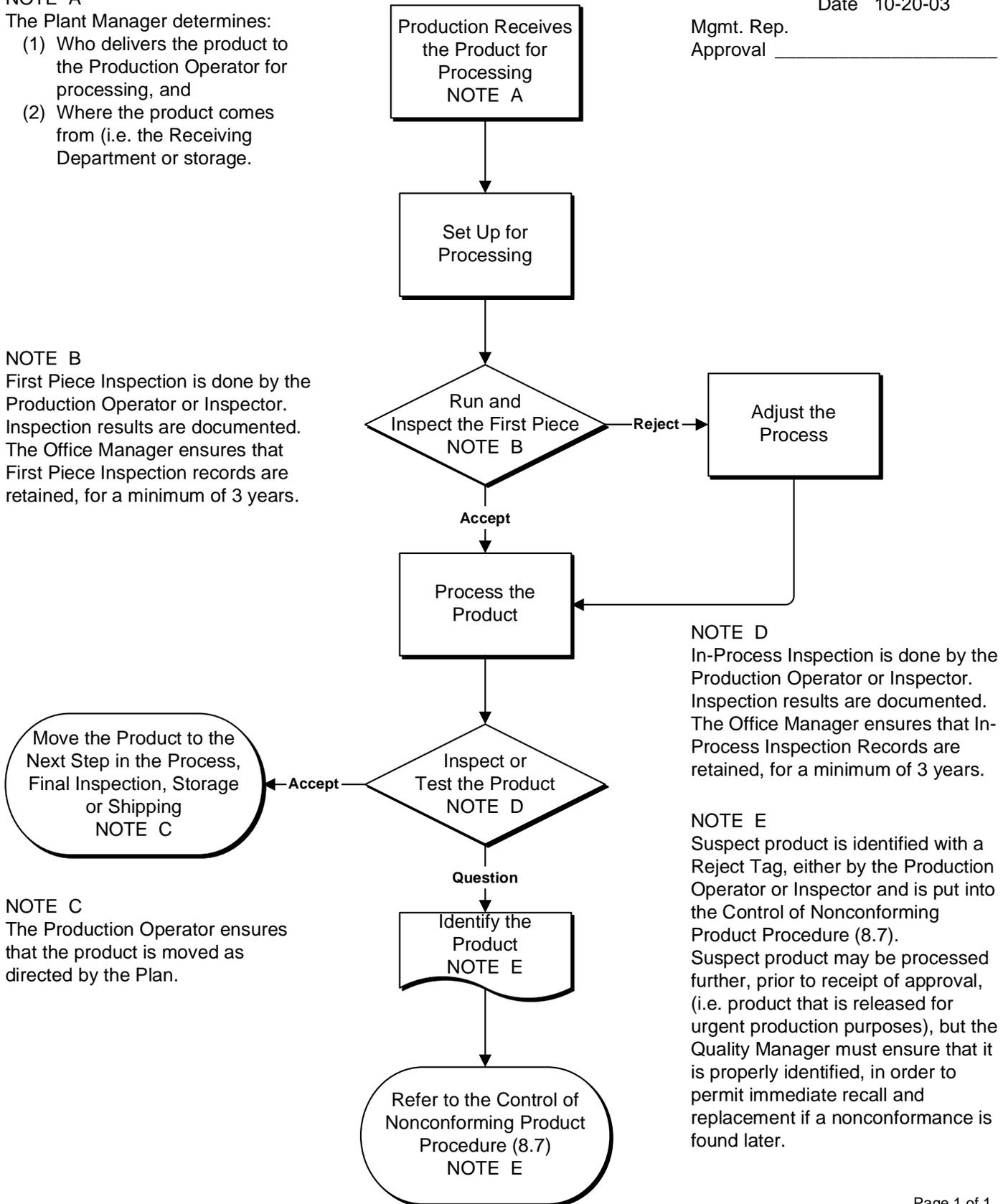
The Production Operator ensures that the product is moved as directed by the Plan.

APPROVAL RECORD

Date 10-20-03

Mgmt. Rep. _____

Approval _____



NOTE D

In-Process Inspection is done by the Production Operator or Inspector. Inspection results are documented. The Office Manager ensures that In-Process Inspection Records are retained, for a minimum of 3 years.

NOTE E

Suspect product is identified with a Reject Tag, either by the Production Operator or Inspector and is put into the Control of Nonconforming Product Procedure (8.7). Suspect product may be processed further, prior to receipt of approval, (i.e. product that is released for urgent production purposes), but the Quality Manager must ensure that it is properly identified, in order to permit immediate recall and replacement if a nonconformance is found later.

FINAL INSPECTION (PROCEDURE 8.6)

APPROVAL RECORD

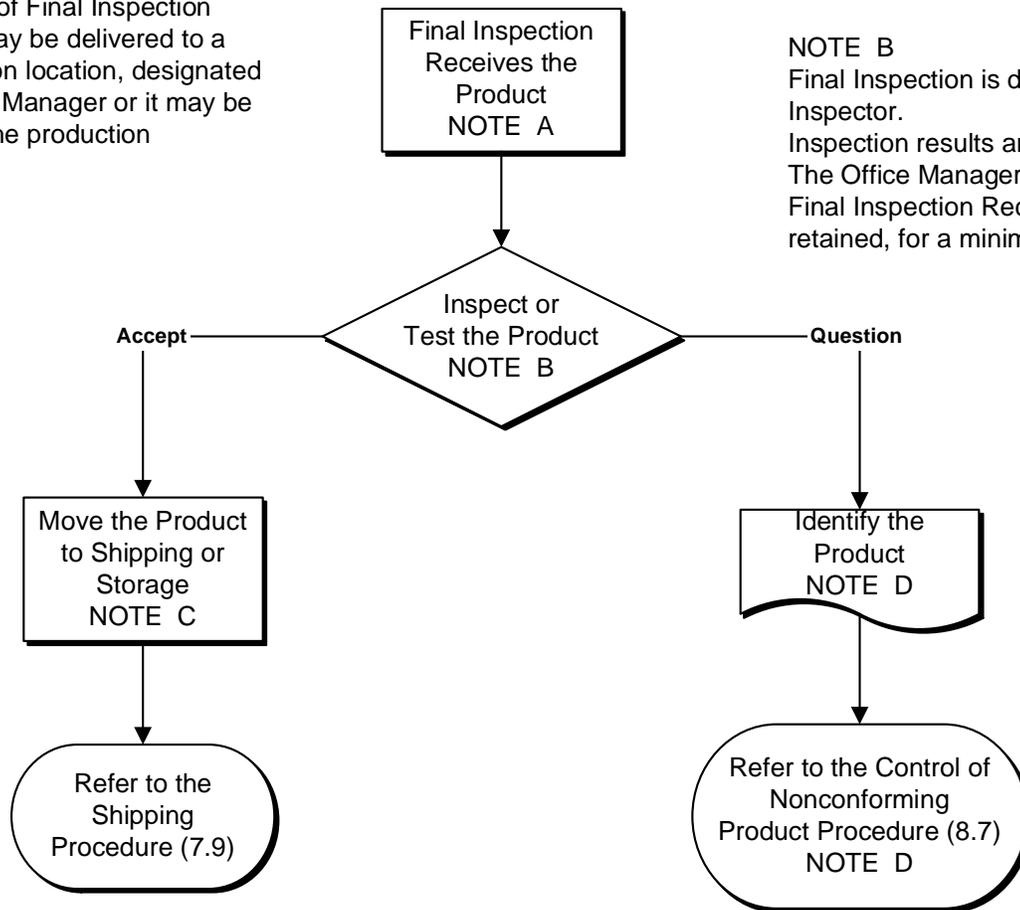
Date 10-20-03

Mgmt. Rep.

Approval _____

NOTE A

For purposes of Final Inspection the product may be delivered to a Final Inspection location, designated by the Quality Manager or it may be inspected at the production operation.



NOTE B

Final Inspection is done by an Inspector. Inspection results are documented. The Office Manager ensures that Final Inspection Records are retained, for a minimum of 3 years.

NOTE C

The Shipping/Receiving Clerk ensures that the product is moved to shipping or storage. If it is unclear whether to ship or store the product, the Plant Manager is contacted.

NOTE D

Suspect product is identified with a Reject Tag, by the Inspector and is put into the Control of Nonconforming Product Procedure (8.7).

CONTROL OF NONCONFORMING PRODUCT (PROCEDURE 8.7)

NOTE A

The Quality Manager ensures that:

- (1) A Nonconforming Material Notice (HTM v7.6-8h2 noncon notice.doc) is prepared, forwarded to the supplier and retained for a minimum of 3 years,
- (2) A copy of the notice is forwarded to the Office Manager to be filed in the job folder.
- (3) A written response is received back from the supplier,
- (4) The response is reviewed, and
- (5) The response is retained, for a minimum of 3 years.

APPROVAL RECORD

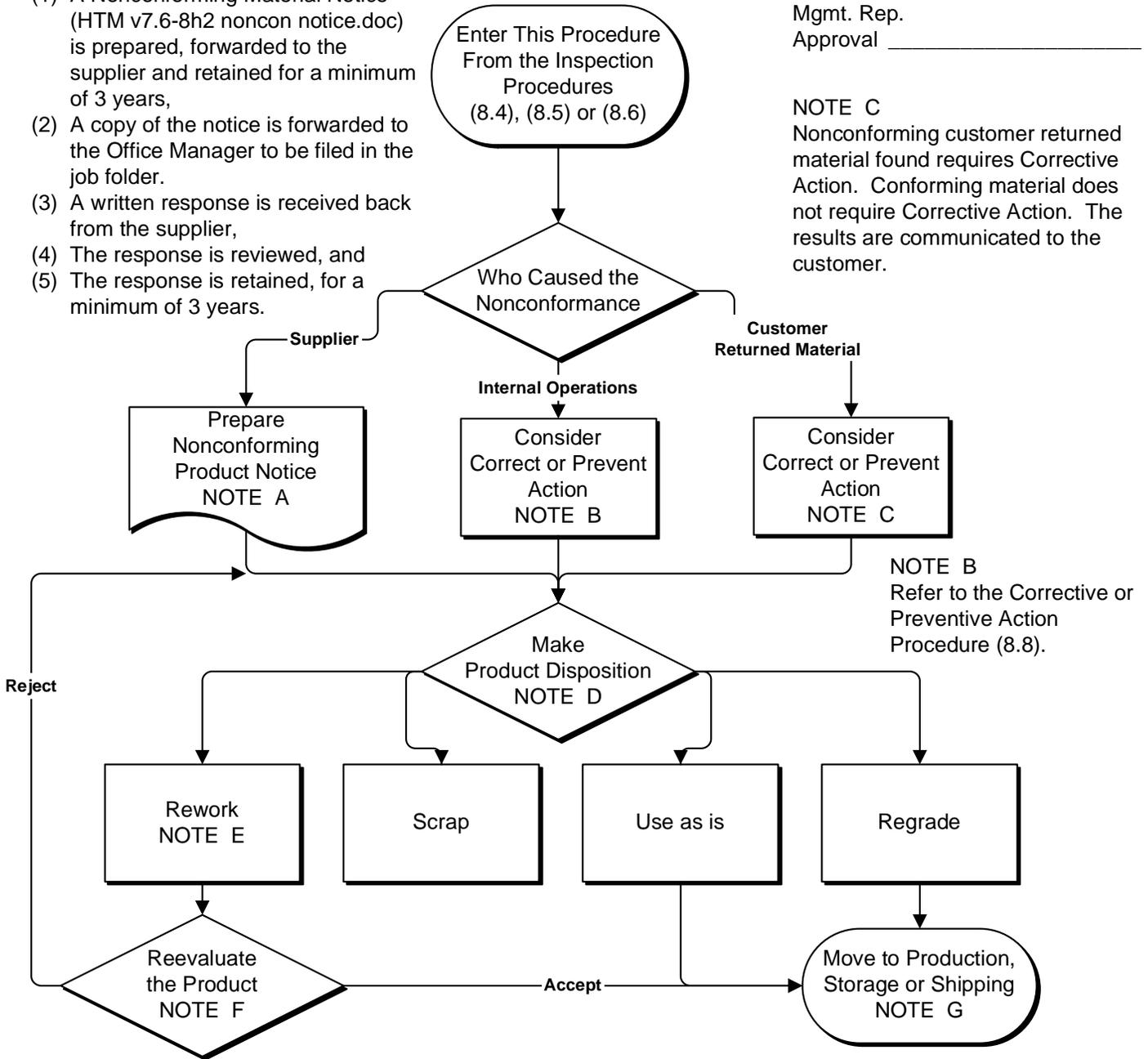
Date 10-20-03

Mgmt. Rep. _____

Approval _____

NOTE C

Nonconforming customer returned material found requires Corrective Action. Conforming material does not require Corrective Action. The results are communicated to the customer.



NOTE D

Disposition of suspect product is made as follows:
Supplier Nonconformance - The Quality and Purchasing Managers.
Internal Nonconformance - The Quality and Plant Managers.

NOTE F

Reworked product is reevaluated according to the original product inspection criteria. At a minimum this evaluation includes examination for the specific defect that caused the rework.

NOTE E

If the product is to be reworked, the Plant Manager determines the process and the manpower needed.

NOTE G

The Shipping/Receiving Clerk ensures that the product is moved to production, storage or shipping.

NONCONFORMING PRODUCT NOTICE

Hi-Tech manufacturing, Inc.

4637 N. 25th Avenue

Schiller Park, IL 60176

(1) Supplier Information

Name _____	Contact Person _____
Address _____	Title _____
_____	Phone No. _____
_____	Fax No. _____

Date Material Received: _____

(2) Material found to be Nonconforming, for the following reason(s)

Prepared by _____ Date _____

This Notice Requires a Written Response

(3) Action Taken to Eliminate the Nonconformance and Material Disposition:

NONCONFORMING PRODUCT NOTICE

Hi-Tech manufacturing, Inc.

4637 N. 25th Avenue

Schiller Park, IL 60176

-

-

-

-

Response Prepared by _____ Date _____

CORRECTIVE OR PREVENTIVE ACTION (PROCEDURE 8.8)

GENERAL NOTE

Corrective Action is implemented to eliminate the cause(s) of a nonconformance in order to prevent recurrence.

Preventive Action is implemented to eliminate the cause(s) of a potential product nonconformance or a system failure in order to prevent either one from occurring.

NOTE A

Corrective or Preventive Action is initiated as the result of:

- (1) An audit (internal or external),
- (2) Repetitive process nonconformances,
- (3) Management review,
- (4) A customer complaint, or
- (5) As otherwise directed by the Management Representative.

NOTE C

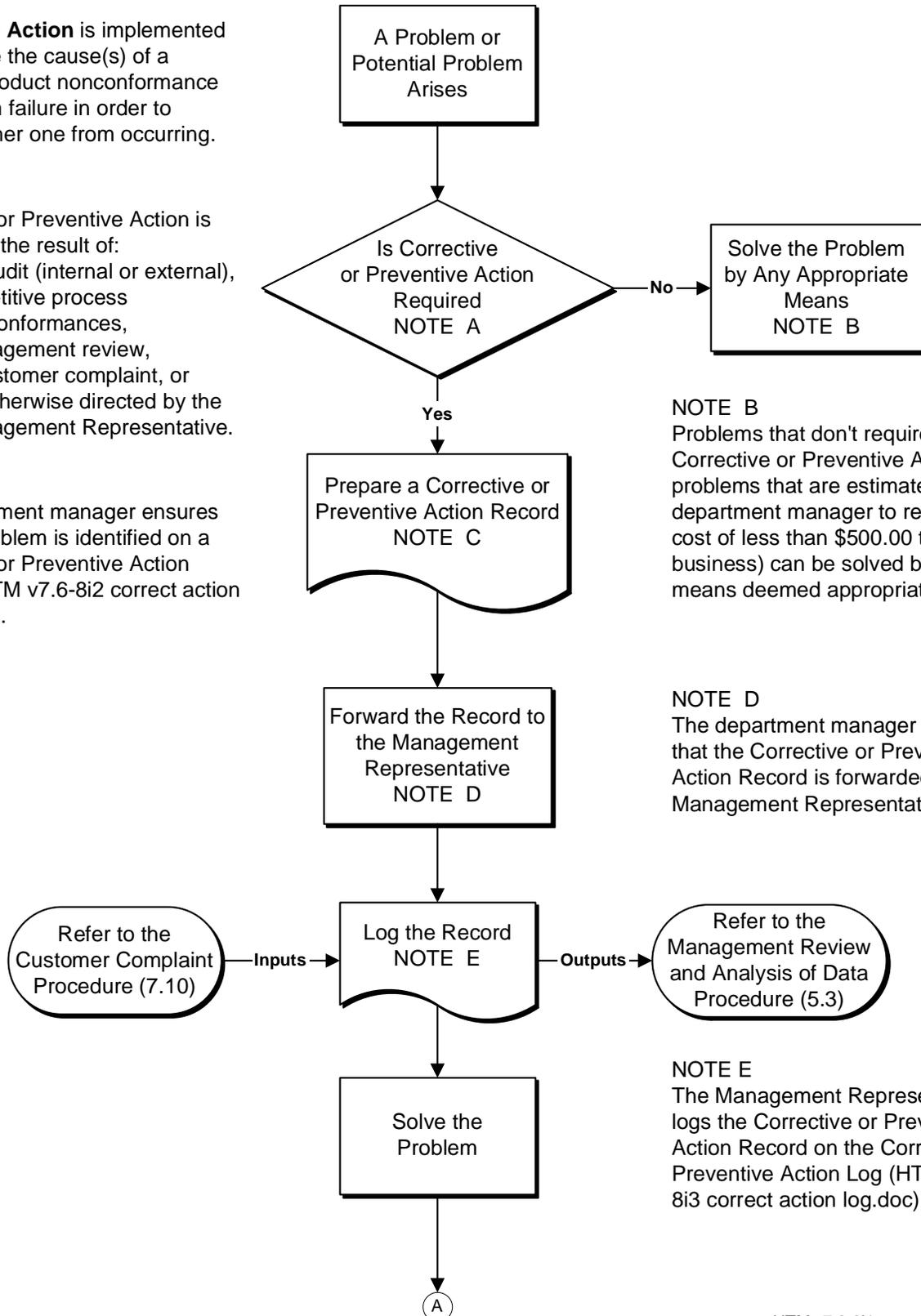
The department manager ensures that the problem is identified on a Corrective or Preventive Action Record (HTM v7.6-8i2 correct action record.doc).

APPROVAL RECORD

Date 12-4-03

Mgmt. Rep. _____

Approval _____



NOTE B

Problems that don't require formal Corrective or Preventive Action (i.e. problems that are estimated by the department manager to result in a cost of less than \$500.00 to the business) can be solved by any means deemed appropriate.

NOTE D

The department manager ensures that the Corrective or Preventive Action Record is forwarded to the Management Representative.

NOTE E

The Management Representative, logs the Corrective or Preventive Action Record on the Corrective or Preventive Action Log (HTM v7.6-8i3 correct action log.doc).

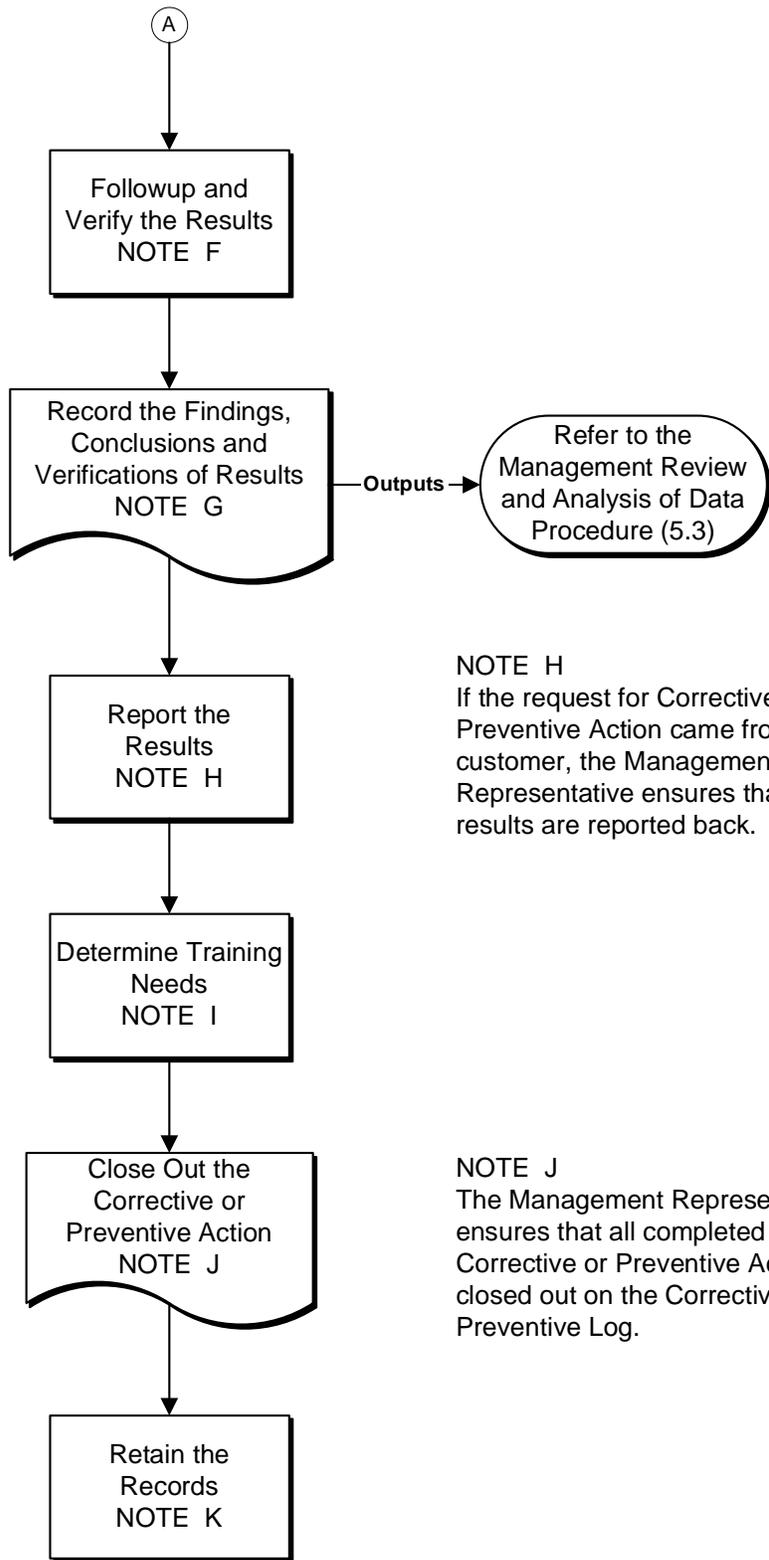
NOTE F
 The Corrective or Preventive Action Team ensures that:

- (1) The solution is implemented, and
- (2) A timely followup is conducted to verify the results.

NOTE G
 The Management Representative ensures that the findings, conclusions and verification of results are recorded on the Corrective or Preventive Action Record, unless they are documented on a customer supplied form.

NOTE I
 The Corrective or Preventive Action Team determines training needs and the training is documented as described in the Training Documentation Procedure (6.1).

NOTE K
 The Management Representative ensures that Corrective or Preventive Action Records are retained, for a minimum of 3 years, and that the Corrective or Preventive Action Log is maintained on an ongoing basis.



NOTE H
 If the request for Corrective or Preventive Action came from a customer, the Management Representative ensures that the results are reported back.

NOTE J
 The Management Representative ensures that all completed Corrective or Preventive Actions are closed out on the Corrective or Preventive Log.

CORRECTIVE OR PREVENTIVE ACTION RECORD

Correct or Prevent Action Identification _____ (assigned by the Management Representative)

This is a (circle or highlight one) Corrective Action or a Preventive Action

<input type="checkbox"/> Customer Request for Corrective or Preventive Action <input type="checkbox"/> Request for Supplier Corrective or Preventive Action <input type="checkbox"/> Internal Corrective or Preventive Action	(Supplier Must Respond Within 14 days)
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------

(1) Description of the Problem or Potential Problem

Problem Documented by _____ Date _____

Stop Here and Forward to the Management Representative

(2) Interim Action Taken - If Required

(3) Root Cause(s) of the Problem

Attach additional pages as required
Ref. Procedure 8.8

CORRECTIVE OR PREVENTIVE ACTION RECORD

Correct or Prevent Action Identification _____ (assigned by the Management Representative)

(4) Permanent Action Taken - Consider Mistake Proofing & Application of Results to Similar Processes / Products

CORRECTIVE OR PREVENTIVE ACTION RECORD

Correct or Prevent Action Identification _____ (assigned by the Management Representative)

-

-

-

-

(5) Verification of Results (i.e. Proof of Effectiveness)

-

-

-

-

-

-

Analysis and Action Documented by _____ Date _____

HI-TECH Manufacturing, Inc.

INSPECTION REPORT

PART# _____ REV# ____ DESCRIPTION _____

JOB # _____ CUSTOMER _____ DATE __/__/__

QUANTITY _____ INSPECTED BY _____ SAMPLE SIZE

Inspection Report

First Article

Inspected Criteria		Inspection Results	Disposition	
#	Inspected Dimension	Range	Accepted	Rejected
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				

20				
21				
22				

Remarks :

Form IR



Bodycote Taussig Inc.
Metallurgical & Materials Engineers



AWS WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

WELDER OR WELDING OPERATOR'S NAME: Tadeusz Sutowski I.D. #39
 WELDING PROCESS: GMAW MANUAL SEMIAUTO XXX MACHINE
 POSITION: 4G - Overhead PROGRESSION: N/A
 WPS NO.: AWS Prequalified TYPE OF JOINT TESTED: Single V Groove
 BASE METAL SPECIFICATION: ASTM A36, Qualifies All Groups
 PIPE DIAMETER: N/A JOINT THICKNESS: 3/8"
 QUALIFICATION RANGES: 3/4" Max. Groove/Unlimited Fillet, Flat, Horiz., Overhead

FILLER METAL

SPECIFICATION NO.: AWS A5.18 CLASSIFICATION: ER80S-D2 F NO.: N/A
 DIAMETER: .035" FLUX/SHIELDING GAS: AR/O₂ - 92/8 FLOW RATE: 25 cfh
 BACKING OR BACK GOUGING METHOD: None

VISUAL INSPECTION RESULTS

APPEARANCE: Satisfactory UNDERCUT: None POROSITY: None

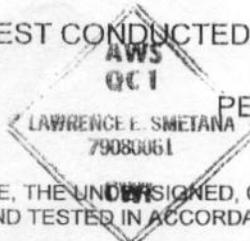
GUIDED BEND TEST RESULTS

TYPE	RESULTS	TYPE	RESULTS
FACE	PASS	ROOT	PASS

FILLET TEST RESULTS

SIZE: N/A FRACTURE TEST: N/A MACROETCH: N/A
 LOCATION, NATURE, SIZE OF DISCONTINUITIES N/A
 NOTED: _____

TEST CONDUCTED BY: BODYCOTE TAUSSIG, INC. LABORATORY NO.: 134477



PER: Lawrence E. Smetana, CWI TEST DATE: March 20, 1997

WE, THE UNDERSIGNED, CERTIFY THAT THIS RECORD IS CORRECT AND THAT THE WELDS WERE PREPARED AND TESTED IN ACCORDANCE WITH AWS D1.1- 1996

MANUFACTURER OR CONTRACTOR: Hi-Tech Manufacturing
 AUTHORIZED BY/DATE: _____

THIS CERTIFICATE OR REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF BODYCOTE TAUSSIG, INC.

Where quality is an ongoing commitment

LIST OF APPROVED SUBCONTRACTORS

"Metalex"

5750 Cornell Rd, CINCINNATI, OH 45242

ph. (513) 489-0507, fax (513) 489-1020,

www.metalexmgf.com

This subcontractor will produce "Support Girder" L1430401-100400

Hi-Tech's Subcontractors

RAW MATERIAL

1: "Alro Steel Corp."

4501 James Pl., Melrose Park, IL 60160

ph. (708) 343-4343, fax (708) 343-7588

2: "Earle M. Jorgensen Co."

1900 Mitchell Blvd., Schaumburg, IL 60193

ph. (847) 301-6100, fax (630) 635-1002

3: "Copper & Brass Sales, Inc."

415 E. State Pkwy, Schaumburg, IL 60173

ph. (847) 490-9870, fax (847) 490-9081

4: "Chicago Tube & Iron"

One Chicago Tube Drive, Romeoville, IL 60446

ph. (815) 834-2500, fax (815) 588-3958

GRINDING

1: "American Grinding & Machine Co"

2000 N. Mango Ave., Chicago, IL 60639-2899

ph. (773) 889-4343, fax (773) 889-3781

2: "Grind Lap"

1045 National, Addison, IL 60101

ph. (630) 458-1111, fax (630) 458-0787

BLACK OXIDE

"Expert Metal Finishing, Inc."

1900 N. Austin Ave., Chicago, IL 60639

ph. (773) 622-0402, fax (773) 622-0403

ANODIZING

"Mike's Anodizing Co."

859 N. Spaulding Ave., Chicago, IL 60651

ph. (773) 722-5778, fax (773) 722-1177

HARD CHROME

"E. J. Summerville"

1305 N. 31st Ave. Melrose Park, IL 60160

ph. (708) 345-5100

PAINTING

"Industrial Finishing, Inc."

2337 N. 17th Ave., Franklin Park, IL 60131

ph. (847) 451-4230, fax (847) 451-4243

HEAT TREATMENT

"Metals Technology Corp."

120 N. Schmale Rd., Carol Stream, IL 60188

ph. (630) 221-2500, fax (630) 221-0120

DELIVERIES

1: "Chicago Suburban Express "

5504 W. 47th St., Forestview, IL 60638

ph. (708) 496-3300, fax (708) 496-1811

2: "Old Dominion Freight Line."

3: "Con-Way Transportation Service "

4: Custom Companies