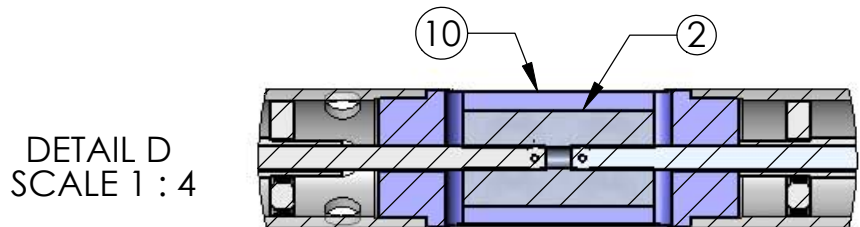
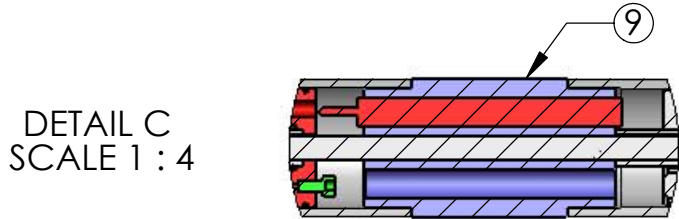
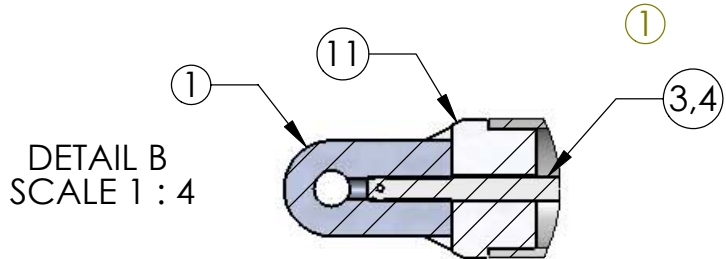
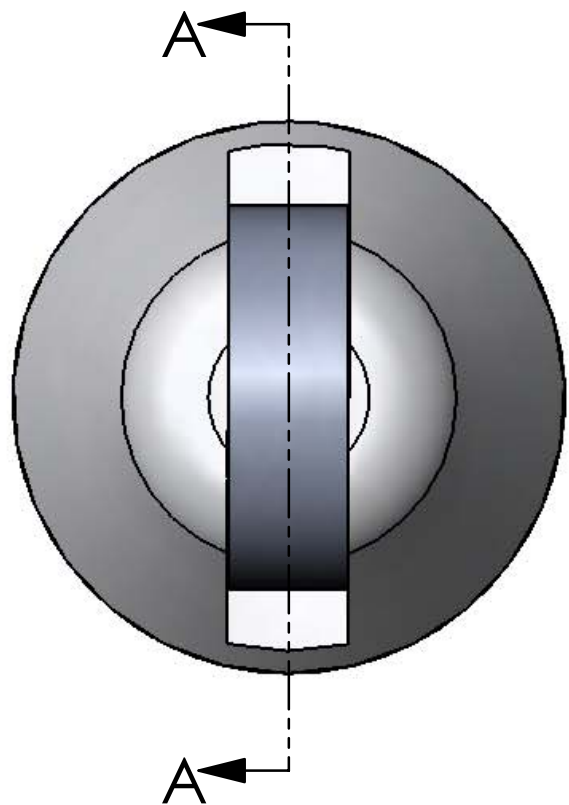
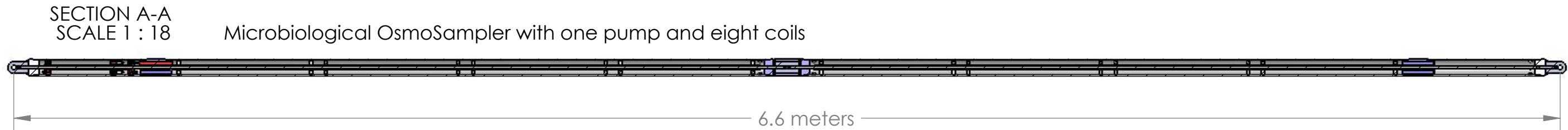
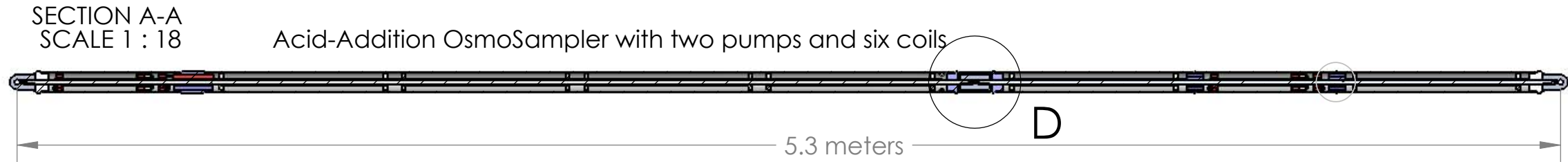


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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		



12	4		Shackle sleeve	1-1/2" Delrin Rod
11	2		Endcap	3" PVC Rod
10	0 or 1		Union Coupler	3" PVC Rod
9	1 or 2		Temp Logger Coupler	3" PVC Rod
8	0 or 2		Coupler	3" PVC Rod
7	0 or 1		MBIO housing	2-1/2" Clear Sch-40 PVC pipe
6	0 or 2		One coil housing	2-1/2" Clear Sch-40 PVC pipe
5	1 or 2		Four coil housing	2-1/2" Clear Sch-40 PVC pipe
4	0 or 1		Strength member (long)	1/2" 316 Stainless Steel rod
3	1 or 2		Strength member (short)	1/2" 316 Stainless Steel rod
2	0 or 1		Union Plate	5/8" 316 Stainless Steel plate
1	2		Shackle Plate	5/8" 316 Stainless Steel plate
Item No.	Qty	Part No.	Description	Material Specification

Bill of Materials			
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:	APPROVALS DATE
Inspector		1 PLACE DIM ±1/16 2 PLACE DIM ±.02 3 PLACE DIM ±.005 ANGLES ±1°	DRAWN Hans Jannasch 06/12/09
Shop Foreman		1. DIMENSIONS ARE IN INCHES	ENGINEER
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.	CHECKED
NEXT ASSY Description	NEXT ASSY Number	3. REMOVE BURRS AND SHARP EDGES .015 MAX.	PROJECT NO.
		4. MACHINED FILLET RADII .0150-.030.	PROJECT NSF OsmoSamplers
		5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005	WEIGHT
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.	
Application		DO NOT SCALE DRAWING	

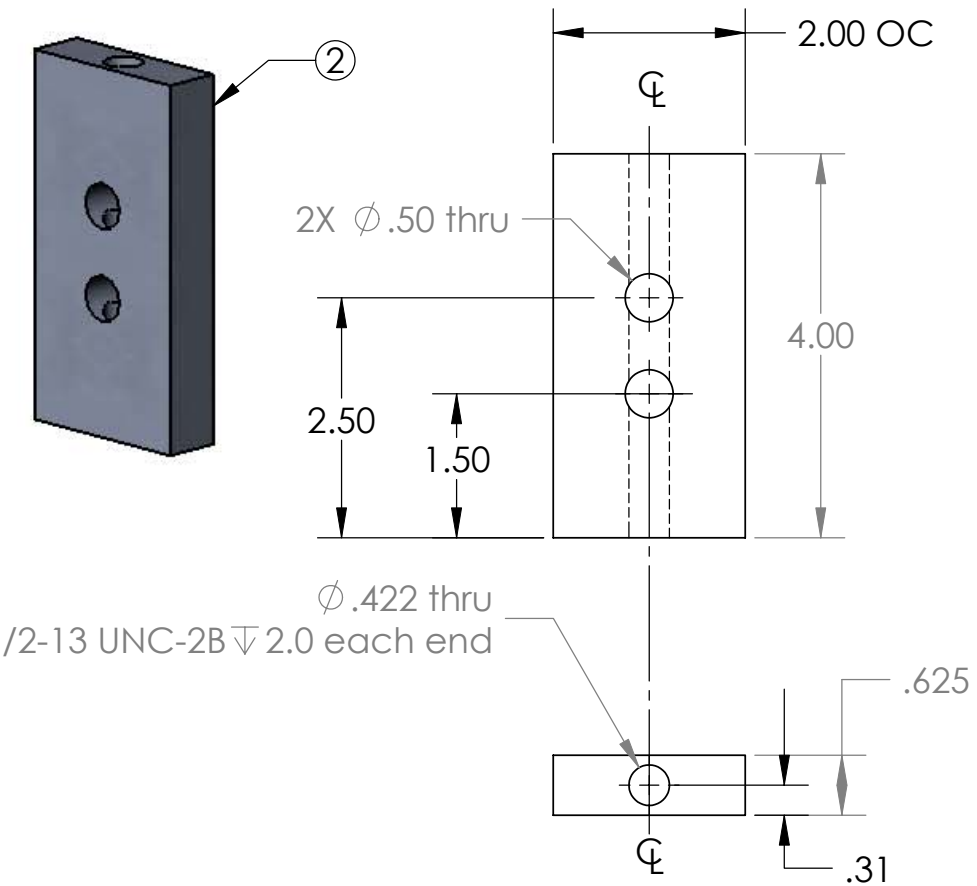
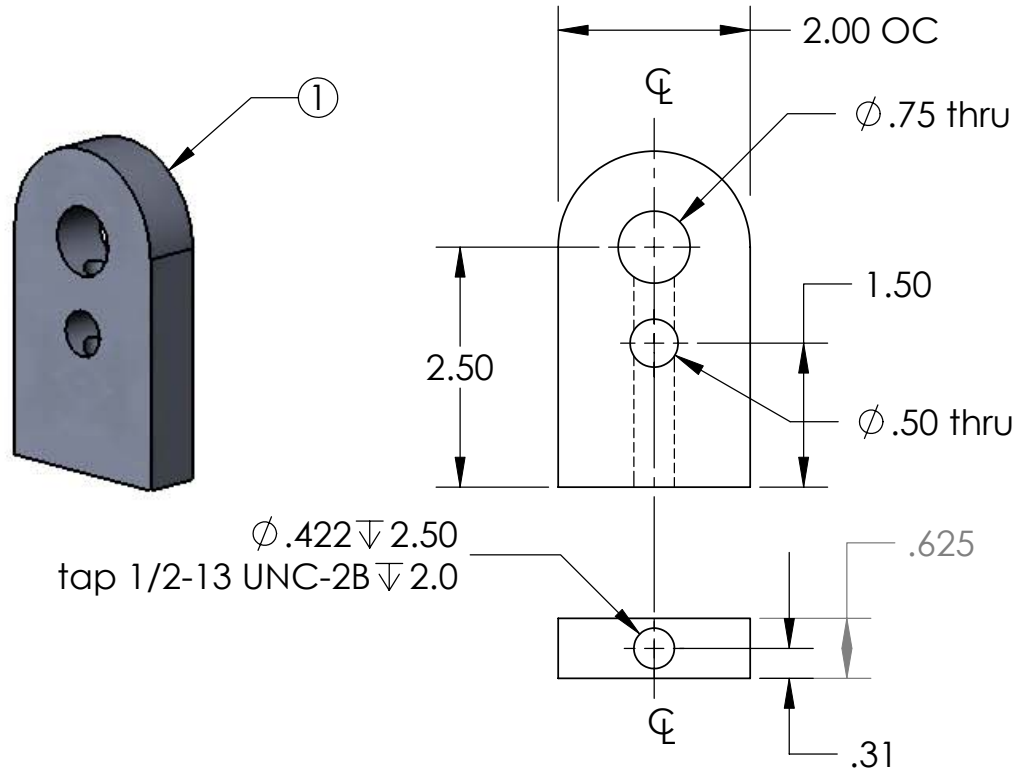
Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

PVC OsmoSampler Housings
(for Juan de Fuca 2009)

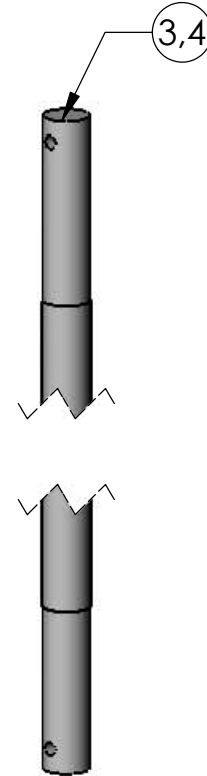
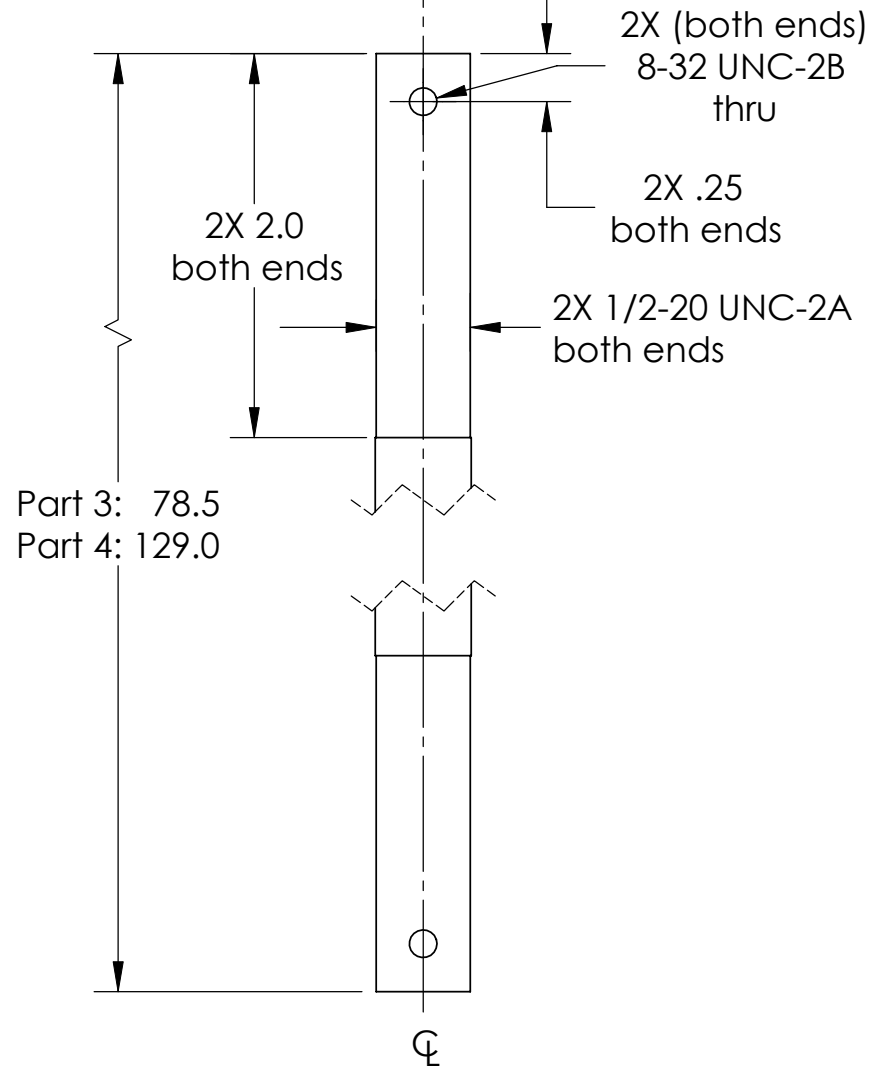
SIZE B DWG. NO. 233jaha-pvcOS-JdF-2009 REV.

SCALE 1:3 CAD FILE: Tornado/chem/SWfiles SHEET 1 OF 5

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$\phi .50$
Nominal OD
Must easily slide
thru 1/2" Sched 80
pumps and spools



4	0 or 1		Strength member (long)	1/2" 316 Stainless Steel rod
3	1 or 2		Strength member (short)	1/2" 316 Stainless Steel rod
2	0 or 1		Union Plate	5/8" 316 Stainless Steel plate
1	2		Shackle Plate	5/8" 316 Stainless Steel plate
Item No.	Qty	Part No.	Description	Material Specification

Bill of Materials				
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS
Inspector		1 PLACE DIM $\pm 1/16$	2 PLACE DIM $\pm .02$	DATE
Shop Foreman		3 PLACE DIM $\pm .005$	ANGLES $\pm 1^\circ$	DRAWN
Engineer		1. DIMENSIONS ARE IN INCHES		Hans Jannasch
		2. DIMENSION LIMITS HELD AFTER PLATING.		06/12/09
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.		ENGINEER
		4. MACHINED FILLET RADII .0150-.030.		CHECKED
		5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005		PROJECT NO.
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.		PROJECT
NEXT ASSY Description	NEXT ASSY Number	DO NOT SCALE DRAWING		NSF OsmoSamplers
Application		WEIGHT		SIZE
				B
				DWG. NO.
				233jaha-pvcOS-JdF-2009
				REV.
				SCALE
				1:3
				CAD FILE: Tornado/chem/SWfiles
				SHEET 2 OF 5

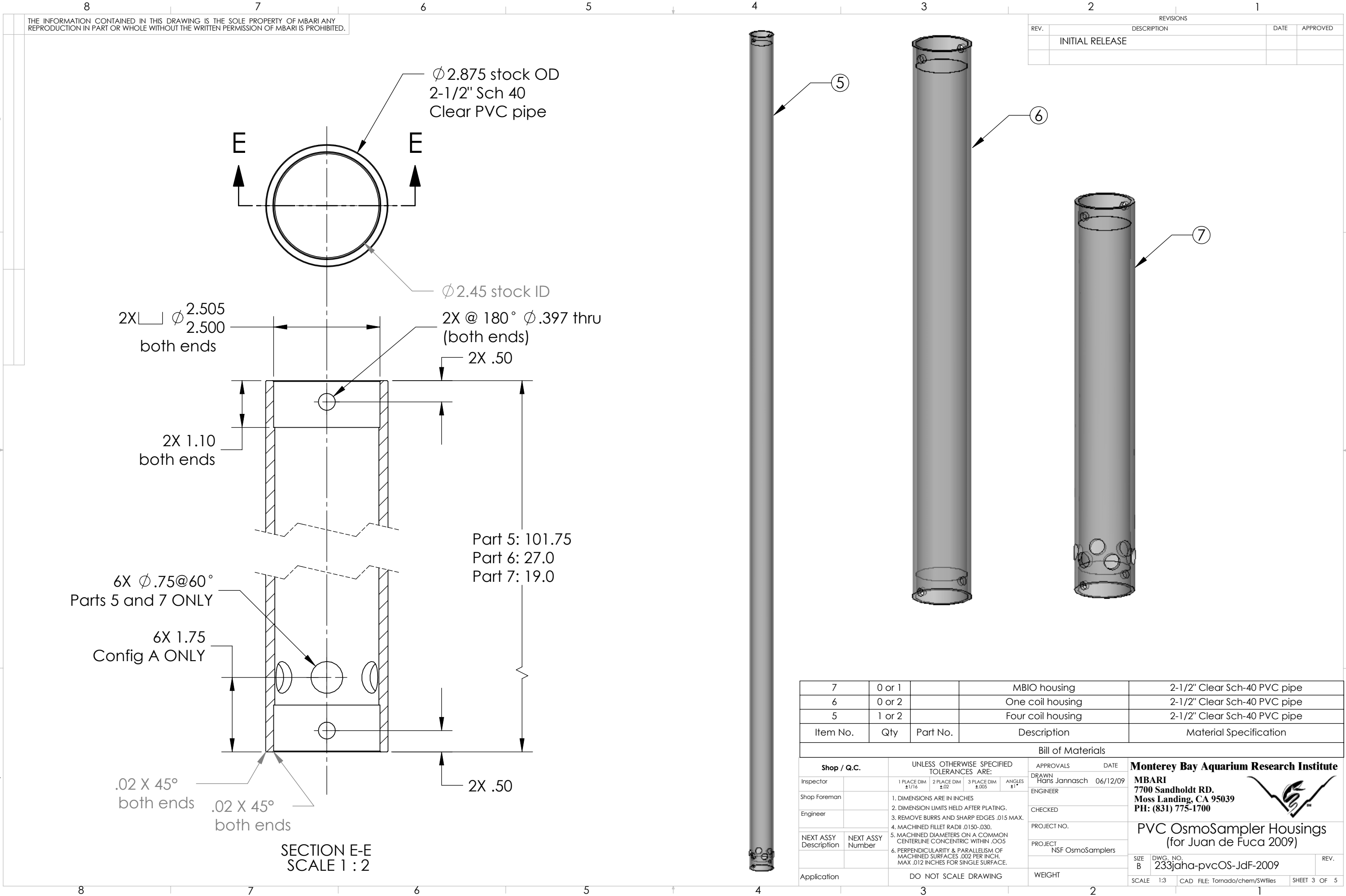
Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700



PVC OsmoSampler Housings
(for Juan de Fuca 2009)

SIZE B DWG. NO. 233jaha-pvcOS-JdF-2009 REV.

SCALE 1:3 CAD FILE: Tornado/chem/SWfiles SHEET 2 OF 5



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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		

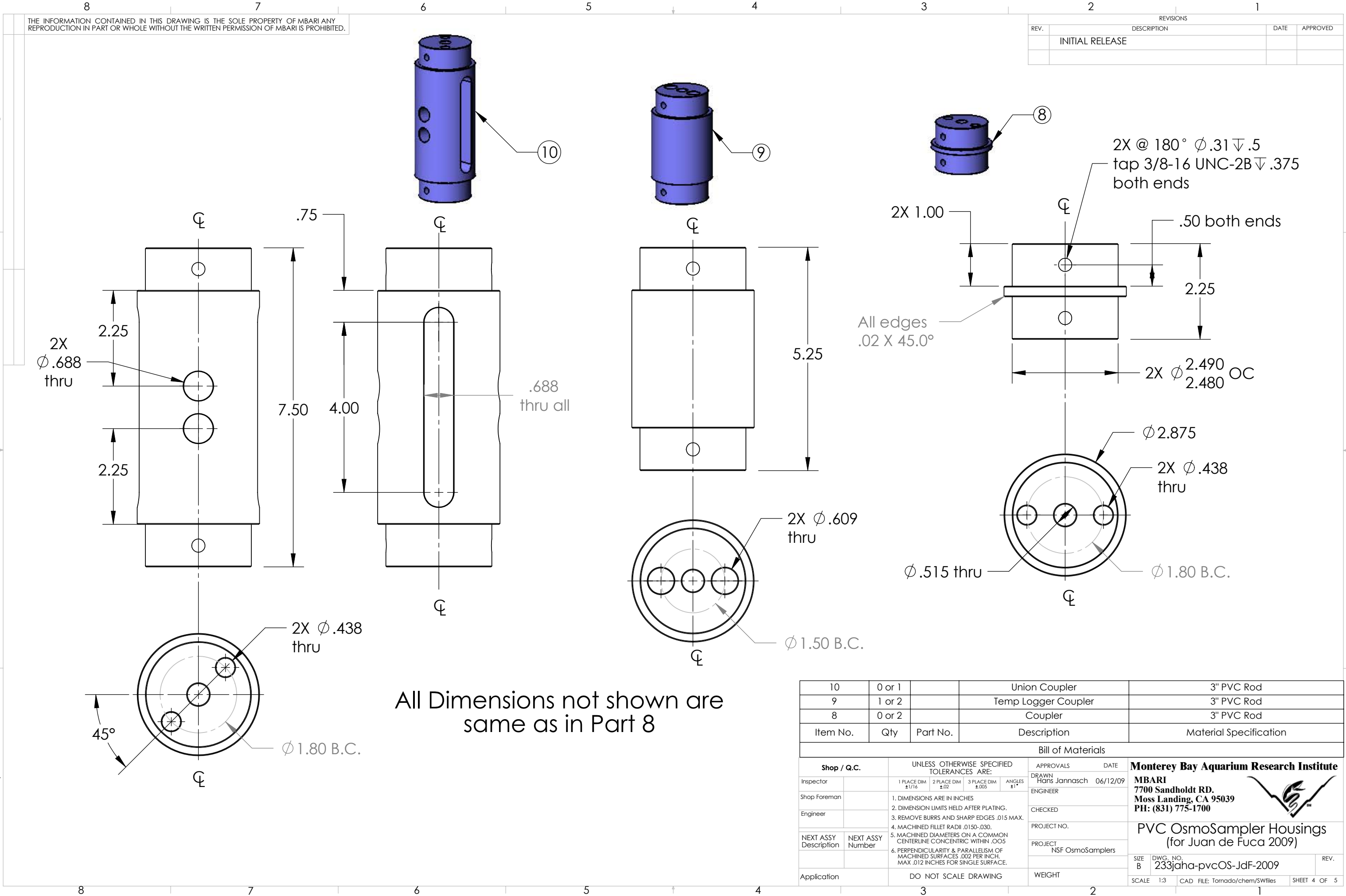
7	0 or 1		MBIO housing	2-1/2" Clear Sch-40 PVC pipe
6	0 or 2		One coil housing	2-1/2" Clear Sch-40 PVC pipe
5	1 or 2		Four coil housing	2-1/2" Clear Sch-40 PVC pipe
Item No.	Qty	Part No.	Description	Material Specification

Shop / Q.C.				UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS	DATE	Monterey Bay Aquarium Research Institute	
Inspector				1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN	Hans Jannasch
Shop Foreman				1. DIMENSIONS ARE IN INCHES				ENGINEER	06/12/09
Engineer				2. DIMENSION LIMITS HELD AFTER PLATING.				CHECKED	
				3. REMOVE BURRS AND SHARP EDGES .015 MAX.				PROJECT NO.	
NEXT ASSY Description	NEXT ASSY Number			4. MACHINED FILLET RADII .0150-.030.				PROJECT	NSF OsmoSampers
				5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005				WEIGHT	
				6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.				SIZE	B
Application				DO NOT SCALE DRAWING				SCALE	1:3
								CAD FILE:	Tornado/chem/SWfiles
								SHEET	3 OF 5

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Moss Landing, CA 95039
PH: (831) 775-1700

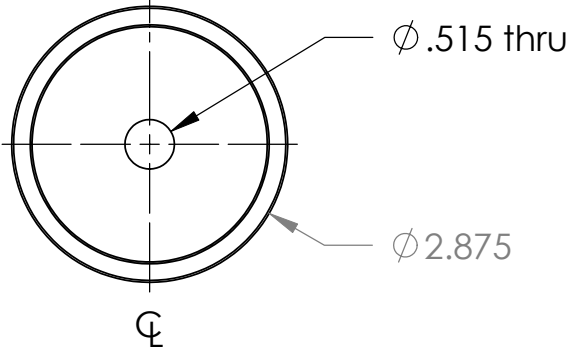
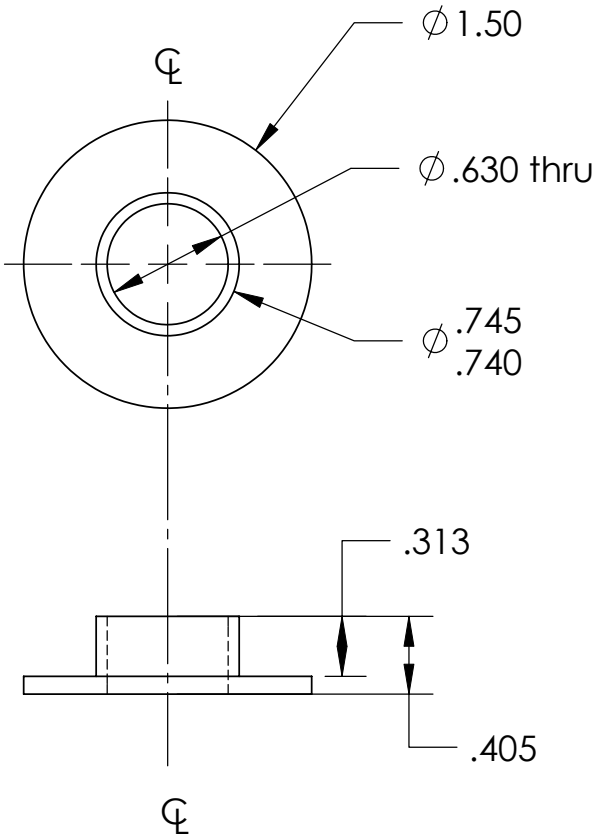
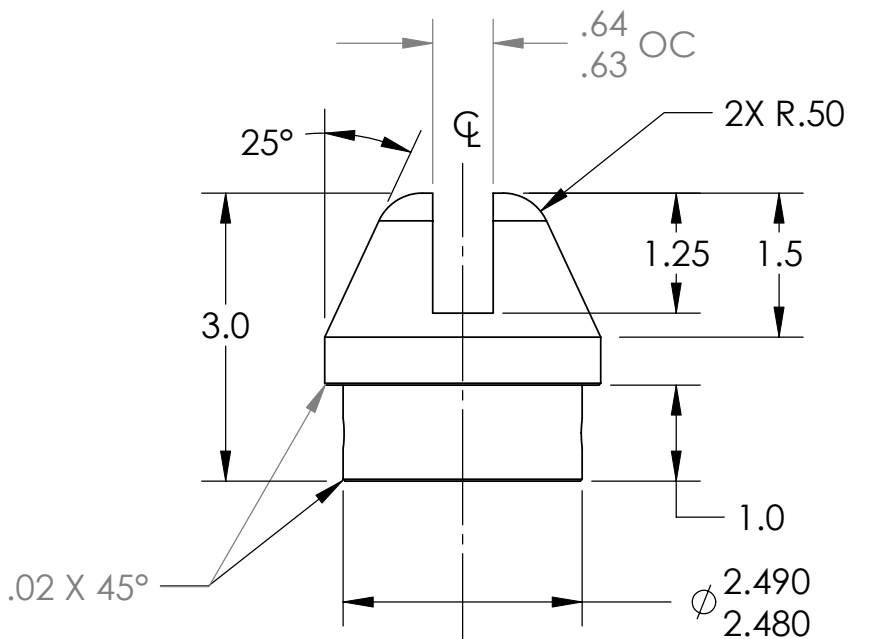
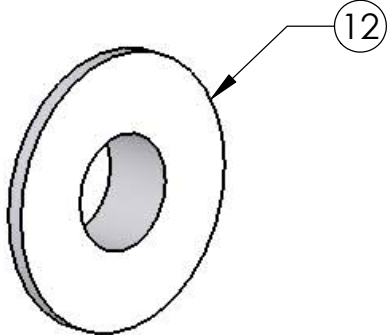
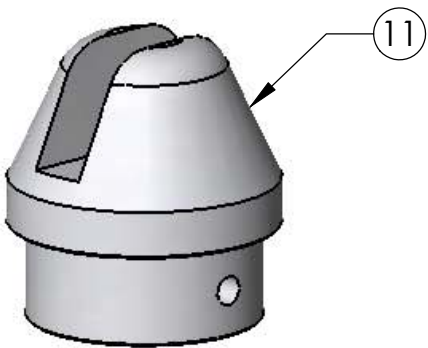
PVC OsmoSampler Housings
(for Juan de Fuca 2009)

SIZE B DWG. NO. 233jaha-pvcOS-JdF-2009 REV. 1



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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		



12	4		Shackle sleeve	1-1/2" Delrin Rod
11	2		Endcap	3" PVC Rod
Item No.	Qty	Part No.	Description	Material Specification

Bill of Materials								
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS	DATE	Monterey Bay Aquarium Research Institute MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700 		
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°		DRAWN Hans Jannasch	06/12/09
Shop Foreman		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .0150-.030. 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.					ENGINEER	
Engineer							CHECKED	
							PROJECT NO.	
NEXT ASSY Description	NEXT ASSY Number					PROJECT	NSF OsmoSamplers	
Application	DO NOT SCALE DRAWING				WEIGHT			
						SIZE B	DWG. NO. 233jaha-pvcOS-JdF-2009	REV.
						SCALE 1:3	CAD FILE: Tornado/chem/SWfiles	SHEET 5 OF 5