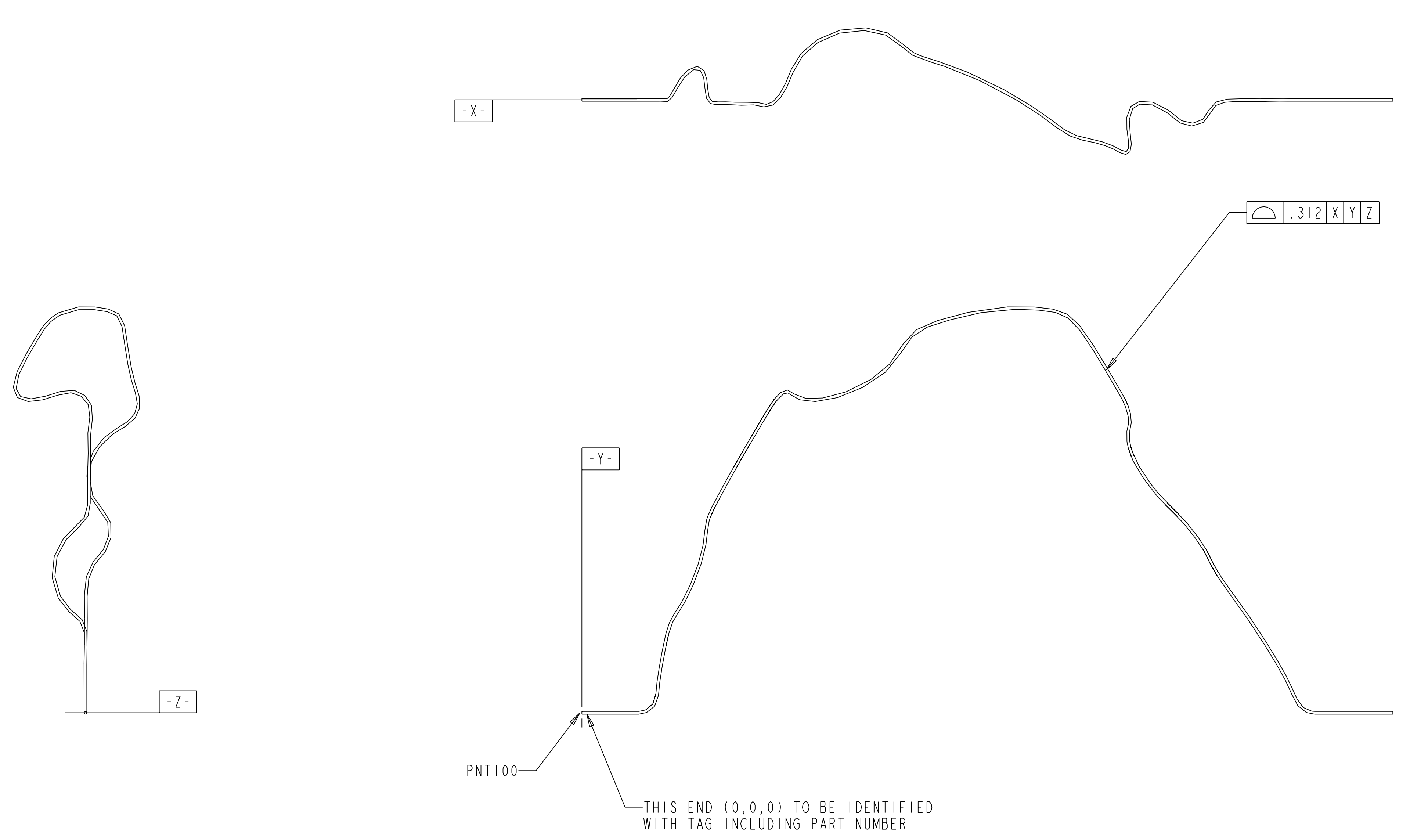


- NOTES
1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
  2. DIMENSIONS ARE IN INCHES.
  3. FABRICATION AND MATERIALS PER NCSX-CSPEC-123-01
  4. PROFILE TOLERANCE OF TUBE SURFACE IS BILATERAL, I.E. 0.156" ANY DIRECTION OFF REFERENCE SURFACE.
  5. ALL TUBE BEND RADII ARE 5/8" TO CENTERLINE OF TUBE.
  6. DATUM POINTS ON CHART ARE THEORETICAL INTERCEPTS OF THE TUBE CENTERLINE. BEND RADII ARE OMITTED. PROFILE TOLERANCE INCLUDES ALLOWANCES FOR THE RADII ERRORS.

Point Name	X	Y	Z
PNT100	0.000	0.000	0.000
PNT101	6.449	0.000	0.000
PNT102	7.466	0.260	0.000
PNT103	8.227	0.982	0.000
PNT104	8.509	1.838	0.000
PNT105	8.637	3.097	-0.000
PNT106	8.770	4.101	-0.000
PNT107	8.906	4.977	-0.000
PNT108	9.102	6.099	-0.000
PNT109	9.294	7.093	-0.000
PNT110	9.506	8.141	0.035
PNT111	9.712	9.008	-0.003
PNT112	9.931	9.778	-0.130
PNT113	10.167	10.416	-0.392
PNT114	10.435	10.879	-0.879
PNT115	10.778	11.345	-1.558
PNT116	11.071	11.813	-2.036
PNT117	11.472	12.506	-2.589
PNT118	11.878	13.289	-3.037
PNT119	12.276	14.094	-3.367
PNT120	12.720	15.113	-3.595
PNT121	13.153	16.249	-3.641
PNT122	13.475	17.243	-3.506
PNT123	13.736	18.218	-3.204
PNT124	13.940	19.213	-2.697
PNT125	14.064	20.163	-1.950
PNT126	14.130	20.891	-1.189
PNT127	14.234	21.556	-0.485
PNT128	14.399	22.155	0.035
PNT129	14.779	23.053	0.409
PNT130	15.380	24.202	0.390
PNT131	16.037	25.413	0.339
PNT132	16.778	26.765	0.393
PNT133	17.492	28.039	0.429
PNT134	18.338	29.518	0.459
PNT135	19.072	30.782	0.476
PNT136	19.938	32.250	0.467
PNT137	20.681	33.503	0.570
PNT138	21.180	34.335	0.647
PNT139	21.736	35.196	0.437
PNT140	22.191	35.771	-0.067
PNT141	22.677	36.212	-0.783
PNT142	23.191	36.465	-1.666
PNT143	23.547	36.458	-2.393
PNT144	23.910	36.105	-3.406
PNT145	24.484	35.733	-4.505
PNT146	25.181	35.540	-5.380
PNT147	26.078	35.459	-6.196
PNT148	27.161	35.526	-6.906
PNT149	28.621	35.812	-7.548
PNT150	30.122	36.297	-7.918
PNT151	31.455	36.880	-8.032
PNT152	32.729	37.589	-7.953
PNT153	33.911	38.408	-7.703
PNT154	34.941	39.352	-7.283
PNT155	35.670	40.298	-6.778
PNT156	36.322	41.352	-6.171
PNT157	36.940	42.255	-5.637
PNT158	37.696	43.068	-5.143
PNT159	38.580	43.664	-4.757
PNT160	39.445	44.020	-4.489
PNT161	40.563	44.371	-4.159
PNT162	41.524	44.662	-3.834
PNT163	42.552	44.955	-3.448
PNT164	43.579	45.209	-3.035
PNT165	44.750	45.452	-2.529
PNT166	45.841	45.637	-2.021
PNT167	47.141	45.793	-1.373
PNT168	48.492	45.900	-0.637
PNT169	49.611	45.936	0.021
PNT170	50.645	45.919	0.664
PNT171	51.860	45.835	1.470
PNT172	52.913	45.704	2.219
PNT173	53.998	45.504	3.047
PNT174	54.799	45.193	3.609
PNT175	55.352	44.838	3.929
PNT176	55.883	44.338	4.147
PNT177	56.405	43.730	4.305
PNT178	56.956	42.999	4.438
PNT179	57.478	42.243	4.551
PNT180	58.095	41.289	4.685
PNT181	58.578	40.508	4.801
PNT182	59.185	39.489	4.975
PNT183	59.672	38.656	5.145
PNT184	60.155	37.827	5.346
PNT185	60.639	37.010	5.588
PNT186	61.067	36.289	5.826
PNT187	61.470	35.536	5.996
PNT188	61.804	34.795	6.022
PNT189	62.034	34.095	5.834
PNT190	62.152	33.538	5.516
PNT191	62.192	32.950	4.956
PNT192	62.122	32.536	4.321
PNT193	62.006	32.078	3.524
PNT194	61.937	31.565	2.758
PNT195	61.975	30.907	2.035
PNT196	62.140	30.081	1.346
PNT197	62.417	29.232	0.826
PNT198	62.743	28.488	0.515
PNT199	63.263	27.553	0.324
PNT200	63.929	26.558	0.326
PNT201	64.536	25.724	0.404
PNT202	65.164	24.915	0.547
PNT203	65.883	24.086	0.863
PNT204	66.664	23.331	1.479
PNT205	67.357	22.701	2.132
PNT206	68.045	21.971	2.553
PNT207	68.807	21.080	2.785
PNT208	69.482	20.226	2.787
PNT209	70.259	19.146	2.516
PNT210	70.764	18.343	2.105
PNT211	71.172	17.522	1.430
PNT212	71.564	16.687	0.761
PNT213	72.077	15.813	0.370
PNT214	72.885	14.611	0.128
PNT215	74.329	12.633	0.095
PNT216	75.979	10.265	0.054
PNT217	77.175	8.445	0.021
PNT218	78.365	6.522	0.000
PNT219	79.440	4.658	0.000
PNT220	80.320	2.976	0.000
PNT221	81.124	1.256	0.000
PNT222	81.641	0.554	0.000
PNT223	82.398	0.120	0.000
PNT224	83.138	-0.000	0.000
PNT225	92.000	0.000	0.000



**RELEASED FOR FABRICATION / INSTALLATION**  
PPPL Drafting:

APPROX TUBE LENGTH = 159.4 IN

AR	CAGE CODE	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	SPECIFICATION	FIND NO
SE123-100	-1	-1	COOLANT TUBE 8-2	316L SS 5/16"-.032 WALL	SEE NOTE 4	I

NEXT ASSEMBLY      PARTS LIST

**-1 COOLANT TUBE 8-2**  
SCALE .125

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**P** THIS DRAWING PRODUCED ON PRO-ENGINEER

REV	DESCRIPTION	BY	DATE	CHK	DEPT	DATE	PE	REQ	DATE	ORNL	DOE	DATE
1	PER ECN NO. 5003	MJC	8/24/08	PLG								

SCALE NOTED		DES: P GORANSON	4-22-05
TOLERANCES UNLESS OTHERWISE SPECIFIED		DRW: G MCGINNIS	4-22-05
FRACTIONS		CHK: G.H. JONES	05-04-05
XX DECIMALS ±.01	FE	SECT:	
XXX DECIMALS ±.005	CR	DEPT:	
ANGLES ±0°15'	PJ	REO:	
BREAK SHARP EDGES OR MAX FINISH .125 UNLESS OTHERWISE SPECIFIED	REO:	PPPL DRFT	
		VERSION NO.	0
		PLANT	ORNL
		BLDG	5700
		FL	3
		SHT	1
		OF	1
		TYPE	S
		CLASS	U
		RELEASE LEVEL	
		Fabrication	
		SE123-102	

SE123-102