





science for a changing world

U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY  
SOUTH CAROLINA DISTRICT  
720 Gracern Road - Suite 129  
Columbia, SC 29210-7651  
Main Number: (803) 750-6100  
<http://wwwsc.er.usgs.gov>  
FAX: (803) 750-6181

DATE: 01-16-01

TO: [REDACTED]  
COMPANY: [REDACTED]  
FAX NUMBER: [REDACTED]

FROM THE DESK OF:  
Ted Cooney

PHONE: (803) 750-6112  
EMAIL: [twcooney@usgs.gov](mailto:twcooney@usgs.gov)

6 Pages, including cover page

Following ARE FIVE PAGES OF DOCUMENTATION THAT I RECEIVED FROM CAROLINA-EASTMAN COMPANY ON JAN. 12, 2001. PAGE 3 SHOWS FLOOD ELEVATIONS FOR SEVERAL LOCATIONS FOR FLOODS FROM 1964 TO 1976. NOTE THAT THE ELEVATION FOR STATION NUMBER 2, WHICH IS LOCATED ABOUT 2000 FT DOWNSTREAM OF THE INTAKE CANAL, WAS DETERMINED TO BE 126.93 FEET FOR THE OCT. 11, 1976 FLOOD. THE USGS DOES NOT INTEND TO USE THIS INFORMATION TO EXTEND THE RATING CURVE AT STATION 02169603 (COWGAREE RIVER AT CAROLINA-EASTMAN COMPANY NEAR COYCE, SC).

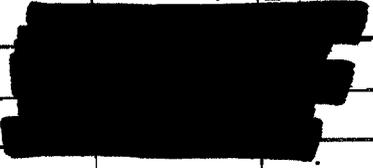
<b>Eastman Chemical Company - Carolina Operations</b> PO Box 1782 Columbia, SC 29202	
<b>FAX</b>	Date: January 12, 2001
	Number of Pages: 5
To: Ted Cooney - USGS 803-750-6181	From: [REDACTED] Power and Services FAX (803) 791-3043 Voice (803) 791-3000 Ext. 3477

I was able to locate an old file of flood information. I have included copies of

- Descriptions of gauge stations
- Flood water elevations at gauge stations (1964 - 1976)
- Plant maps showing gauge station locations

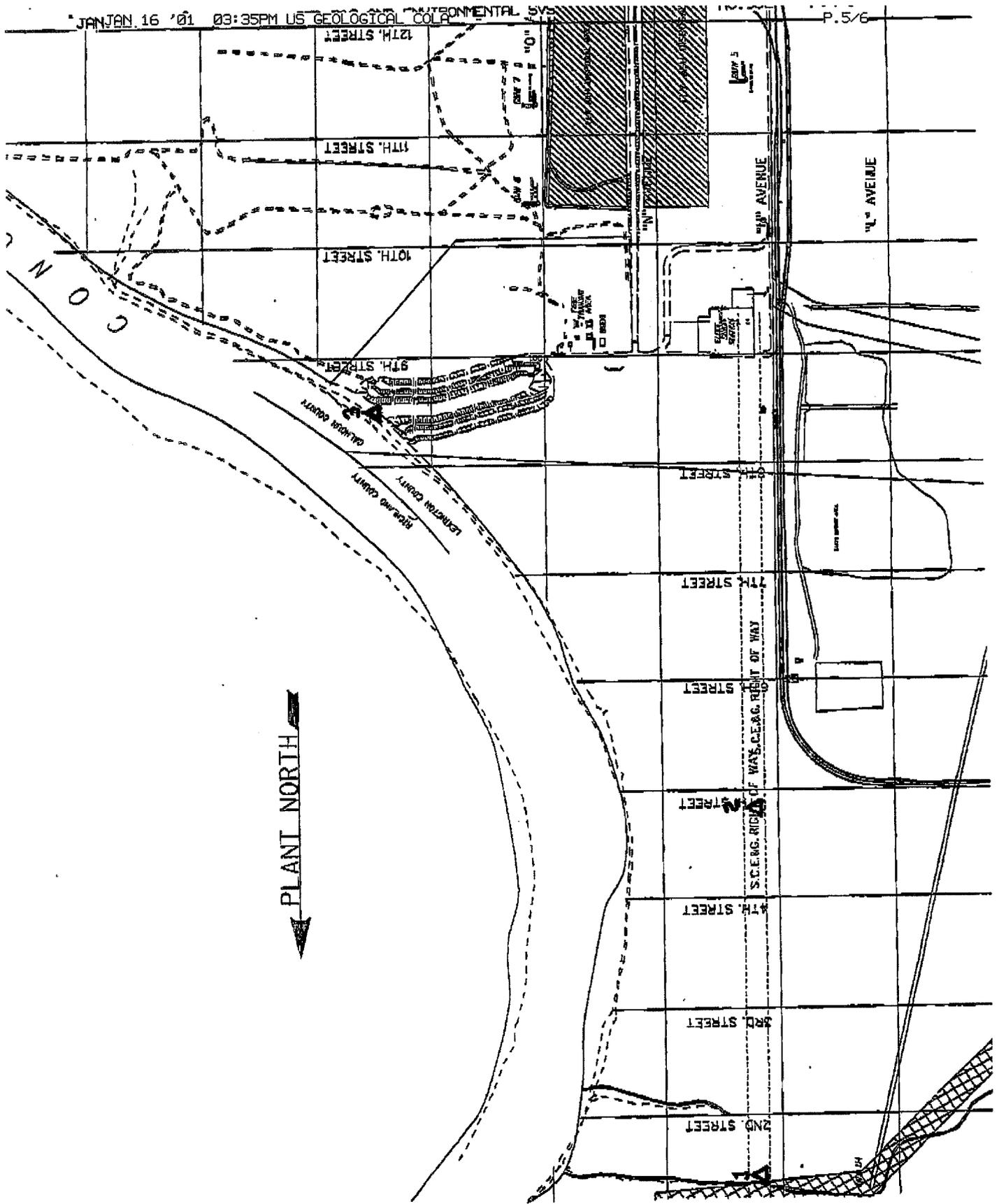
You should be able to locate stations in reference to the county lines shown on our plant map. Our plant grid map is laid out in 600-foot squares with north-south grid lines identified alphabetically and east-west grid lines identified numerically. Our plant north is approximately 22° to the west of true north.

Plant Stations for high water - March 17, 1975



Sta. #	Location of Stations	Elev. of Sta. & high water
# 1	Power Pole N of Under Power Line direct UP Pole #47 Near 1st + 200 and Mt 120	Nail 125.48 high water 126.10
# 2	Nail in Power Pole # 50 Near 4th + 493 and Mt 122	Nail 129.88 high water 126.00
# 2A	Nail in Power Pole # 51 Near 5th + 504 and Mt 122	Nail 135.98 high water 125.95
# 3	Pump station - River elev. Recorder Near 8th + 300 and Pt 300	high water 126.50
# 4	Nail in base of 12" oak tree Near 13th + 200 and G Ave. (Salvage yard)	Nail 122.61 high water 123.60
# 5	R.R. spike in 30" Pine Tree Near 14th + 500 and O Ave. (Near oxidation pond)	R.R. spike 126.36 high water 123.57
# 6	Nail in 16" oak tree Near 18th + 00 and Mt 500	Nail 128.71 high water 123.20
<u>New</u> # 7	Nail in 15" oak tree Near 19th + 35 and Ct 175	Nail 125.19 high water 123.20
<u>New</u> # 8	Nail in Twin maple - Near 19th + 507 and Pt 369	Nail 124.57 high water 123.10
# 9		







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EMAIL: [twcooney@usgs.gov](mailto:twcooney@usgs.gov)

FAX NUMBER: [REDACTED]

7 Pages, including cover page

Series of horizontal lines for additional information or notes.

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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WATER RESOURCE DIVISION

## STATION DESCRIPTION

STATION ID.--02169603      Description prepared by: W.B. Guimaraes      Date: June 1987  
Description updated by: T.W. Cooney      Date: December 2000

Description of Gaging Station on Congaree River near Cayce, SC (Carolina Eastman intake)

LOCATION.--Lat: 33 52'45", long: 081 00'48", Calhoun County, hydrologic unit 03050110, 5.0 mi upstream of Sandy Run Creek, about 6.5 mi south of Cayce, at the Carolina-Eastman Company intake canal.

ESTABLISHMENT.--March 3, 1986.

## DRAINAGE AREA.--

GAGE.--Staff gage only. The original staff gage was installed on the most downstream piling at the mouth of the intake canal and on the streamward side of the piling. A second staff gage was installed on November 3, 1986, on the upstream side of the pump house at the end of the intake canal. The second staff gage was installed so that Carolina-Eastman personnel can easily obtain gage readings (the original staff gage can only be read by boat). Elevation of gage is 100 feet above NGVD of 1929 (from topographic map).

HISTORY.--Discharge measurements were made at different gage heights to establish a rating curve. Original measurement and level notes were erroneously annotated with station number "02169605" and corrected to "02169603" in December 2000.

REFERENCE MARKS.-- T.D. Point- Angle iron (painted red) on 7th downstream piling at mouth of intake canal and on the shoreward side of the piling. Gage height = 16.550 feet.

R.M.#1.-Top of iron pole at end of road (could have been old guard rail) on upstream side of intake canal. Gage height = 24.408 ft.

R.M.#2.-Top of tie rod on bottom left step, approximately 0.25 feet from front rail guard. Gage height = 21.849 feet.

## CONTROL.-- Channel

CHANNEL.--The channel is fairly straight for several hundred feet upstream and downstream of gage. The right bank is steep, and the left bank has a gradual incline. Stream bed is firm sand and clay.

DISCHARGE MEASUREMENTS.--Measurements are made by boat at gage.

## FLOODS.--

## POINT OF ZERO FLOW.--

WINTER FLOW.--Discharge will not be affected by ice.

REGULATION.--Flow regulated by Lake Murray and Lake Greenwood and to some extent, at low and medium flow, by power plants on the Broad River.

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DIVERSIONS.--

ACCURACY.--Measuring conditions are usually good.

COOPERATION.--Station established and maintained by the Geological Survey in cooperation with Carolina Eastman Corp.

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DATE (YEAR)	DRAINAGE MEASUREMENT, NOS	DRAINAGE IN CUBIC FEET PER SECOND	AND	AND IS	FIELD DEFINED BETWEEN	DATE	CHK. BY	DATE	CFS	DIP TO Q	FEET	PERCENT FT
1.80	1690*	1696	1701	1702	1718	1722	1729	1735	1740	56.00	54.00	73.00
1.90	1748	1751	1757	1762	1767	1773	1784	1789	1795	73.00	73.00	73.00
2.00	1800*	1807	1815	1822	1829	1844	1851	1859	1866	73.00	73.00	73.00
2.10	1873	1880	1888	1895	1902	1910	1924	1931	1939	72.00	72.00	71.00
2.20	1946	1953	1960	1967	1975	1982	1996	2003	2011	71.00	71.00	71.00
2.30	2018	2025	2032	2039	2046	2054	2068	2075	2082	71.00	71.00	71.00
2.40	2089	2096	2103	2110	2118	2125	2133	2139	2146	92.00	92.00	92.00
2.50	2160*	2169	2178	2187	2197	2206	2215	2224	2233	91.00	91.00	92.00
2.60	2252	2261	2270	2279	2288	2297	2307	2316	2325	92.00	92.00	92.00
2.70	2303	2313	2322	2331	2340	2349	2359	2368	2378	93.00	93.00	93.00
2.80	2435	2445	2454	2463	2472	2481	2491	2500	2509	92.00	92.00	92.00
2.90	2528	2538	2546	2555	2565	2574	2583	2592	2602	93.00	93.00	93.00
3.00	2670*	2680	2690	2700	2710	2720	2730	2740	2750	100.0	100.0	100.0
3.10	2715	2725	2735	2745	2755	2765	2775	2785	2795	100.0	100.0	100.0
3.20	2819	2829	2839	2849	2859	2869	2879	2889	2899	100.0	100.0	100.0
3.30	2919	2929	2939	2949	2959	2969	2979	2989	2999	101.0	101.0	101.0
3.40	3019	3029	3039	3049	3059	3069	3079	3089	3099	121.0	121.0	121.0
3.50	3120*	3132	3144	3156	3168	3181	3193	3205	3217	125.0	125.0	125.0
3.60	3261	3284	3296	3278	3290	3303	3315	3327	3340	126.0	126.0	126.0
3.70	3364	3377	3389	3401	3414	3426	3438	3451	3463	135.0	135.0	135.0
3.80	3480	3501	3513	3525	3538	3550	3563	3575	3588	126.0	126.0	126.0
3.90	3613	3625	3638	3651	3663	3676	3689	3701	3714	128.0	128.0	128.0
4.00	3739	3752	3765	3777	3790	3803	3816	3828	3841	138.0	138.0	138.0
4.10	3867	3879	3892	3905	3918	3931	3944	3957	3969	130.0	130.0	130.0
4.20	3995	4008	4021	4034	4047	4060	4073	4086	4099	132.0	132.0	132.0
4.30	4133	4138	4151	4164	4177	4190	4203	4216	4229	132.0	132.0	132.0
4.40	4255	4258	4281	4295	4308	4321	4334	4347	4360	133.0	133.0	133.0
4.50	4397	4400	4413	4427	4440	4453	4466	4480	4493	133.0	133.0	133.0
4.60	4520	4533	4546	4560	4573	4586	4600	4613	4626	135.0	135.0	135.0
4.70	4653	4657	4670	4684	4707	4721	4734	4748	4761	135.0	135.0	135.0
4.80	4789	4802	4815	4829	4842	4855	4869	4883	4897	137.0	137.0	137.0
4.90	4924	4937	4951	4965	4978	5006	5019	5033	5047	137.0	137.0	137.0
5.00	5061	5074	5088	5102	5116	5130	5143	5157	5171	139.0	139.0	139.0
5.10	5198	5212	5226	5240	5254	5268	5281	5295	5309	140.0	140.0	140.0
5.20	5337	5351	5365	5379	5393	5407	5421	5435	5449	140.0	140.0	140.0
5.30	5477	5491	5505	5519	5533	5547	5561	5575	5589	142.0	142.0	142.0
5.40	5637	5633	5655	5660	5674	5688	5702	5716	5730	5745	5745	5745

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

EXPANDED FLOWING TABLE

DATE PROCESSED: 12-15-2000 @ 08:39 BY: LECROSBY

NO: 1

START DATE/TIME: 03-01-1986 (L210)

STATION: 001

DATE: 12-15-2000

DATE: 03-01-1986

DATE: 12-15-2000

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GAUGE SERIAL (FEET)	00	01	02	03	04	05	06	07	08	09	FEET TIDAL PT
5.50	5759	5773	5797	5811	5836	5830	5848	5858	5873	5887	143.0
5.60	5901	5915	5930	5944	5958	5973	5987	6001	6016	6030	143.0
5.70	6044	6059	6073	6088	6102	6116	6131	6145	6160	6174	143.0
5.80	6189	6203	6218	6232	6247	6261	6276	6290	6305	6319	143.0
5.90	6334	6348	6363	6378	6392	6407	6421	6436	6451	6465	146.0
6.00	6480	6494	6509	6524	6538	6553	6568	6583	6597	6612	147.0
6.10	6527	6541	6556	6571	6586	6600	6615	6630	6645	6660	147.0
6.20	6714	6729	6743	6758	6773	6788	6803	6818	6833	6848	149.0
6.30	6913	6928	6943	6958	6973	6988	7003	7018	7033	7048	151.0
6.40	7072	7087	7102	7117	7132	7147	7163	7178	7193	7208	151.0
6.50	7223	7238	7253	7268	7283	7298	7313	7328	7344	7359	152.0
6.60	7374	7389	7404	7419	7434	7450	7465	7480	7495	7510	152.0
6.70	7526	7541	7556	7571	7587	7602	7617	7633	7648	7663	152.0
6.80	7678	7694	7709	7724	7740	7755	7770	7785	7801	7817	154.0
6.90	7831	7847	7863	7878	7894	7909	7924	7940	7955	7971	154.0
7.00	7986	8002	8017	8033	8048	8064	8079	8095	8110	8126	155.0
7.10	8141	8157	8172	8188	8204	8219	8235	8250	8266	8282	156.0
7.20	8297	8313	8328	8344	8360	8375	8391	8407	8422	8438	157.0
7.30	8454	8470	8485	8501	8517	8532	8548	8564	8579	8595	157.0
7.40	8511	8527	8543	8559	8574	8590	8606	8622	8638	8654	158.0
7.50	8765	8785	8801	8817	8833	8849	8865	8881	8897	8912	159.0
7.60	8928	8948	8964	8978	8992	9008	9024	9040	9056	9072	160.0
7.70	9088	9104	9120	9136	9152	9168	9184	9200	9216	9232	162.0
7.80	9248	9265	9281	9297	9313	9329	9345	9361	9377	9393	162.0
7.90	9418	9435	9452	9468	9484	9501	9517	9533	9549	9565	163.0
8.00	9581	9598	9614	9630	9646	9663	9679	9695	9711	9728	163.0
8.10	9734	9751	9767	9783	9799	9815	9832	9848	9865	9881	163.0
8.20	9897	9914	9930	9946	9963	9979	9995	10010	10026	10040	170.0
8.30	10060	10076	10090	10105	10120	10135	10150	10165	10180	10195	170.0
8.40	10238	10248	10258	10268	10278	10288	10298	10308	10318	10328	170.0
8.50	10330	10418	10428	10438	10448	10458	10468	10478	10488	10498	170.0
8.60	10500	10570	10580	10590	10600	10610	10620	10630	10640	10650	170.0
8.70	10720	10730	10740	10750	10760	10770	10780	10790	10800	10810	170.0
8.80	10890	10910	10930	10950	10960	10970	10980	10990	11000	11010	170.0
8.90	11060	11080	11090	11100	11110	11120	11130	11140	11150	11160	170.0
9.00	11230	11250	11260	11280	11300	11310	11320	11330	11340	11350	170.0
9.10	11400	11430	11430	11450	11470	11480	11490	11500	11510	11520	170.0
9.20	11570	11590	11600	11620	11640	11650	11660	11670	11680	11690	170.0

02185603  
CHANDLER RIVER NEAR CANOE 5 C  
NO OFFSHORE READ

DISCHARGE IN CUBIC FEET PER SECOND

(EXTENDED PREDICTION)

FEET

TIDAL  
PT

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION  
CHANDLER RIVER NEAR CANOE  
DATA PROCESSED: 12-15-2000 @ 08:13 BY (60000) J  
NO: 1  
STATION DATA/TIME: 03-01-1986 (1200)

Rating based on measurements 1 through 11 (1986-87)

DEC 15 '00 11:30AM US GEOLOGICAL COLA

P.67

02169503  
COMBINE RIVER WIND CANOE S C  
NO OFFSETS USED

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION  
FINANCED RATING TABLE  
DATE PROCESSED: 12-15-2000 @ 08:33 BY lamcooey  
DO: 1  
STAFF USER/TITLE: 03-01-1506 (1200)

PAGE 3  
TYPE: LOG

Rating based on measurements 1 through 11 (1985-97)

TYPE: 091  
RATING: 91  
DATE: 03-01-1506 (1200)

GAUGE HEIGHT (FEET)	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	THRESH FEET
9.30	11748	11760	11770	11790	11810	11830	11840	11860	11880	11890	170.0
9.40	11910	11930	11950	11960	11980	12000	12010	12030	12050	12050	170.0
9.50	12080	12100	12120	12130	12150	12170	12190	12200	12220	12240	180.0
9.60	12260	12270	12290	12310	12330	12340	12360	12380	12390	12410	170.0
9.70	12410	12450	12460	12480	12500	12520	12530	12550	12570	12590	180.0
9.80	12600	12620	12640	12650	12670	12690	12710	12730	12740	12760	170.0
9.90	12700	12800	12810	12830	12850	12870	12880	12900	12920	12940	180.0
10.00	12950	12970	12990	13010	13020	13040	13060	13080	13090	13110	180.0
10.10	13130	13150	13160	13180	13200	13220	13240	13250	13270	13290	170.0
10.20	13310	13320	13340	13360	13380	13390	13410	13430	13450	13470	180.0
10.30	13400	13500	13520	13540	13560	13570	13610	13630	13650	13680	180.0
10.40	13650	13680	13700	13710	13730	13750	13770	13790	13800	13820	180.0
10.50	13860	13870	13890	13890	13910	13930	13950	13960	13980	14000	180.0
10.60	14020	14040	14050	14070	14090	14110	14130	14140	14160	14180	180.0
10.70	14200	14220	14230	14250	14270	14290	14310	14320	14340	14360	180.0
10.80	14380	14400	14410	14430	14450	14470	14490	14500	14520	14540	180.0
10.90	14560	14580	14600	14610	14630	14650	14670	14690	14700	14720	180.0
11.00	14780	14780	14780	14800	14810	14830	14850	14870	14890	14900	180.0
11.10	14920	14940	14960	14980	15000	15010	15030	15050	15070	15090	180.0
11.20	15110	15120	15140	15160	15180	15200	15210	15230	15250	15270	180.0
11.30	15290	15310	15330	15340	15360	15380	15400	15420	15440	15460	180.0
11.40	15470	15490	15510	15530	15550	15560	15580	15600	15620	15640	180.0
11.50	15660	15670	15690	15710	15730	15750	15770	15790	15800	15820	180.0
11.60	15840	15860	15880	15900	15920	15940	15970	15990	16010	16030	180.0
11.70	16030	16050	16060	16080	16100	16120	16140	16160	16180	16200	180.0
11.80	16210	16230	16250	16270	16290	16310	16320	16340	16360	16380	180.0
11.90	16400	16420	16440	16460	16470	16490	16510	16530	16550	16570	180.0
12.00	16590	16610	16620	16640	16660	16680	16700	16720	16740	16760	180.0
12.10	16770	16790	16810	16830	16850	16870	16890	16910	16930	16950	180.0
12.20	16960	16980	17000	17020	17040	17060	17080	17100	17120	17130	180.0
12.30	17150	17170	17190	17210	17230	17250	17260	17280	17300	17310	180.0
12.40	17340	17360	17380	17400	17420	17440	17450	17470	17490	17510	180.0
12.50	17530	17550	17570	17590	17610	17630	17640	17660	17680	17700	180.0
12.60	17720	17740	17760	17780	17800	17820	17840	17860	17880	17900	180.0
12.70	17910	17930	17950	17970	17990	18010	18030	18050	18060	18080	180.0
12.80	18100	18120	18140	18160	18180	18200	18220	18240	18260	18280	180.0
12.90	18300	18310	18330	18350	18370	18390	18410	18430	18450	18470	180.0

