MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA
(National Water-Quality Assessment Station)
(National Stream-Quality Accounting Network Station)

LOCATION.--Lat 40°23'28", long 79°51'30", Allegheny County, Hydrologic Unit 05020005, near right bank on river guide wall 300 ft upstream from dam at lock 2 at Braddock, 1,700 ft downstream from Turtle Creek, and 11.2 mi upstream of confluence with Allegheny River.

DRAINAGE AREA.--7,337 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder and fixed-crest concrete dam control with streamward lock chamber usable as floodway during high flow since 1951. Datum of gage is 709.66 ft above sea level (U.S. Army Corps of Engineers benchmark). Prior to Aug. 13, 1951, at site 700 ft upstream, and Aug. 13, 1951 to Nov. 8, 1990 at present site at datum 2.50 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by locks and hydroelectric plants, since 1938 by Tygart Lake (station 03055500), since 1926 by Lake Lynn, since 1925 by Deep Creek Reservoir (station 03076000), since 1943 by Youghiogheny River Lake (station 03077000), and since 1990 by Stonewall Jackson Lake, combined capacity, 779,000 acre-ft. Figures of daily discharge include slight diversion from Beaver Run Reservoir in the Kiskiminetas River Basin to the borough of Jeannette in the Monongahela River Basin. U.S. Army Corps of Engineers satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 38.8 ft from floodmarks, discharge, 210,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2770	1880	1830	2330	12300	15300	13500	8360	4200	2330	2580	1470
2	2320	2520	1680	3130	11100	22500	17900	8500	4560	3010	2160	1760
3	2330	5150	1400	3320	11200	22600	16000	6940	3970	3100	1930	1690
4	3040	4720	1610	7610	12400	38000	12900	6580	4040	2180	1760	1390
5	2970	1840	1510	7960	9960	39800	11600	5120	2900	1910	2460	1450
6	2880	1850	1470	6570	9430	39200	11600	5070	2800	1900	1930	1770
7	2600	2000	1940	5910	12000	56800	11200	4360	2890	1700	1570	1730
8	3360	1760	1680	4780	32400	42400	10300	5080	3660	1640	1630	1760
9	3790	2190	2190	12100	38400	35400	12500	5260	2360	1520	1900	2910
10	4620	1940	2230	30400	29700	28200	48400	4770	1820	1750	2010	2770
11	3980	2170	1880	22900	23700	19600	33900	4330	1820	1710	1970	1840
12	3770	1860	4360	20800	18900	16800	31900	3350	2040	1710	1870	1710
13	3510	1470	2920	22400	15900	15400	25400	4150	1820	1490	2120	1940
14	3190	1800	2800	38300	13400	15000	24600	3720	2620	1400	2420	1640
15	2290	1800	5660	63900	12200	16200	20600	4330	2450	1550	2110	1650
16	3030	1650	3330	52200	11400	19900	21500	4970	2240	1420	1830	1810
17	2010	1650	2930	36700	9600	18500	19100	3370	2190	1400	1870	1680
18	3280	1830	2490	34700	9810	38600	14900	5350	2190	1540	1630	1700
19	2140	1800	2260	44000	8930	54200	14100	12200	1750	1390	1780	1790
20	2800	1890	2820	37400	7950	42500	18800	10500	2300	1380	1770	1950
21	2950	1580	2880	29900	7700	35200	23100	6600	1970	1360	2030	1750
22	2880	1870	3920	32500	8760	38700	27700	6620	1810	1790	1820	1820
23	3060	1780	6150	40000	7470	39200	25400	10900	1700	1600	1630	2000
24	2960	1990	6780	45400	5860	31500	35100	21100	1800	1490	1980	1690
25	2820	1660	4750	58100	6300	26400	31400	22900	1790	1340	1960	1540
26	2420	1570	4780	41300	5240	22800	24900	21100	1450	1430	2750	1640
27	2430	1600	2550	35500	5590	20200	22200	13800	1620	1480	2110	1720
28	2730	1740	3390	30400	6530	18900	19300	10200	1970	2910	1800	1830
29	2450	1830	3510	26100	---	16400	13400	7440	1880	5290	1870	1730
30	2200	1780	3330	18000	---	12700	12500	5820	2360	4690	1850	4580
31	2330	---	3680	14900	---	13800	---	5010	---	2850	1580	---
TOTAL	89910	61170	94710	829510	364130	872700	625700	247800	72970	62260	60680	56710
MEAN	2900	2039	3055	26760	13000	28150	20860	7994	2432	2008	1957	1890
MAX	4620	5150	6780	63900	38400	56800	48400	22900	4560	5290	2750	4580
MIN	2010	1470	1400	2330	5240	12700	10300	3350	1450	1340	1570	1390
CFSM	.40	.28	.42	3.65	1.77	3.84	2.84	1.09	.33	.27	.27	.26
IN.	.46	.31	.48	4.21	1.85	4.42	3.17	1.26	.37	.32	.31	.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1999, BY WATER YEAR (WY)

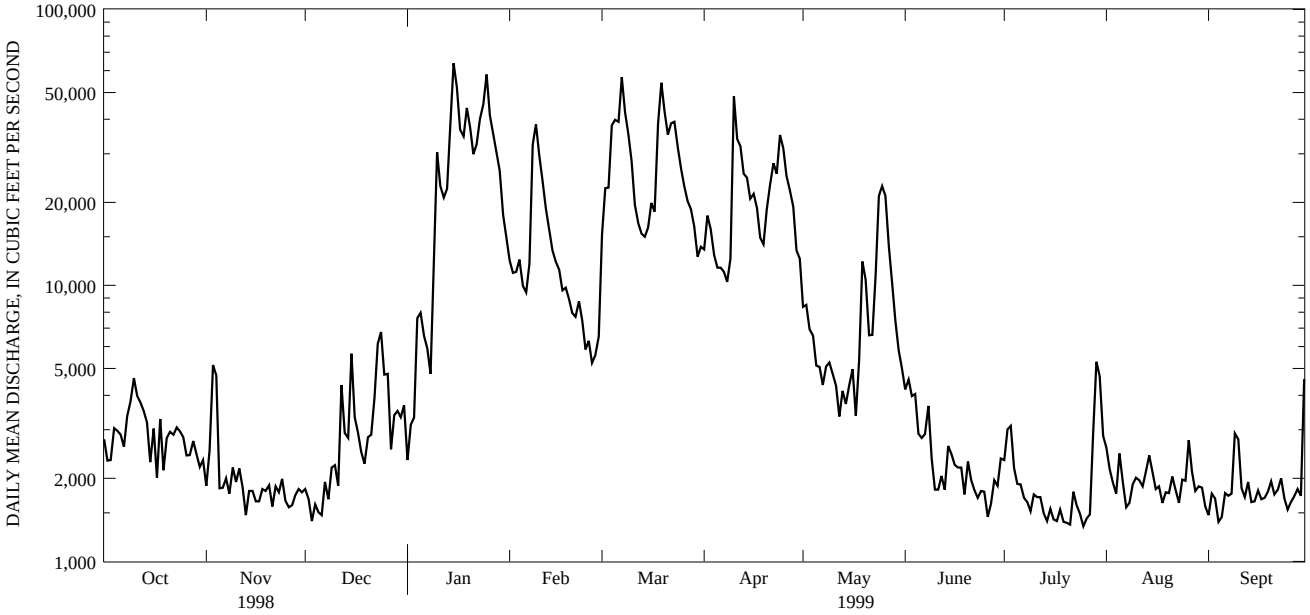
MEAN	5381	9421	15630	17480	20750	24240	18720	14190	9150	6260	5803	4632
MAX	23130	42130	37600	36150	43120	54500	39180	40310	30240	15620	23720	18290
(WY)	1980	1986	1973	1952	1956	1963	1940	1996	1981	1958	1956	1971
MIN	1200	971	2748	3389	6387	8042	6473	3352	2107	1765	1531	1005
(WY)	1954	1954	1954	1977	1954	1969	1971	1982	1965	1966	1957	1946

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1939 - 1999	
ANNUAL TOTAL	4520070		3438250			
ANNUAL MEAN	12380		9420		12590	
HIGHEST ANNUAL MEAN					18440	1996
LOWEST ANNUAL MEAN					6946	1954
HIGHEST DAILY MEAN	73400	Jan 9	63900	Jan 15	188000	Jan 20 1996
LOWEST DAILY MEAN	1400	Dec 3	1340	Jul 25	703	Sep 3 1946**a**
ANNUAL SEVEN-DAY MINIMUM	1610	Nov 30	1430	Jul 15	839	Nov 17 1953
INSTANTANEOUS PEAK FLOW			69100	Jan 15	**b**210000	Jan 20 1996
INSTANTANEOUS PEAK STAGE			17.67	Jan 15	**c**31.20	Jun 5 1941
ANNUAL RUNOFF (CFSM)	1.69		1.28		1.72	
ANNUAL RUNOFF (INCHES)	22.92		17.43		23.32	
10 PERCENT EXCEEDS	31600		29800		29400	
50 PERCENT EXCEEDS	5620		3040		7720	
90 PERCENT EXCEEDS	1990		1640		2220	

a Also Sept. 4, 22, 1946.
b From rating curve extended above 183,000 ft^3/s.
c Maximum gage height, 31.39 ft, June 24, 1972 (backwater from Allegheny River). Datum then in use.



1-YEAR HYDROGRAPH
OCTOBER 1, 1998 TO SEPTEMBER 30, 1999

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued
(National Water-Quality Assessment Station)
(National Stream-Quality Accounting Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1958 to September 1993. September 1994 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1973 to October 1975.
WATER TEMPERATURE: January 1973 to September 1979, November 1996 to September 1998.
SUSPENDED SEDIMENT DISCHARGE: January 1973 to September 1979.

INSTRUMENTATION.--From January 1973 to September 1979, specific conductance and water temperature were once daily readings by an observer. From January 1973 to September 1979, suspended-sediment samples were collected daily and more often during storm events by an observer. From November 1996 to September 1998, daily records of water temperature were measured and collected at hourly intervals with an in-situ probe and electronic data logger.

REMARKS.--All water-quality samples were collected and analyzed by the U.S. Geological Survey. An explanation of selected abbreviations used in the water-quality tables are given on pages 36-37.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 30.0°C, on several days during summers; minimum, 0.0°C, on several days each year before 1979 water year.
SEDIMENT CONCENTRATIONS: Maximum daily, 830 mg/L, March 15, 19, 1978; minimum daily, 2 mg/L, November 29, 1976.
SEDIMENT DISCHARGES: Maximum daily, 210,000 tons, January 12, 1974; minimum daily, 14 tons, February 8, 1977.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT											
30...	0900	2280	748	8.6	7.5	548	15.0	160	43	12	2.8
NOV											
17...	0745	1480	760	9.5	7.5	521	12.5	150	42	11	2.7
DEC											
10...	0815	1960	750	8.5	7.5	731	12.5	110	30	8.0	2.2
JAN											
26...	0815	43200	751	11.5	7.3	187	6.5	57	16	3.9	1.3
FEB											
22...	0830	9880	748	12.0	7.2	305	4.5	89	25	6.6	1.5
MAR											
25...	0815	26400	744	11.8	7.2	203	5.5	64	18	4.7	1.1
MAY											
27...	0815	15200	741	8.3	7.9	473	18.5	150	43	12	1.9
JUN											
15...	0800	2800	741	6.4	8.0	545	27.0	160	45	12	2.7
JUL											
26...	0800	1410	735	6.1	7.6	615	30.0	170	47	13	3.0
AUG											
31...	0835	1500	749	6.4	7.1	650	25.5	180	47	14	3.4
SEP											
17...	0750	1720	742	6.9	7.4	720	23.0	190	51	15	3.2

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT											
30...	47	46	26	.25	3.1	170	.084	.27	.35	1.21	.016
NOV											
17...	39	42	28	.23	2.5	150	.132	.33	.42	1.30	.023
DEC											
10...	22	62	40	.19	.63	220	.206	.42	.44	1.49	.027
JAN											
26...	9.1	21	13	<.10	4.5	35	.077	.20	.39	1.04	<.010
FEB											
22...	17	28	17	<.10	4.8	75	.114	.21	.25	.922	.012
MAR											
25...	9.5	19	12	<.10	4.5	46	.074	.15	.20	.836	<.010
MAY											
27...	27	44	15	.24	4.2	150	.128	.24	.41	.726	.012
JUN											
15...	37	49	31	.22	3.8	140	.084	.28	.46	1.13	.024
JUL											
26...	46	44	42	.30	1.2	180	.028	.10	.33	1.38	.027
AUG											
31...	57	49	42	.29	3.5	180	.098	.25	.30	1.31	.022
SEP											
17...	60	46	40	.26	3.3	220	.145	.28	.37	1.22	.022

DATE	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (µG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (µG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT										
30...	<.050	.011	E.033	351	22	30	2.0	.40	9	94
NOV										
17...	<.050	.021	E.041	320	34	80	2.0	.30	7	74
DEC										
10...	.115	.030	.060	458	25	12	2.1	.30	7	91
JAN										
26...	<.004	<.010	.083	103	20	86	2.0	.50	42	93
FEB										
22...	<.004	<.010	.023	181	17	124	--	--	5	88
MAR										
25...	<.004	<.010	.022	113	E9.4	99	--	--	12	83
MAY										
27...	<.004	<.010	.047	291	22	92	--	--	24	89
JUN										
15...	.007	<.010	.048	340	22	<3.0	--	--	13	88
JUL										
26...	<.004	<.010	.029	371	<10	<3.0	--	--	3	86
AUG										
31...	.011	<.010	.048	403	E7.0	<3.0	--	--	13	90
SEP										
17...	.014	<.010	.047	456	E7.4	24	--	--	16	85

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

REMARKS.--The following data are for analytes from the National Water Quality Laboratory (NWQL) schedule 2010--pesticides in filtered water. Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. A surrogate is then added to the sample. The filtered water is then field extracted on C-18 Solid Phase Extraction Cartridges and analyzed by a gas chromatography/mass spectrometric detector.

The method detection limit (MDL) provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less-than sign (<). The abbreviations SRG, SURROGT, or SURROG indicate surrogate recovery in percent.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (µG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (µG/L) (46342)	ALPHA BHC DIS-SOLVED (µG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (µG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 µ GF, REC (µG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (µG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 µ GF, REC (µG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 µ GF, REC (µG/L) (82674)
AUG											
31...	0835	1500	<.0030	<.0020	<.002	<.0020	.016	<.0020	<.0020	<.0030	<.0030
SEP											
17...	0750	1720	<.0030	<.0020	<.002	<.0020	.013	<.0020	<.0020	<.0030	<.0030

DATE	CHLOR-PYRIFOS DIS-SOLVED (µG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (µG/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (µG/L) (04040)	DIAZ-INON D10 SRG WAT FLT 0.7 µ GF, REC PERCENT (91063)	DI-AZINON, DIS-SOLVED (µG/L) (39572)	DI-ELDRIN DIS-SOLVED (µG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 µ GF, REC (µG/L) (82677)	EPTC WATER FLTRD 0.7 µ GF, REC (µG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 µ GF, REC (µG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 µ GF, REC (µG/L) (82672)
AUG											
31...	<.0040	<.0040	<.0020	<.0020	E179	<.010	<.001	<.0170	<.0020	<.0040	<.0030
SEP											
17...	<.0040	<.0040	<.0020	E.0055	E23.5	.005	<.001	<.0170	<.0020	<.0040	<.0030

DATE	FONOFOS WATER DISS REC (µG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 µ GF, REC PERCENT (91065)	LINDANE DIS-SOLVED (µG/L) (39341)	LIN-URON WATER FLTRD 0.7 µ GF, REC (µG/L) (82666)	MALA-THION, DIS-SOLVED (µG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 µ GF, REC (µG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 µ GF, REC (µG/L) (82667)	METO-LACHLOR WATER DISSOLV (µG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (µG/L) (82630)	MOL-INATE WATER FLTRD 0.7 µ GF, REC (µG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 µ GF, REC (µG/L) (82684)
AUG											
31...	<.0030	134	<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
SEP											
17...	<.0030	E16.1	<.004	<.0020	<.005	<.0010	<.0060	E.004	<.004	<.0040	<.0030

DATE	P,P' DDE DISSOLV (µG/L) (34653)	PARA-THION, DIS-SOLVED (µG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 µ GF, REC (µG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 µ GF, REC (µG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 µ GF, REC (µG/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µG/L) (82664)	PRO-METON, WATER, DISS, REC (µG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 µ GF, REC (µG/L) (82676)	PROP-CHLOR, WATER, DISS, REC (µG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 µ GF, REC (µG/L) (82679)
AUG										
31...	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	E.0118	<.0030	<.0070	<.0040
SEP										
17...	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	E.0096	<.0030	<.0070	<.0040

DATE	PRO-PARGITE WATER FLTRD 0.7 µ GF, REC (µG/L) (82685)	SI-MAZINE, WATER, DISS, REC (µG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 µ GF, REC (µG/L) (82670)	TER-BACIL WATER FLTRD 0.7 µ GF, REC (µG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 µ GF, REC (µG/L) (82675)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 µ GF, REC PERCENT (91064)	THIO-BENCARB WATER FLTRD 0.7 µ GF, REC (µG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 µ GF, REC (µG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 µ GF, REC (µG/L) (82661)	SAMPLE VOLUME SCHED-ULE 2010 (ML) (99857)
AUG										
31...	<.0130	<.0050	<.0100	<.0070	<.0130	--	<.0020	<.0010	<.0020	934
SEP										
17...	<.0130	<.0050	<.0100	<.0070	<.0130	E.0112	<.0020	<.0010	<.0020	980