

Polychlorinated biphenyls (PCBs) and organochlorine pesticides in a composite sample of largemouth bass taken from Eighteenmile Creek at Corwin (vicinity of Jacques Road Bridge), Niagara County, NY.

<u>Parameter</u>	<u>Concentration (ng/g wet weight), or other measure given</u>
Date of sampling	June 27, 1989
Number of fish in composite	10
Length (mm) ¹	252 ± 30
	198 - 292
Weight (g) ¹	290 ± 87
	142 - 397
PCB Aroclor 1221	<5
PCB Aroclors 1016/1242	300
PCB Aroclor 1248	<5
PCB Aroclor 1254	510
PCB Aroclor 1260	80
p,p'-DDT	<5
p,p'-DDE	80
p,p'-DDD	10
Aldrin	<2
Dieldrin	<2
Endrin	<2
Endrin aldehyde	<2
Endrin ketone	<2
<i>cis</i> -Chlordane	<5
<i>trans</i> -Chlordane	<5
<i>cis</i> -Nonachlor	<5
<i>trans</i> -Nonachlor	<5
Heptachlor	<5
Heptachlor epoxide	<5
α-HCH	<4
β- HCH	<4
γ-HCH (Lindane)	<4
δ-HCH	<4
Endosulfan I	10
Endosulfan II	<5
Endosulfan sulfate	<5
Methoxychlor	<50
Toxaphene	<100

¹ All fish were less than legal size (305 mm). Values given are mean ± standard deviation, and minimum and maximum values.

Mercury, lead and cadmium in composite samples of largemouth bass and rock bass taken from Eighteenmile Creek at Corwin (vicinity of Jacques Road Bridge), Niagara County, NY.

Parameter	Concentration ($\mu\text{g/g}$ wet weight) or other measure	
	Largemouth bass	Rock bass
Date of collection	June 27, 1989	July 6, 1989
Number of fish in composite	10	11
Length (mm) ¹	334 \pm 24 305 - 395	173 \pm 13 155 - 194
Weight (g) ¹	658 \pm 185 454 - 1135	139 \pm 20 114 - 170
Mercury	0.40	0.19
Lead	<0.3	<0.3
Cadmium	<0.02	<0.02

¹ Mean \pm standard deviation, and minimum and maximum values are presented.

1 sample

82-14-84 (7/85)



just 2 Bulk samples per

CHAIN OF CUSTODY. RIBS 89-9

I, Michael Wilkinson (Michael Wilkins), of 600 Delaware Ave., Buffalo, NY 14202 have
(Print Name) (Print Address)

collected the on June 27 and July 6, 1989 from Eighteenmile Creek in the
vicinity of Olcott Harbor upstream to R.R. bridge Town of Newfane,
Niagara County.

Items: Twenty (20) largemouth bass with tag numbers 9T 2330 to 9T 2332 and 9T 3276 to
9T 3292 and twenty (20) rock bass with tag numbers 9T 3293 to 9T 3300 and 9T 3201 to
9T 3212.

said sample(s) were in my possession and handled according to standard procedures provided to me prior
to collection. The sample(s) were placed in the custody of a representative of the New York State Depart-
ment of Environmental Conservation on June 27 and July 6, 1989.

Michael A. Wilkinson
Signature

July 11, 1989
Date

I, Paul E. McLean, have received the above mention
and have assigned identification number(s) (see above items)
I have recorded pertinent data for the sample(s) on the attached collection r
my custody until subsequently transferred, prepared or shipped at times an

2 Bulk
Samples
Each

specified
sample(s).
recorded in
w.

Paul E. McLean
Signature

Ribs 89-9

Completed
6-17-91 WR

SECOND RECIPIENT (Print Name) <u>Robert Foley</u>	TIME AND DATE <u>230 PM 12/14/89</u>	PURPOSE <u>TN</u>
SIGNATURE <u>Robert Foley</u>	UNIT <u>BEP</u>	<u>stor</u>
THIRD RECIPIENT (Print Name) <u>H. Hitchcock</u>	TIME AND DATE <u>06/19/90 0830</u>	PURPOSE
SIGNATURE <u>Howard Hitchcock</u>	UNIT <u>HCFS</u>	<u>To Coxsackie</u>
FOURTH RECIPIENT (Print Name)	TIME AND DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
RECEIVED IN LABORATORY BY (Print Name) <u>JOHN A. MCKINNEY</u>	TIME AND DATE <u>1010 hrs. 6/14/90</u>	<u>ANALYSIS & STORAGE</u>
SIGNATURE <u>John A. McKinney (MGR)</u>	UNIT <u>CAL</u>	
LOGGED IN BY (Print Name) <u>Valerie J. Liberatore</u>	TIME AND DATE <u>1135 4/22/91</u>	ACCESSION NUMBERS: <u>0116 0136</u> <u>0121 0137</u>
SIGNATURE <u>Valerie J. Liberatore</u>	UNIT <u>HCFS</u>	<u>0135-91-H - 0135-91-H</u>

Recd at HCFS 1:30 PM 04/22/91
via H. Hitchcock SJ Packling

SEE REVERSE SIDE

FISH/WILDLIFE COLLECTION RECORD
 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 DIVISION OF FISH AND WILDLIFE

FROM REGION 9 FOR "RIBS" portion of TSMP

TOXIC SUBSTANCE MONITORING PROGRAM

BY COLLECTOR(S) T. Veno, M. Wilkinson, E. Rende

USING Electrofishing

COLLECTION METHOD.

PECIMENS PRESERVED BY Icing in field, freezing in office METHOD.

ILL IN APPROPRIATE BLANKS AS COMPLETELY AS POSSIBLE.

OR LAB SE ONLY AR ENTRY O.	COLLECTION OR TAG NO.	SPECIES	DATE TAKEN	LOCATION	AGE	SEX &/OR REPROD. CONDIT.	millimeters LENGTH ()	ounces WEIGHT ()	REMARKS
2117	Comp A 9T 3293	Rock bass	Jul. 6, 1989	Eighteenmile Creek (Niagara County)	N.A.	N.A.	252	340 12 oz.	A
2118	9T 3294	"	"	"	"	"	200	170 6 oz.	A
2119	9T 3295	"	"	"	"	"	237	311 14 oz.	A
2120	9T 3296	"	"	"	"	"	226	252 9 oz.	A
2121	9T 3297	"	"	"	"	"	211	252 9 oz.	A
2122	Comp B 9T 3298	"	"	"	"	"	167	140 5 oz.	B
2123	9T 3299	"	"	"	"	"	225	283 10 oz.	A
2124	9T 3300	"	"	"	"	"	190	170 6 oz.	B
2125	9T 3201	"	"	"	"	"	215	255 9 oz.	A
2126	9T 3202	"	"	"	"	"	200	198 7 oz.	A
2127	9T 3203	"	"	"	"	"	199	224 8 oz.	A
2128	9T 3204	"	"	"	"	"	182	142 5 oz.	B
2129	9T 3205	"	"	"	"	"	194	170 6 oz.	B
2130	9T 3206	"	"	"	"	"	182	152 5 oz.	B
2131	9T 3207	"	"	"	"	"	155	113 4 oz.	B

FISH/WILDLIFE COLLECTION RECORD
 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 DIVISION OF FISH AND WILDLIFE

ROM REGION 9 FOR "RIBS" portion of TSMR TOXIC SUBSTANCE MONITORING PROGRAM
 T. Veno, M. Wilkinson, K. Williams on June 27, 1989
 Y COLLECTOR(S) T. Veno, M. Wilkinson, E. Rende on July 6, 1989
 USING Electrofishing COLLECTION METHOD.

PECIMENS PRESERVED BY icing in field, freezing in office METHOD.

ILL IN APPROPRIATE BLANKS AS COMPLETELY AS POSSIBLE.

OR LAB SE ONLY AB ENTRY	COLLECTION OR TAG NO.	SPECIES	DATE TAKEN	LOCATION	AGE	SEX &/OR REPROD. CONDIT.	LENGTH millimeters ()	WEIGHT lbs., oz. ()	REMARKS
1214-91-H	Comp A 9T 2330	LMB Largemouth bass	Jun. 27, 1989	Eighteenmile Creek (Niagara County)	N.A.	N.A.	334	1 lb., 3/4 oz. 364	A
1217 "	Comp B 9T 2331	"	"	"	"	"	292	14 oz. 396	B
1218 "	9T 2332	"	"	"	"	"	305	1 lb., 0 oz. 4/53	A
1219 "	9T 3276	Largemouth bass	Jul. 6, 1989	Eighteenmile Creek (Niagara County)	N.A.	N.A.	342	1 lb., 8 oz. 6/79	A
1240 "	9T 3277	"	"	"	"	"	318	1 lb., 2 oz. 3/69	A
1241 "	9T 3278	"	"	"	"	"	395	2 lb., 11 oz. 8 oz.	A
1242 "	9T 3279	"	"	"	"	"	275	14 oz. 314	B
1243 "	9T 3280	"	"	"	"	"	330	1 lb., 3/4 oz. 8 oz.	A
1244 "	9T 3281	"	"	"	"	"	325	1 lb., 5/4 oz. 5 oz.	A
1245 "	9T 3282	"	"	"	"	"	330	1 lb., 1/4 oz. 8 oz.	A
1246 "	9T 3283	"	"	"	"	"	342	1 lb., 6/79 8 oz.	A
1247 "	9T 3284	"	"	"	"	"	242	234 8 oz.	B
1248 "	9T 3285	"	"	"	"	"	319	1 lb., 5/4 oz. 5 oz.	A
1249 "	9T 3286	"	"	"	"	"	260	12 oz. 346	B
1250 "	9T 3287	"	"	"	"	"	267	12 oz. 346	B

SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT

PROJECT NARRATIVE

EIGHTEEN MILE CREEK - LAKE ONTARIO

LOCATION AND DESCRIPTION OF HABITAT:

Eighteen Mile Creek empties into Lake Ontario at the hamlet of Olcott, in the Town of Newfane, Niagara County (7.5' Quadrangle: Newfane, N.Y.). The fish and wildlife habitat extends approximately one and one-half miles from the N.Y.S. Route 18 bridge to the Burt Dam, and includes the entire stream channel and associated wetlands and islands. Eighteen Mile Creek is a relatively large, meandering, warmwater stream, with predominantly silt and gravel substrates. The creek drains approximately 90 square miles of relatively flat agricultural and rural residential lands. Below the Burt Dam, Eighteen Mile Creek flows through a steep sided, undeveloped wooded gorge, where habitat disturbances are minimal. In contrast, the mouth of this Lake Ontario tributary has been extensively developed as a small boat harbor, including marinas, boat launches, and protective breakwalls extending out into the lake. Most of the land area bordering Eighteen Mile Creek is privately owned.

FISH AND WILDLIFE VALUES:

Eighteen Mile Creek is the largest stream in Niagara County (aside from the lower Niagara River), and is one of about ten major tributaries in the Great Lakes Plain ecological region. Undisturbed tributary streams that provide habitat for major spawning runs by salmonids and other lake-based fish populations are especially important in this region. The extensive beds of emergent and submergent aquatic vegetation in this area account for an estimated 65 acres, comprising one of the largest coastal wetlands in the western portion of Lake Ontario.

Eighteen Mile Creek is particularly significant because large concentrations of coho and chinook salmon and brown trout migrate from Lake Ontario into the creek each fall, from late August through December (September - November, primarily), when salmonids ascend the streams to spawn (although unsuccessfully in most instances). In addition, steelhead (lake-run rainbow trout) migrate into Eighteen Mile Creek during the fall and between late February and April. These fish populations are the result of an ongoing effort by the NYSDEC to establish a major salmonid fishery in the Great Lakes through stocking. In both 1983 and 1984, approximately 200,000 chinook salmon and over 35,000 coho salmon were released in the creek. Eighteen Mile Creek was among the top ten Lake Ontario tributaries for numbers of salmonids stocked in 1984. Eighteen Mile Creek also contains a diverse warmwater fishery. The area supports substantial

natural reproduction by smallmouth bass, northern pike, rock bass, black crappie, brown bullhead, and largemouth bass.

The wetlands and undisturbed woodlands bordering Eighteen Mile Creek provide valuable habitats for wildlife that are uncommon in Niagara County's coastal area. A variety of bird species inhabit the area, including great blue heron, green-backed heron, mallard, wood duck, belted kingfisher, marsh wren, common yellowthroat, red-winged blackbird, and swamp sparrow. Other wildlife species occurring along the creek include resident furbearers, such as muskrat, mink, and raccoon.

The fish and wildlife resources associated with Eighteen Mile Creek attract a significant amount of recreational use, although access to the area is limited by the steep banks and private land ownership. This is one of the most popular recreational fishing streams on western Lake Ontario, due primarily to the large salmonid runs in the area. Fishing pressure is concentrated in the upper one-fourth mile of the area, (between Fisherman's Park access site and Burt Dam), and in the vicinity of Olcott Harbor. The intervening segment of the creek is often fished by small boat or canoe, especially for the abundant warmwater species in the area. Eighteen Mile Creek attracts many fishermen from as far away as Buffalo and Rochester. Local residents also utilize this area to a limited extent for waterfowl hunting and trapping.

IMPACT ASSESSMENT:

Any activity that would substantially degrade water quality, increase temperature or turbidity, reduce flows, or alter water depths in Eighteen Mile Creek may adversely affect the fish and wildlife resources of this area. These impacts would be especially detrimental during fish spawning and nursery periods (late February-July for most warmwater species and steelhead, and September-November for most salmonids), and wildlife breeding seasons (April-July for most species). Discharges of sewage or stormwater runoff containing sediments or chemical pollutants (including fertilizers) may result in adverse impacts on fish or wildlife species. Of particular concern are the potential effects of upstream disturbances, including water withdrawals, stream bed disturbances, and effluent discharges. Hydroelectric facilities on the creek should only be permitted with run-of-river operations. Barriers to fish migration, whether physical or chemical, would have a significant impact on fish populations in the creek. Disturbances of wetland vegetation, including submergent beds, through dredging, filling, or bulkheading, would result in a direct loss of valuable habitat area. Enhancement of motorboat access to the area above Route 18 would significantly increase human disturbance of the habitat, reducing its potential value to many fish and wildlife species. Existing woodlands bordering

Eighteen Mile Creek should be maintained to provide bank cover, perch sites, soil stabilization, and buffer areas.

KNOWLEDGEABLE CONTACTS:

Terry Moore, Wildlife Manager
or Bill Shepherd, Fisheries Manager
or Jim Pomeroy, Environmental Protection Biologist
NYSDEC - Region 9
128 South Street
Olean, NY 14760
Phone: (716)372-8676

NYSDEC - Significant Habitat Unit
Wildlife Resources Center
Delmar, NY 12054
Phone: (518)439-7486

Newfane Quadrangle
RIBS Collection July 6, 1989
(Area Sampled highlighted in yellow)

4802

4801

20'

800

98

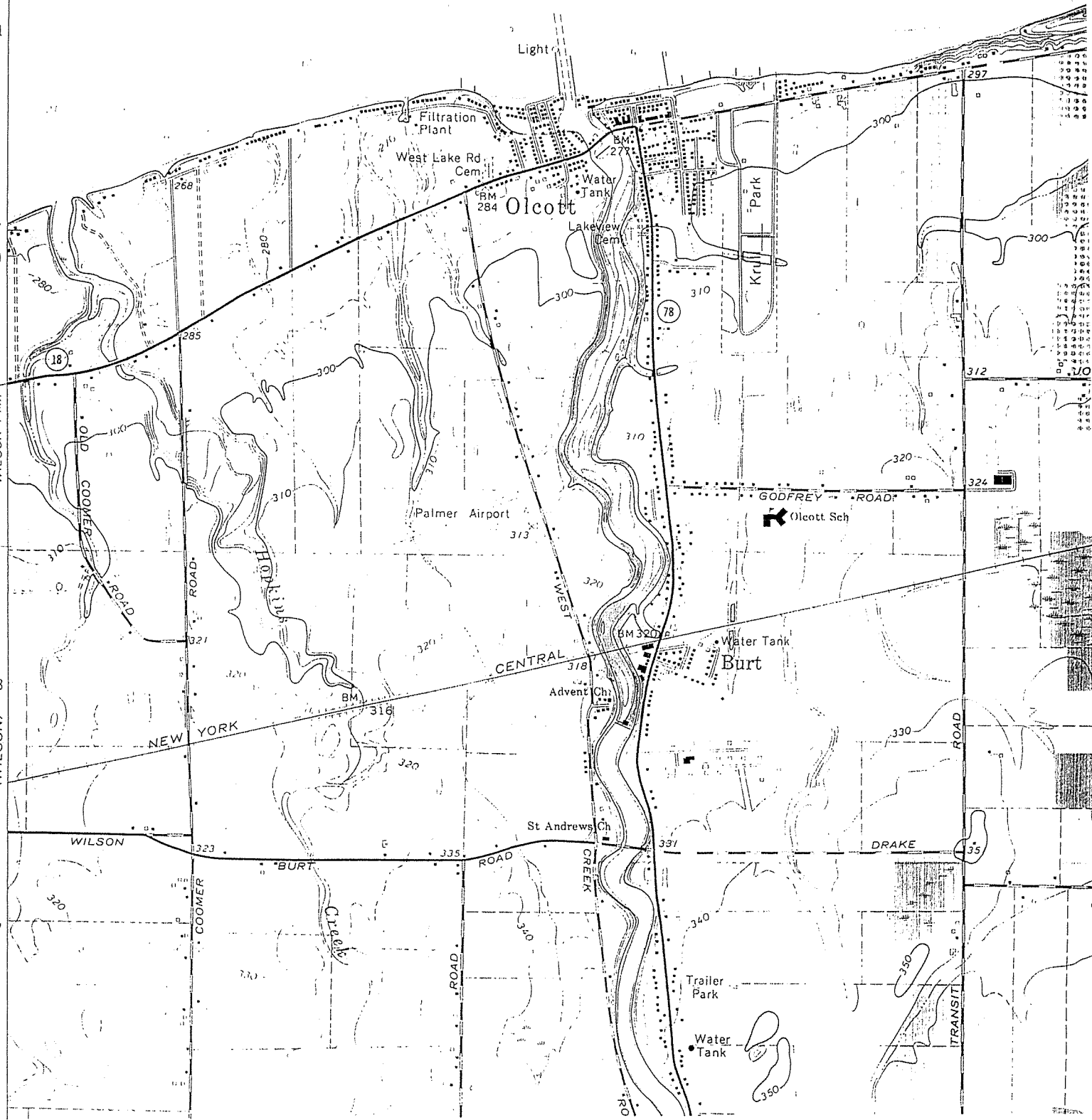
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WILSON 4 MI.

(WILSON)

WILSON

COOMER



Region	Location	Species	Tag No's.	Composite	Priority				
VII	-Phoenix	Bluegill	7T3406-10.12-16.19	200C-89	0332-91-H				
					A	1			
		Carp	7T3411.17.18.20-25	201C-89	0333-91-H				
					B	1			
					7T3376.79.80.82.83.85.88.90.91.96.97.99.3401.02.03.05	202C-89	0334-91-H		
							A	1	
					7T3377.78.81.84.86.87.89.92.93.95.98.3400.04		203C-89	0335-91-H	
								B	1
					7T3394			204C-89	Ind. 0336-291-H
		IX 9	18-mile Cr.	Lgmouth bass	9T2330.32.3276-78.80-83.85	205C-89	1 0136-91-H		
	A								
Rock bass	9T2331.3279.84.86-92			206C-89	1 0137				
	9T3293-97.99.3201-03				207C-89	1 0116			
			9T3298.3300.3204-12	208C-89	1 0121				
					B				
	Allegheny Riv. -Salamanca	Carp	9T3241.43-46.48-50.3426.28-31	209C-89	1 0159-91-H				
					A				
		Golden redhorse	9T3238-40.42.47.3427	210C-89	1 0156				
					B				
K	-Mill Grove	Smlmouth bass	9T3443.44.46.3432-42	211C-89	1 0175				
			A						
		Carp	9T3445.47-51	212C-89	1 0177				
					B				
		Carp	9T3766	213C-89	Ind. 1 0195-91-H				
					Ind.				
			9T3769.2341.97.95.62.64-66	214C-89	1 0198				
					A				
			9T3767.68.70.71.2399.98.63.67-69	215C-89	1 0196				
					B				
		Golden redhorse	9T2400	216C-89	-hold-				
			9T2371-74.2403.04.06.07.09.10.11.13-15		217C-89	1 0217			
						A			
			9T2370.2401.02.05.08.12	217C-89	1 0216				
					B				
X	Chadakoin Riv.	Northern hogsucker	9T2301.03.05.08.09.11	218C-89	1 0236-91-H				
					A				
			9T2302.04.06.07.10.12-16.17-20	219C-89	1 0237				
					B				