



SK98K0063

## APPENDIX A.3.

**Minutes from meeting  
of the 1995<sup>th</sup> Joint Annual Report's Proposals and on the Slovak-Hungarian  
monitoring of underwater weir impacts  
according to the Inter-governmental Agreement  
held on October 10, 1996 in Győr.**

**Participants:** Dominik Kocinger - head of the Slovak delegation

Kovács Árpád - head of the Hungarian delegation

Members of the Slovak and Hungarian expert committees according to  
the enclosed List of participants

**Points of the agenda:**

1. Evaluation of the water discharged by the Slovak Party according to the Agreement from 1995.
2. Information about the monitoring data exchange:
  - surface and groundwater regimes in 1996,
  - surface and ground water quality,
  - soil moisture.
  - biomonitoring including Proposals in the 1995<sup>th</sup> Joint Annual Report.
3. schedule of the 1995<sup>th</sup> Joint Annual Report's proposals fulfilment.
4. Tasks concerning the 1996<sup>th</sup> National and the Joint Annual Reports preparation.

**Point 1.**

Based on the information of the experts, the Hungarian Party have stated that according to the jointly measured discharges in the period from April 30, 1996 to July 14, 1996 the discharged amount of water to the Danube old river bed was less than the amount defined by the joint Agreement.

The Parties have agreed that the Hungarian Party will provide discharge data for the Helena branch required by the Slovak Party.

**Point 2.**

According to the Minutes from meeting from September 11, 1996 concerning the surface water quality the Hungarian Party informed:

Experts of both Parties agreed that the evaluation of surface water quality long term development of the influenced area and the Danube will start at four selected sampling sites on each side.

For the exchange of the long time data series the jointly accepted data by the Slovak-Hungarian Committee for the Boundary Waters will be used. These data will be obtained from the Committee for the Boundary Waters by Parties themselves.

Furthermore experts agreed that the data exchange and the evaluation will start from October 1, 1992 (Annex 1).

Experts of both Parties agreed that the evaluation of the groundwater quality long term development will start on two selected monitored objects on each side. The Slovak Party have proposed objects for drinking water supply:

- monitoring object No. 102 - Rusovce,
- monitoring object No. 116 - Kalinkovo.

The Hungarian Party have proposed object for ground water monitoring:

- groundwater monitoring object No. 9327 at Rajka region,
- groundwater monitoring object No. 9430 at Kisbodak region.

Experts of both Parties agreed that the technical data of groundwater quality monitoring objects included in the joint monitoring will be exchanged by November 30, 1996 (Annex 1).

A complete overview of sampling frequency, list of measured parameters, sampling starting point and sampling date will be prepared for each observation the object included in the joint monitoring.

According to the 1995<sup>th</sup> Joint Annual Report's proposals the experts defined the impact area of the realised temporary measures according to the Agreement and exchanged relevant maps.

Experts of both Parties agreed that the geodetic coordinates for the groundwater level observation well will be exchanged by November 30, 1996.

Groundwater level data for all observation objects included in the joint monitoring will be exchanged for period starting from October 1, 1992.

Written proposals for extension of the present monitoring network will be prepared by both Parties for approval by the plenipotentiaries.

#### Soil moisture measurements.

The data exchange for the soil moisture monitoring sites according to the Agreement from 1995 will be based on the agreement of experts from October 2, 1996 (Annex 2).

#### Biological monitoring.

Zoological data exchange will be extended by the data of terrestrial Mollusca. Concerning the monitoring of algae a negotiation of experts will be held by November 15, 1996.

Concerning the data exchange of terrestrial phytocoenoses, experts will prepare a proposal for plenipotentiaries by November 30, 1996.

#### Forest monitoring.

Quantitative parameters data exchange will be done for the period starting from 1992.

The methodology will be unified by both Parties by November 30, 1996.

Methodology and results of aerial photos evaluation will be exchanged by Parties.

#### **Point 3.**

The time schedule for the 1995<sup>th</sup> Joint Annual Report's proposals fulfilment is contained in the Minutes from meeting from September 11, 1996 and October 2, 1996 (Annex 1 and 2).

Biological data exchange has to be done by December 20, 1996, the exchange of other data has to be done by November 30, 1996.

Data of surface and ground water regimes and quality will be exchanged according to the Minutes of experts negotiation from October 1, 1992.

The data exchange between the Slovak and Hungarian Parties is executed by the Ground Water Consulting Ltd. on the Slovak side and by the Danube Dam Secretariat on the Ministry for Environment and Regional Policy, the North-Transdanubian Environmental Inspectorate, Győr, and the North-Transdanubian Water Authority, Győr on the Hungarian side.

The coordinators responsible for the relevant works are Zoltán Hlavatý on the Slovak side and Márta Liebhardt on Hungarian side.

**Point 4.**

The preparation of the National Annual Reports for the year 1996 will be completed by January 31, 1997 in agreed form.

The deadline for preparation, compilation and mutual signing of the Joint Annual Report is February 28, 1997.

These Minutes were prepared in Hungarian and Slovak languages. The English version was elaborated additionally. The English text will prevail in the event of any discrepancy.

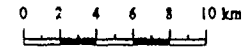
The Minutes of the negotiations of experts from September 11, 1996 and from October 2, 1996, and the List of participants are annexes to these Minutes.

Győr, October 10, 1996.

  
.....  
**Kovács Árpád**  
*Plenipotentiary of the  
Hungarian Government*

  
.....  
**Dominik Kocinger**  
*Plenipotentiary of the  
Slovak Government*

# The Temporary Measures Impact Area



- IMPACT AREA ON THE SLOVAK SIDE
- IMPACT AREA ON THE HUNGARIAN SIDE
- AREA USED FOR GROUND WATER CONTOUR LINES CONSTRUCTION



GROUND WATER  
Consulting Ltd.  
Bratislava, SLOVAKIA

## Annexes

## Sample tabular forms and digital formats for data exchange

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## Surface Water - Discharge

Station No.: 1250

daily average discharge

Year	1994		1995									
Day	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct
1	1446.00	1052.00	1875.00	2119.00	1461.00	2321.00	2702.00	2647.00	2064.00	1154.00	1361.00	1128.00
2	1338.00	1066.00	2370.00	2072.00	1544.00	2354.00	2791.00	2444.00	1967.00	1242.00	1396.00	1041.00
3	1335.00	1005.00	2325.00	2016.00	1916.00	2503.00	2839.00	2333.00	1886.00	1273.00	1484.00	976.90
4	1395.00	1098.00	2523.00	1971.00	1894.00	2317.00	2579.00	2415.00	1776.00	1291.00	1636.00	1103.00
5	1388.00	1056.00	2597.00	2020.00	2076.00	2180.00	2601.00	2766.00	1690.00	1258.00	1689.00	1231.00
6	1349.00	1049.00	2753.00	1959.00	1914.00	2149.00	3040.00	2951.00	1785.00	1166.00	1505.00	1251.00
7	1294.00	1083.00	2480.00	1781.00	1787.00	2110.00	2832.00	2992.00	1858.00	1177.00	1441.00	1185.00
8	1221.00	1141.00	2454.00	1748.00	1883.00	2017.00	2496.00	2857.00	2245.00	1108.00	1393.00	1203.00
9	1213.00	1185.00	2371.00	1739.00	2037.00	1882.00	2319.00	2691.00	2099.00	1166.00	1404.00	1107.00
10	1301.00	1432.00	2196.00	1746.00	2507.00	1844.00	2215.00	2816.00	1951.00	1238.00	1445.00	1072.00
11	1247.00	1573.00	2119.00	1739.00	2445.00	1751.00	2406.00	2942.00	1818.00	1224.00	1451.00	1090.00
12	1237.00	1539.00	2014.00	1708.00	2483.00	1925.00	2419.00	2725.00	1653.00	1250.00	1386.00	1061.00
13	1228.00	1452.00	1932.00	1655.00	2348.00	2430.00	2196.00	2385.00	1619.00	1380.00	1390.00	1149.00
14	1248.00	1586.00	1843.00	1511.00	2413.00	4563.00	2152.00	2296.00	1594.00	1291.00	1333.00	1017.00
15	1185.00	1716.00	1931.00	1439.00	2458.00	5055.00	2170.00	2187.00	1564.00	1161.00	1375.00	1005.00
16	1167.00	1740.00	1953.00	1414.00	2306.00	4775.00	2155.00	2068.00	1562.00	1153.00	1352.00	994.40
17	1377.00	1747.00	1903.00	1399.00	2304.00	4774.00	2184.00	2045.00	1540.00	1147.00	1303.00	934.80
18	1324.00	1925.00	1798.00	1365.00	2264.00	4923.00	2274.00	2302.00	1430.00	1124.00	1311.00	859.70
19	1301.00	2477.00	1711.00	1326.00	2267.00	5758.00	2337.00	2116.00	1490.00	1178.00	1331.00	968.40
20	1247.00	2412.00	1609.00	1300.00	2189.00	4495.00	3260.00	2057.00	1729.00	1334.00	1301.00	978.30
21	1245.00	3897.00	1569.00	1182.00	2202.00	3849.00	3190.00	2451.00	1664.00	1615.00	1393.00	867.70
22	1137.00	4480.00	1528.00	1203.00	2414.00	3602.00	2914.00	2629.00	1682.00	1396.00	1371.00	917.30
23	1110.00	4038.00	1438.00	1260.00	2729.00	3453.00	2509.00	2355.00	1652.00	1263.00	1250.00	845.50
24	1175.00	3990.00	1345.00	1293.00	2624.00	3267.00	2378.00	2189.00	1571.00	1364.00	1339.00	818.50
25	1129.00	3580.00	1496.00	1309.00	2654.00	3067.00	2622.00	2085.00	1432.00	1374.00	1378.00	820.10
26	1126.00	3095.00	2284.00	1455.00	3087.00	3034.00	3070.00	2055.00	1393.00	1906.00	1096.00	951.70
27	1146.00	2676.00	2841.00	1472.00	3375.00	3235.00	3144.00	1969.00	1395.00	2044.00	1316.00	936.40
28	1098.00	2421.00	2655.00	1446.00	2921.00	2940.00	3275.00	1950.00	1428.00	1874.00	1125.00	919.30
29	1021.00	2156.00	2644.00		2709.00	2933.00	2976.00	1966.00	1439.00	1618.00	1254.00	1014.00
30	958.50	1941.00	2354.00		2511.00	2827.00	2940.00	1913.00	1361.00	1452.00	1215.00	1057.00
31		1852.00	2169.00		2375.00		2856.00		1316.00	1438.00		945.70



Station No	Date	Discharge
1250	1.1.1994	1875.00
1250	2.1.1994	2370.00
1250	3.1.1994	2325.00
1250	4.1.1994	2523.00
1250	5.1.1994	2597.00
1250	6.1.1994	2753.00
1250	7.1.1994	2480.00
1250	8.1.1994	2454.00
1250	9.1.1994	2371.00
1250	10.1.1994	2196.00
1250	11.1.1994	2119.00
1250	12.1.1994	2014.00
1250	13.1.1994	1932.00
1250	14.1.1994	1843.00
1250	15.1.1994	1931.00
1250	16.1.1994	1953.00
1250	17.1.1994	1903.00
1250	18.1.1994	1798.00
1250	19.1.1994	1711.00
1250	20.1.1994	1609.00
1250	21.1.1994	1569.00
1250	22.1.1994	1528.00
1250	23.1.1994	1438.00
1250	24.1.1994	1345.00
1250	25.1.1994	1496.00
1250	26.1.1994	2284.00
1250	27.1.1994	2841.00
1250	28.1.1994	2655.00
1250	29.1.1994	2644.00
1250	30.1.1994	2354.00
1250	31.1.1994	2169.00
1250	1.2.1994	2119.00
1250	2.2.1994	2072.00
1250	3.2.1994	2016.00
1250	4.2.1994	1971.00
1250	5.2.1994	2020.00
1250	6.2.1994	1959.00
1250	7.2.1994	1781.00
1250	8.2.1994	1748.00
1250	9.2.1994	1739.00
1250	10.2.1994	1746.00
1250	11.2.1994	1739.00
1250	12.2.1994	1708.00
1250	13.2.1994	1655.00
1250	14.2.1994	1511.00
1250	15.2.1994	1439.00
1250	16.2.1994	1414.00
1250	17.2.1994	1399.00
1250	18.2.1994	1365.00
1250	19.2.1994	1326.00
1250	20.2.1994	1300.00
1250	21.2.1994	1182.00
1250	22.2.1994	1203.00
1250	23.2.1994	1260.00
1250	24.2.1994	1293.00
1250	25.2.1994	1309.00
1250	26.2.1994	1455.00
1250	27.2.1994	1472.00
1250	28.2.1994	1446.00

## Surface Water - Water Level

Station No.: 1250

daily average level

Year	1994		1995									
Day	Nov	Déc	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct
1	134.89	134.26	135.46	135.77	134.91	136.02	136.44	136.38	135.69	134.35	134.67	134.36
2	134.73	134.28	136.06	135.71	135.03	136.05	136.54	136.15	135.55	134.49	134.73	134.22
3	134.73	134.18	136.02	135.64	135.51	136.22	136.59	136.03	135.44	134.54	134.86	134.12
4	134.82	134.33	136.24	135.58	135.49	136.01	136.30	136.12	135.28	134.56	135.08	134.32
5	134.81	134.26	136.32	135.65	135.71	135.85	136.33	136.51	135.16	134.51	135.15	134.52
6	134.75	134.25	136.50	135.57	135.51	135.81	136.80	136.71	135.29	134.37	134.89	134.56
7	134.66	134.31	136.19	135.35	135.35	135.76	136.58	136.75	135.40	134.39	134.79	134.45
8	134.54	134.40	136.16	135.30	135.47	135.64	136.21	136.61	135.92	134.28	134.72	134.48
9	134.52	134.48	136.07	135.29	135.67	135.47	136.01	136.43	135.73	134.37	134.74	134.33
10	134.67	134.87	135.87	135.30	136.22	135.43	135.89	136.56	135.53	134.48	134.80	134.27
11	134.58	135.07	135.77	135.29	136.15	135.31	136.11	136.70	135.34	134.46	134.81	134.30
12	134.56	135.03	135.64	135.26	136.20	135.53	136.12	136.46	135.10	134.50	134.71	134.26
13	134.55	134.90	135.54	135.19	136.05	136.12	135.86	136.09	135.05	134.70	134.56	134.39
14	134.58	135.09	135.42	134.99	136.12	138.26	135.81	135.98	135.02	134.56	134.63	134.19
15	134.48	135.26	135.53	134.88	136.17	138.71	135.83	135.85	134.98	134.56	134.69	134.17
16	134.45	135.29	135.56	134.85	136.00	138.47	135.81	135.71	134.97	134.35	135.10	134.15
17	134.79	135.30	135.50	134.83	136.00	138.47	135.85	135.68	134.94	134.34	135.03	134.05
18	134.71	135.52	135.37	134.78	135.95	138.60	135.96	135.99	134.78	134.31	135.04	133.92
19	134.67	136.19	135.26	134.71	135.95	139.29	136.03	135.77	134.87	134.39	134.93	134.11
20	134.58	136.12	135.13	134.67	135.86	138.23	137.02	135.69	135.21	134.63	134.88	134.12
21	134.58	137.65	135.07	134.47	135.87	137.61	136.95	136.16	135.12	135.05	134.72	133.94
22	134.40	138.22	135.01	134.51	136.12	137.36	136.67	136.36	135.14	134.73	134.69	134.02
23	134.35	137.80	134.88	134.60	136.47	137.21	136.22	136.05	135.10	134.52	134.50	133.90
24	134.46	137.75	134.74	134.66	136.35	137.03	136.08	135.86	134.99	134.68	134.48	133.85
25	134.39	137.34	134.96	134.69	136.39	136.83	136.35	135.73	134.78	134.69	134.39	133.85
26	134.38	136.85	135.96	134.91	136.85	136.79	136.83	135.69	134.72	135.46	134.26	134.08
27	134.41	136.41	136.59	134.93	137.14	137.00	136.90	135.58	134.72	135.66	134.29	134.06
28	134.33	136.13	136.39	134.89	136.68	136.70	137.04	135.56	134.77	135.42	134.31	134.03
29	134.20	135.82	136.37		136.45	136.69	136.73	135.58	134.79	135.05	134.52	134.18
30	134.10	135.55	136.05		136.23	136.58	136.70	135.51	134.67	134.81	134.45	134.25
31		135.44	135.83		136.08		136.61		134.60	134.79		134.07

# Surface water - quality

Long time measurement station No.112

Date	Temp [°C]	pH [pH]	BC [mg/L]	O <sub>2</sub> [mg/L]	NH <sub>4</sub> [mg/L]	K [mg/L]	Ca [mg/L]	Mg [mg/L]	Mn [mg/L]	Fe [mg/L]	NH <sub>3</sub> [mg/L]	BOD <sub>5</sub> [mg/L]	Cl <sup>-</sup> [mg/L]	SO <sub>4</sub> <sup>2-</sup> [mg/L]	NO <sub>2</sub> [mg/L]	NO <sub>3</sub> [mg/L]
25.11.1994	8.0	8.0		9.7	6.4	2.9	58.1	12.8	0.17	0.21	0.44	195.3	20.0	29.0	10.80	0.10
3.12.1994	6.5	8.1		10.6	6.6	2.9	60.1	17.0	0.11	0.33	0.35	207.5	19.0	33.0	12.22	0.16
11.1.1995	3.3	8.0	41.0	11.1	6.8	2.9	63.1	12.8	0.03	0.26	0.36	195.3	21.0	32.0	15.18	0.13
24.1.1995	5.2	8.0	44.8	13.2	9.5	3.0	65.1	14.6	0.17	0.25	0.55	213.6	23.0	36.0	16.38	0.10
3.2.1995	5.0	8.0	38.1	11.9	7.5	3.2	55.1	10.3	0.02	0.40	0.54	167.8	22.0	36.5	17.62	0.10
21.2.1995	7.0	8.3	40.2	10.3	11.0	3.1	60.1	12.3	0.03	0.24	0.42	201.4	20.0	34.0	13.10	0.07
7.3.1995	5.6	8.0	40.6	10.7	11.3	3.0	58.1	14.6	0.08	0.21	0.26	195.3	21.0	34.0	15.58	0.13
21.3.1995	6.2	8.3	42.7	12.3	11.9	2.7	63.1	14.0	0.08	0.30	0.18	207.5	22.0	38.0	15.98	0.07
4.4.1995	7.7	8.1	38.9	12.0	9.4	2.3	58.1	11.5	0.11	0.74	0.15	189.2	17.5	30.0	15.01	0.07
19.4.1995	8.8	8.2	37.6	10.9	9.0	2.1	58.1	12.2	0.08	0.29	0.13	195.3	17.5	31.0	11.60	0.03
3.5.1995	12.3	8.3	35.2	10.4	9.0	2.3	56.1	12.2	0.02	0.27	0.10	192.2	16.5	28.5	10.00	0.03
16.5.1995	12.4	8.3	32.2	10.3	7.7	1.7	46.1	13.4	0.08	2.28	0.23	164.8	15.5	23.5	8.59	0.07
30.5.1995	17.8	8.6	34.0	12.3	7.7	1.7	50.1	13.4	0.07	0.58	0.09	177.0	15.0	29.0	9.38	0.03
3.6.1995	15.0	8.0	33.0	9.0	6.8	2.3	52.1	10.3	0.01	0.96	0.41	183.1	13.0	24.5	10.40	0.10
27.6.1995	14.9	8.2	31.8	9.8	6.4	1.8	48.1	9.1	0.03	1.56	0.32	164.8	16.5	20.0	15.41	0.10
11.7.1995	19.3	8.2	31.4	8.6	7.2	2.1	48.1	9.1	0.01	0.52	0.21	173.9	14.0	23.5	8.59	0.07
25.7.1995	20.6	8.1	32.0	8.6	7.7	2.2	48.1	10.3	0.01	0.41	0.21	170.9	13.5	26.0	7.39	0.03
8.8.1995	21.2	8.2	33.5	7.9	8.4	2.7	52.1	8.5	0.04	0.63	0.17	177.0	18.5	28.0	7.39	0.07
22.8.1995	20.0	8.3	34.4	9.0	9.1	2.7	51.1	13.4	0.03	0.42	0.08	170.9	18.0	30.0	9.38	0.07
5.9.1995	13.2	8.0	29.8	10.4	6.3	2.4	48.1	7.9	0.08	1.92	0.46	158.7	12.0	21.0	7.79	0.07
19.9.1995	15.1	8.2	35.4	8.9	8.1	2.3	54.1	10.9	0.00	0.24	0.12	198.3	15.5	29.0	7.39	0.07
3.10.1995	13.2	8.4	37.3	9.7	9.2	2.5	54.1	14.0	0.03	0.20	0.06	189.2	15.0	31.0	9.38	0.03
17.10.1995	14.5	8.5	39.0	10.3	10.8	3.1	57.1	12.8	0.01	0.17	0.10	195.3	15.5	32.0	8.99	0.03
31.10.1995	11.5	8.1	40.8	9.7	11.0	3.1	58.1	14.6	0.02	0.26	0.15	204.4	19.0	35.0	7.79	0.03
14.11.1995	7.5	8.1	41.3	11.1	11.3	3.3	60.1	14.6	0.01	0.06	0.19	207.5	14.5	36.0	12.62	0.13
28.11.1995	4.7	8.0	40.6	10.9	10.3	3.1	60.1	13.4	0.01	0.07	0.22	207.5	18.0	30.5	10.80	0.13
12.12.1995	4.1	8.1	42.9	12.4	11.3	3.2	63.1	17.6	0.03	0.07	0.42	219.7	19.0	35.0	10.80	0.13

Station No	Date	Parameter	Flag	Value	Unit
112	13.6.1995	Temperature		15	°C
112	13.6.1995	pH		8	-
112	13.6.1995	Conductivity		33	mSm-1
112	13.6.1995	O2		9	mg/l-1
112	13.6.1995	Na+		6	mg/l-1
112	13.6.1995	K+		2	mg/l-1
112	13.6.1995	Ca2+		52	mg/l-1
112	13.6.1995	Mg2+		10	mg/l-1
112	13.6.1995	Mn	<	0	mg/l-1
112	13.6.1995	Fe		0	mg/l-1
112	13.6.1995	NH4+		0	mg/l-1
112	13.6.1995	HCO3-		183	mg/l-1
112	13.6.1995	Cl-		13	mg/l-1
112	13.6.1995	SO42-		24	mg/l-1
112	13.6.1995	NO3-		10	mg/l-1
112	13.6.1995	NO2-		0	mg/l-1
112	13.6.1995	PO42-		0	mg/l-1
112	13.6.1995	total P		0	mg/l-1
112	13.6.1995	total N		3	mg/l-1
112	13.6.1995	Hg	<	0	microgl-1
112	13.6.1995	Zn		53	microgl-1
112	13.6.1995	As		1	microgl-1
112	13.6.1995	Cu		2	microgl-1
112	13.6.1995	Cr		0	microgl-1
112	13.6.1995	Cd		0	microgl-1
112	13.6.1995	Ni		2	microgl-1
112	13.6.1995	CODMn		4	mg/l-1
112	13.6.1995	BOD5		1	mg/l-1
112	13.6.1995	suspended silts		51	mg/l-1
112	13.6.1995	Saprobity index		2	-
112	13.6.1995	Chlorophyll-a		6	mgm-3
112	13.6.1995	Coliform Bacteria		144	NrCml-1
112	13.6.1995	Fecalcoli		8	NrCml-1
112	13.6.1995	Streptococcus		3	NrCml-1
112	13.6.1995	Number of Bacteria		2514	NrCml-1
112	13.6.1995	TOC		4	mg/l-1
112	13.6.1995	UV oil		0	mg/l-1
112	13.6.1995	total dissolved solid		248	mg/l-1
112	13.6.1995	Number of Algae		320	Cellsml-1
112	13.6.1995	Zooplankton		0	ln ml-1
112	13.6.1995	Macrobenthos		0	ln ml-1
112	11.7.1995	Temperature		19	°C
112	11.7.1995	pH		8	-
112	11.7.1995	Conductivity		31	mSm-1
112	11.7.1995	O2		8	mg/l-1
112	11.7.1995	Na+		7	mg/l-1
112	11.7.1995	K+		2	mg/l-1
112	11.7.1995	Ca2+		48	mg/l-1
112	11.7.1995	Mg2+		9	mg/l-1
112	11.7.1995	Mn		0	mg/l-1
112	11.7.1995	Fe		0	mg/l-1
112	11.7.1995	NH4+		0	mg/l-1
112	11.7.1995	HCO3-		173	mg/l-1
112	11.7.1995	Cl-		14	mg/l-1
112	11.7.1995	SO42-		23	mg/l-1
112	11.7.1995	NO3-		8	mg/l-1
112	11.7.1995	NO2-		0	mg/l-1
112	11.7.1995	PO42-		0	mg/l-1
112	11.7.1995	total P		0	mg/l-1
112	11.7.1995	total N		2	mg/l-1
112	11.7.1995	Hg		0	microgl-1
112	11.7.1995	Zn		20	microgl-1
112	11.7.1995	As		1	microgl-1
112	11.7.1995	Cu		2	microgl-1
112	11.7.1995	Cr		0	microgl-1

## Ground Water - Water Level

Station No.: 1977

daily average level

Year	1994		1995									
Day	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct
1	116.58	116.59	116.43	116.39	116.32	116.27	116.41	116.59	116.53	116.17	116.32	116.25
2	116.56	116.59	116.48	116.41	116.32	116.30	116.41	116.58	116.53	116.13	116.34	116.27
3	116.51	116.59	116.45	116.43	116.32	116.31	116.42	116.58	116.51	116.20	116.39	116.25
4	116.50	116.59	116.45	116.44	116.32	116.33	116.44	116.59	116.51	116.21	116.45	116.20
5	116.50	116.55	116.55	116.41	116.32	116.33	116.47	116.60	116.49	116.15	116.50	116.17
6	116.49	116.53	116.60	116.41	116.32	116.32	116.49	116.59	116.48	116.11	116.51	116.18
7	116.47	116.53	116.63	116.41	116.32	116.30	116.49	116.58	116.49	116.09	116.48	116.20
8	116.46	116.54	116.62	116.41	116.32	116.30	116.49	116.58	116.49	116.06	116.48	116.20
9	116.46	116.55	116.60	116.42	116.32	116.30	116.48	116.58	116.51	116.01	116.48	116.20
10	116.43	116.59	116.59	116.43	116.32	116.30	116.49	116.57	116.51	116.00	116.45	116.20
11	116.42	116.58	116.52	116.43	116.32	116.33	116.49	116.57	116.49	115.98	116.44	116.19
12	116.46	116.54	116.49	116.39	116.34	116.37	116.50	116.56	116.45	115.94	116.47	116.17
13	116.51	116.53	116.51	116.35	116.32	116.35	116.51	116.60	116.42	115.93	116.47	116.16
14	116.55	116.54	116.53	116.33	116.32	116.35	116.51	116.59	116.39	115.93	116.44	116.16
15	116.57	116.54	116.53	116.31	116.33	116.46	116.51	116.58	116.36	115.92	116.41	116.15
16	116.57	116.51	116.53	116.32	116.33	116.63	116.51	116.58	116.34	115.89	116.37	116.13
17	116.56	116.49	116.49	116.32	116.34	116.75	116.51	116.54	116.32	115.86	116.40	116.12
18	116.58	116.48	116.48	116.32	116.34	116.83	116.51	116.46	116.31	115.85	116.40	116.08
19	116.58	116.45	116.49	116.31	116.35	116.86	116.53	116.44	116.31	115.85	116.42	116.03
20	116.58	116.40	116.49	116.31	116.33	116.93	116.54	116.38	116.36	115.84	116.43	115.99
21	116.57	116.37	116.49	116.31	116.32	116.90	116.59	116.39	116.39	115.85	116.43	115.97
22	116.57	116.43	116.49	116.32	116.31	116.77	116.58	116.46	116.42	115.88	116.43	115.96
23	116.57	116.60	116.48	116.32	116.29	116.67	116.58	116.50	116.50	115.97	116.43	115.95
24	116.58	116.68	116.46	116.32	116.30	116.58	116.58	116.50	116.49	115.97	116.39	115.95
25	116.59	116.75	116.45	116.31	116.29	116.52	116.61	116.50	116.43	115.95	116.35	115.96
26	116.61	116.71	116.45	116.32	116.28	116.48	116.62	116.50	116.36	115.97	116.32	115.93
27	116.61	116.62	116.45	116.32	116.25	116.45	116.61	116.50	116.31	116.05	116.28	115.93
28	116.61	116.52	116.43	116.32	116.22	116.42	116.61	116.51	116.30	116.24	116.25	115.94
29	116.61	116.46	116.39		116.22	116.41	116.62	116.53	116.28	116.36	116.23	115.94
30	116.60	116.42	116.38		116.22	116.40	116.61	116.53	116.28	116.37	116.23	115.94
31		116.40	116.39		116.24		116.60		116.22	116.34		115.95

Station N	Date	Water level
1977	1.1.1994	116.43
1977	2.1.1994	116.48
1977	3.1.1994	116.45
1977	4.1.1994	116.45
1977	5.1.1994	116.55
1977	6.1.1994	116.6
1977	7.1.1994	116.63
1977	8.1.1994	116.62
1977	9.1.1994	116.6
1977	10.1.1994	116.59
1977	11.1.1994	116.52
1977	12.1.1994	116.49
1977	13.1.1994	116.51
1977	14.1.1994	116.53
1977	15.1.1994	116.53
1977	16.1.1994	116.53
1977	17.1.1994	116.49
1977	18.1.1994	116.48
1977	19.1.1994	116.49
1977	20.1.1994	116.49
1977	21.1.1994	116.49
1977	22.1.1994	116.49
1977	23.1.1994	116.48
1977	24.1.1994	116.46
1977	25.1.1994	116.45
1977	26.1.1994	116.45
1977	27.1.1994	116.45
1977	28.1.1994	116.43
1977	29.1.1994	116.39
1977	30.1.1994	116.38
1977	31.1.1994	116.39
1977	1.2.1994	116.39
1977	2.2.1994	116.41
1977	3.2.1994	116.43
1977	4.2.1994	116.44
1977	5.2.1994	116.41
1977	6.2.1994	116.41
1977	7.2.1994	116.41
1977	8.2.1994	116.41
1977	9.2.1994	116.42
1977	10.2.1994	116.43
1977	11.2.1994	116.43
1977	12.2.1994	116.39
1977	13.2.1994	116.35
1977	14.2.1994	116.33
1977	15.2.1994	116.31
1977	16.2.1994	116.32
1977	17.2.1994	116.32
1977	18.2.1994	116.32
1977	19.2.1994	116.31
1977	20.2.1994	116.31
1977	21.2.1994	116.31
1977	22.2.1994	116.32
1977	23.2.1994	116.32
1977	24.2.1994	116.32
1977	25.2.1994	116.31
1977	26.2.1994	116.32
1977	27.2.1994	116.32
1977	28.2.1994	116.32

# Ground water - quality

## Long time measurement Station No.116

Date	Temp. (°C)	pH	Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	Ca (mg/l)	Mg (mg/l)	Mn (mg/l)	Fe (mg/l)
2.5.1994	11.1	7.7	40.8	0.3	9.7	2.5	60.9	14.3	0.05	0.00
13.6.1994	11.1	7.5	42.9	0.4	10.1	1.2	62.3	13.9	0.05	0.00
13.7.1994	11.4	7.6	43.2	0.4	10.7	0.8	62.3	14.3	0.09	0.00
10.8.1994	11.4	7.5	39.2	0.5			62.3	15.2	0.08	0.00
7.9.1994	11.4	7.5	38.8	0.6	9.4	1.1	62.3	15.2	0.10	0.00
5.10.1994	11.1	7.5	39.6	0.6	9.8	1.1	62.3	15.6	0.00	0.00
16.11.1994	11.2	7.5	39.4	0.7	9.6	1.1	62.3	15.6	0.09	0.00
14.12.1994	11.0	7.5	39.1	0.8	10.1	1.0	62.3	15.6	0.08	0.00
11.1.1995	10.8	7.6	39.2	0.8	8.5	1.0	63.0	16.1	0.08	0.00
8.2.1995		7.6	10.6	1.0	10.2	1.2	63.0	16.1	0.08	0.00
9.3.1995	10.6	7.6	39.7	0.7	10.2	0.9	64.4	15.6	0.10	0.00
5.4.1995	10.8	7.5	40.3	0.4	11.7	1.2	64.4	16.1	0.00	
4.5.1995	10.4	7.5	47.7		10.1	0.9	65.2	16.5	0.05	0.00
14.6.1995	10.4	7.4	46.7	0.1	10.5	1.3	67.3	15.6	0.10	0.00
12.7.1995	10.4	7.6	47.2	0.1	9.7	1.1	67.3	16.5	0.03	0.00
9.8.1995	10.4	7.2	47.8	0.1	9.5	1.1	67.3	16.5	0.03	0.05
6.9.1995	10.4	7.5	47.6	0.5	9.9		65.9	16.1	0.08	0.00
4.10.1995	10.4	7.0	46.1	0.1	9.8	2.7	64.4	15.6	0.08	0.00
15.11.1995	10.3	7.3	45.3	0.1	8.9	2.7	64.4	15.2	0.11	0.00
13.12.1995	10.4	7.6	50.7	0.1	7.8	1.0	63.0	15.2	0.11	0.00

Station No	Date	Parameter	Flag	Value	Unit
116	4.10.1995	Temperature		10.4	°C
116	4.10.1995	pH		7	-
116	4.10.1995	Conductivity		46.1	µmS·m <sup>-1</sup>
116	4.10.1995	O <sub>2</sub>		0.1	mg·l <sup>-1</sup>
116	4.10.1995	Na <sup>+</sup>		9.8	mg·l <sup>-1</sup>
116	4.10.1995	K <sup>+</sup>		2.7	mg·l <sup>-1</sup>
116	4.10.1995	Ca <sup>2+</sup>		64.4	mg·l <sup>-1</sup>
116	4.10.1995	Mg <sup>2+</sup>		15.6	mg·l <sup>-1</sup>
116	4.10.1995	Mn		0.08	mg·l <sup>-1</sup>
116	4.10.1995	Fe		0	mg·l <sup>-1</sup>
116	4.10.1995	NH <sub>4</sub> <sup>+</sup>		0	mg·l <sup>-1</sup>
116	4.10.1995	HCO <sub>3</sub> <sup>-</sup>		231.9	mg·l <sup>-1</sup>
116	4.10.1995	Cl <sup>-</sup>		17.6	mg·l <sup>-1</sup>
116	4.10.1995	SO <sub>4</sub> <sup>2-</sup>		36.4	mg·l <sup>-1</sup>
116	4.10.1995	NO <sub>3</sub> <sup>-</sup>		6.1	mg·l <sup>-1</sup>
116	4.10.1995	NO <sub>2</sub> <sup>-</sup>		0	mg·l <sup>-1</sup>
116	4.10.1995	PO <sub>4</sub> <sup>2-</sup>		0	mg·l <sup>-1</sup>
116	4.10.1995	CODMn		1	mg·l <sup>-1</sup>
116	4.10.1995	TOC		2.03	mg·l <sup>-1</sup>
116	4.10.1995	SiO <sub>3</sub> <sup>-</sup>		3.9	mg·l <sup>-1</sup>



## Soil Moisture Monitoring

Station No.: 2703

Year: 1994

Depth/Date	25.02	05.03	20.03	03.04	17.04	02.05	10.05	19.05	20.05	30.05	02.06
0.10	19.7	17.1	21.0	16.8	23.1	15.4	11.5	10.6	7.3	14.4	14.7
0.20	26.0	25.2	24.8	25.8	28.4	22.8	23.6	19.8	17.7	26.8	22.5
0.30	25.5	25.3	25.1	25.8	26.5	22.8	26.0	20.4	22.0	27.8	22.8
0.40	21.7	22.0	21.6	22.4	24.1	20.4	22.5	17.5	18.2	23.8	19.1
0.50	21.5	21.6	21.1	22.0	24.3	20.2	19.3	16.1	16.7	18.2	17.7
0.60	19.8	20.0	20.2	20.5	21.8	19.3	17.3	15.6	16.4	17.2	15.9
0.70	17.0	17.2	16.7	17.5	19.9	16.1	15.7	13.3	15.2	14.8	12.8
0.80	19.3	19.4	19.6	19.8	22.5	20.2	17.2	16.5	17.2	16.8	16.1
0.90	22.6	22.5	22.6	22.4	25.0	23.1	23.6	19.7	22.5	20.9	19.2
1.00	23.8	23.6	23.6	23.5	25.8	23.9	24.1	21.8	23.3	21.7	21.0
1.10	24.2	24.2	24.2	24.2	24.6	24.1	26.5	22.6	25.4	25.2	22.2
1.20	21.0	20.9	20.2	20.7	20.9	21.9	23.6	20.0	22.5	21.2	19.6
1.30	17.8	17.6	17.3	17.8	17.9	18.9	19.4	17.4	18.0	17.3	16.7
1.40	16.1	16.2	16.0	16.9	17.4	17.2	18.5	16.8	17.5	16.9	15.3
1.50	16.6	16.7	16.7	17.4	17.9	18.0	20.1	17.7	18.5	18.5	16.4
1.60	19.8	19.9	19.8	21.0	20.1	21.6	26.0	21.8	25.2	26.0	21.1
1.70	19.2	19.4	19.6	21.4	20.0	21.7	27.6	22.1	27.4	26.5	21.3
1.80	20.1	20.0	20.4	21.9	20.6	22.6	27.3	23.3	25.6	24.9	22.6
1.90	18.7	18.8	19.2	20.9	19.5	21.6	27.3	22.6	26.8	27.0	22.2
2.00	15.3	15.6	15.8	17.4	17.5	18.2	25.4	19.5	25.8	23.8	19.5
2.10	10.9	11.1	11.4	12.8	13.3	13.7	15.8	14.4	14.7	15.7	14.1
2.20	7.5	7.6	8.0	8.7	8.9	9.1	10.6	9.4	10.8	10.8	9.3
2.30	3.0	2.9	3.1	3.4	2.9	3.8	5.7	3.7	5.9	5.7	3.8
2.40	2.4	2.3	2.4	2.3	2.2	4.4	5.6	4.3	5.4	5.4	3.7
2.50	6.7	6.5	5.9	6.3	7.1	12.5	11.4	11.1	10.8	9.5	10.0
2.60	10.9	10.9	10.7	11.3	11.9	21.1	19.3	18.4	17.4	16.9	16.2
2.70	18.7	18.2	17.8	17.8	18.0	31.5	27.0	26.0	24.7	22.7	23.1
2.80	11.0	10.9	10.8	10.9	17.5	13.4	13.7	12.2	13.0	12.0	11.4
2.90	8.0	7.7	7.4	7.7	16.1	9.7	6.9	8.8	7.7	6.2	8.5
3.00	9.3	8.9	8.5	8.4	17.9	10.1	7.9	9.3	7.6	6.9	8.8
3.10	10.4	10.2	9.8	10.3	18.1	12.2	9.4	11.4	8.8	9.0	10.9
3.20	10.9	10.8	10.2	10.3	18.6	12.8	9.6	11.9	9.9	8.8	11.3
3.30	9.6	9.3	8.8	9.2	25.2	11.3	9.6	10.5	9.5	9.4	9.8
3.40	8.6	8.3	8.0	8.1	28.9	10.6	8.6	9.4	6.7	7.9	8.9
3.50	7.2	7.1	6.9	7.3	30.8	9.1	7.3	8.4	7.4	6.8	7.8
3.60	6.1	5.9	5.7	6.0	31.5	7.0	6.2	6.1	6.5	5.0	5.6
3.70	4.7	4.6	4.3	4.6	32.7	6.6	5.5	5.6	5.1	5.9	5.1
3.80	3.9	3.8	3.8	4.0	33.9	5.8	5.1	4.8	5.0	5.0	4.3
3.90	4.4	4.4	4.1	4.6	35.8	6.0	5.5	4.9	5.4	5.0	4.3
4.00	7.5	7.3	7.1	7.5	30.1	9.8	7.9	8.7	7.3	7.7	8.2
4.10	10.0	9.8	9.6	10.5	22.2	11.7	8.9	10.6	8.2	8.2	10.3
4.20	8.9	8.8	8.8	9.6	23.2	10.1	7.9	9.1	7.9	7.7	9.4
4.30	8.1	8.9	8.8	9.5	26.2	10.9	7.9	9.5	8.4	8.6	9.4
4.40	8.0	10.1	9.9	11.4	24.8	12.5	10.3	11.5	10.8	10.8	14.1
4.50	10.0	14.4	14.3	15.0	23.0	19.7	15.2	15.9	16.2	16.5	19.1
4.60	14.4	21.3	20.9	20.9	24.6	23.8	21.4	22.6	21.1	21.8	24.5
4.70	21.3	24.9	24.0	24.9	25.0	25.0		24.4	24.3	25.5	25.0
4.80	25.2	27.0	27.0	27.0	27.0	27.0		26.5			27.0
4.90	28.4	29.0	29.0	29.0	29.0	29.0		29.0			29.0
5.00	28.1	28.1	28.1	28.1	28.1	28.1		28.1			28.1

Station No.	Date	Depth	Value
2703	25.2.1994	10	19.7
2703	25.2.1994	20	26
2703	25.2.1994	30	25.5
2703	25.2.1994	40	21.7
2703	25.2.1994	50	21.5
2703	25.2.1994	60	19.8
2703	25.2.1994	70	17
2703	25.2.1994	80	19.3
2703	25.2.1994	90	22.6
2703	25.2.1994	100	23.8
2703	25.2.1994	110	24.2
2703	25.2.1994	120	21
2703	25.2.1994	130	17.8
2703	25.2.1994	140	16.1
2703	25.2.1994	150	16.6
2703	25.2.1994	160	19.8
2703	25.2.1994	170	19.2
2703	25.2.1994	180	20.1
2703	25.2.1994	190	18.7
2703	25.2.1994	200	15.3
2703	25.2.1994	210	10.9
2703	25.2.1994	220	7.5
2703	25.2.1994	230	3
2703	25.2.1994	240	2.4
2703	25.2.1994	250	6.7
2703	25.2.1994	260	10.9
2703	25.2.1994	270	18.7
2703	25.2.1994	280	11
2703	25.2.1994	290	8
2703	25.2.1994	300	9.3
2703	25.2.1994	310	10.4
2703	25.2.1994	320	10.9
2703	25.2.1994	330	9.6
2703	25.2.1994	340	8.6
2703	25.2.1994	350	7.2
2703	25.2.1994	360	6.1
2703	25.2.1994	370	4.7
2703	25.2.1994	380	3.9
2703	25.2.1994	390	4.4
2703	25.2.1994	400	7.5
2703	25.2.1994	410	10
2703	25.2.1994	420	8.9
2703	25.2.1994	430	8.1
2703	25.2.1994	440	8
2703	25.2.1994	450	10
2703	25.2.1994	460	14.4
2703	25.2.1994	470	21.3
2703	25.2.1994	480	25.2
2703	25.2.1994	490	28.4
2703	25.2.1994	500	28.1
2703	25.2.1994	510	27.5
2703	25.2.1994	520	26.9
2703	25.2.1994	530	26.6
2703	5.3.1994	10	17.1
2703	5.3.1994	20	25.2
2703	5.3.1994	30	25.3
2703	5.3.1994	40	22
2703	5.3.1994	50	21.6
2703	5.3.1994	60	20
2703	5.3.1994	70	17.2
2703	5.3.1994	80	19.4
2703	5.3.1994	90	22.5
2703	5.3.1994	100	23.6
2703	5.3.1994	110	24.2
2703	5.3.1994	120	20.9
2703	5.3.1994	130	17.6
2703	5.3.1994	140	16.2
2703	5.3.1994	150	16.7
2703	5.3.1994	160	19.9
2703	5.3.1994	170	19.4

**Minutes from meeting  
of experts for surface and ground water regime and quality  
held on September 11, 1996 in Bratislava.**

**Participants:**

Slovak Party:           Dr. Zoltán Hlavatý  
                              prof. Igor Mucha  
                              Ing. Boris Minárik  
                              Dr. Dalibor Rodák  
                              Katarína Földešová

Hungarian Party:       Dr. Lajos Horváth  
                              Emil Janák  
                              Zoltán Nagy  
                              Éva Tevan Bartalis  
                              Csaba Madarász

The main point of the agenda was the negotiation about the fulfilment of the proposals and recommendations connected to the surface and ground water regime and quality accepted by the Nominated Monitoring Agents in the 1995<sup>th</sup> Joint Annual Report.

The results of the meeting accepted by the Parties will be submitted as a proposal to the negotiation of the Nominated Monitoring Agents on October 10, 1996 in Győr.

Discussed items:

**1. General proposals**

**1.1. Definition of the impact area of the measures realised according to the Agreement.**

Experts of the two Parties agreed that for the purposes of data exchange and evaluation of the measures impacts the following area will be used:

Hungarian side - area defined by the state boundary to the Lajta river, Lajta river, Mosoni Danube and the Danube to the confluence with the Mosoni Danube.

Slovak side - the whole area on the right side of the Danube, the area on the left side of the Danube defined by the reservoir, power channel and tailrace channel (including the reservoir, the power channel and the tailrace channel), and approximately 1 km wide zone behind the power channel towards the inner Žitný ostrov area and behind the Danube downstream from Sap ending at the confluence with Mosoni Danube.

For the purpose of constructing groundwater level contour lines observation wells covering the whole Žitný ostrov area will be used, bounded by the Malý Danube river and the river Váh. In the framework of surface water levels and discharges data exchange the data from stations Komárno and Komárom will be also included.

## **1.2. Data exchange progress on the defined area.**

Experts of the both Parties stated that the data exchange is continuing according to the time schedule with a little delay caused by the 1995<sup>th</sup> Joint Annual Report preparation. The daily data exchange of surface water levels and discharges on both sides goes according to the time schedule without difficulties. Simplification of the daily data exchange will be agreed later.

The Slovak Party provided groundwater level data till June 1996 (including), and surface and ground water quality data till June 1996 (including).

The Hungarian Party provided ground water level data till April 1996 (including), and surface and ground water quality data till May 1996 (including). Groundwater level data for the period of May and June 1996 will be provided by the Hungarian Party by the end of September 1996.

## **1.3. Evaluation of time series data.**

Experts of the both Parties agreed that the evaluation of the time series data for the whole set of data for the period before signing the Statute will start at October 1, 1992.

The tabular and digital forms for the long term surface water levels and discharges, groundwater levels, and surface and ground water quality data form the annex of these Minutes.

The experts of the both Parties agreed on the following time schedule for the exchange of long term time series data:

- surface water levels and discharges (all stations): by November 15, 1996.
- ground water level data (all stations) : by November 30, 1996.
- surface and ground water quality data for the selected stations: by November 30, 1996 (SK - stations No. 109, 112, 311, 312, H - profiles Rajka, Ásványráró, lock No. 1, lock No. 2).
- surface and ground water quality data for the other stations will be exchanged later on.

## **2. Surface water regime**

### **2.1. Evaluation of the long time series data.**

Experts of the both Parties agreed that the evaluation of the long time series data will be done for the stations Bratislava (SK) and Rajka (H).

### **2.2. Use of unified methods of measurements.**

Experts of the both Parties stated that the methods of water level and discharge measurements are jointly agreed by the Committee for the Boundary Waters, while the both Parties use its own method accepted by the other Party. The exchanged data are jointly agreed on annual bases.

## **3. Surface water quality**

### **3.1. Long term development of the surface water quality.**

Experts of the both Parties agreed that the evaluation of long term development of the surface water quality in the Danube will start on selected stations: SK - stations No.

109, 112, 311, 312, H - stations Rajka, Ásványráró, lock No. 1, lock No. 2.

### **3.2. Data measured within the framework of the Slovak-Hungarian Committee for the Boundary Waters.**

Experts of the both Parties agreed that the data exchange of selected monitoring profiles observed within the framework of the Slovak-Hungarian Committee of the Boundary Waters will continue. The first sample in the month will be included in the data exchange.

Experts of the both Parties agreed that the long time data series of jointly accepted data by the Slovak-Hungarian Committee for the Boundary Waters will be used (for stations included in the joint monitoring). These data will be obtained from the Committee for the Boundary Waters by Parties themselves.

### **3.3. Evaluation methods used within the framework of the Slovak-Hungarian Committee for the Boundary Waters.**

Experts of the both Parties agreed that for the year 1996 the statistical methods used within the framework of the Slovak-Hungarian Committee for the Boundary Waters cannot be applied because of insufficient number of measurements (18 measurements, including the year 1995).

Experts of the both Parties agreed that for the long term data evaluation the Slovak-Hungarian Committee's report evaluating the period 1990-1995 will be used.

### **3.4. Sampling frequency and the list of parameters.**

Experts of the both Parties agreed that by November 30, 1996 an overview of sampling frequency and the whole set of analysed parameters will be prepared for all stations included in the joint monitoring. Overview will cover the period starting from 1992 (including), and contain the date of the first observation

The both Parties will elaborate a list of individual sampling dates with a complete set of analysed parameters for each date.

### **3.5. Documentation of sampling and analysis.**

Experts of the both Parties agreed that by November 30, 1996 an overview of analysis methods for each parameter included in the data exchange will be prepared. In the case of standard methods: a name of the method, short description (one sentence) and the reference to the National or European standard.. In the case of non-standard methods the description will be more detailed.

## **4. Groundwater regime**

### **4.1. Exchange of geodetic coordinates.**

Experts of the both Parties agreed that by November 30, 1996 the geodetic coordinates of groundwater level observation wells will be exchanged, with the date of the last geodetic measurement or verification.

### **4.2. Exchange of long term data.**

Experts of the both Parties agreed that by November 30, 1996 the groundwater level data for the period starting from October 1, 1992 will be exchanged for all observation points included in the joint monitoring. In the case of extension of the present network

of observation points, groundwater level data for the period starting from October 1, 1992 will be exchanged also for extended observation points.

Verification measurement are recommended only in the justified cases, when there is a doubt about the correct altitude measurement. During the data processing such data will be temporarily omitted.

#### **4.3. Extension of the present network of groundwater level observation points.**

Experts of the both Parties agreed that a list of observation points proposed for extension of the present network of groundwater level observation points will be jointly prepared. For this purpose situations of available groundwater level observation points will be exchanged by September 30, 1996.

The Slovak Party suggested to extend the network of groundwater level observation points on the Hungarian side with all existing objects in the right side inundation, because no one observation object is included at present time. On the other area of Szigetköz the Slovak Party suggests to complete the network with objects from the basic observation network with available long time data series.

On the Slovak side the present monitoring network will be extended with selected groundwater level observation points from the SHMÚ observation network from area bounded by the Malý Danube.

### **5. Groundwater quality**

#### **5.1. Evaluation of the groundwater quality long time data series.**

Experts of the both Parties agreed that the evaluation of long term development of the groundwater quality will start on two selected stations. The Slovak Party proposed to use objects used for drinking water supply. The Hungarian Party suggested that both Parties should prepare proposals of two objects on Slovak and two Hungarian side for the negotiation in Győr.

#### **5.2. Technical data of the observation points.**

Experts of the both Parties agreed that by November 30, 1996 will exchange the basic technical data of the groundwater quality observation wells included in the joint monitoring. Among the basic data the depth of the well, screening, material and the well diameter, and the completion log will be described.

The Slovak Party suggested the exchange of similar basic data for the groundwater level observation wells as well (mainly the depth and the screening).

#### **5.3. Documentation of sampling and analysis.**

Experts of the both Parties agreed that by November 30, 1996 an overview of analysis methods for each parameter included in the data exchange will be prepared. In the case of standard methods: a name of the method, short description (one sentence) and the reference to the National or European standard. In the case of non-standard methods the description will be more detailed.

#### **5.4. Sampling frequency and the list of parameters.**

Experts of the both Parties agreed that by November 30, 1996 an overview of sampling frequency and the whole set of analysed parameters will be prepared for all

stations included in the joint monitoring. Overview will cover the period starting from 1992 (including), and contain the date of the first observation  
The both Parties will elaborate a list of individual sampling dates with a complete set of analysed parameters for each date.

### **Miscellaneous**

The Hungarian Party requested to completion the groundwater quality data with groundwater level data.

The Slovak Party stated that the groundwater level data for groundwater quality observation wells are available only at the time of sampling. The Slovak Party will provide these data if possible.

Concerning the evaluation of the surface and groundwater quality in the 1996<sup>th</sup> National Annual Reports the Slovak Party proposed:

At the selected representative profiles for surface water quality and the selected groundwater quality objects graphically present the whole set of parameters included in the data exchange. Graphical presentation of the other sampling profiles or objects are to be decided by Parties themselves.

If either Party wants to evaluate a trend or a state in the 1996<sup>th</sup> Joint Annual Report, a graphical presentation in the National Annual Reports is necessary.

These Minutes were prepared in Hungarian and Slovak languages. The English version was elaborated additionally. The English text will prevail in the event of any discrepancy.

Bratislava, September 11, 1996.

**Dr. Zoltán Hlavatý**  
*Slovak Party*

**Dr. Lajos Horváth**  
*Hungarian Party*

**Minutes from meeting  
of experts for soil moisture monitoring and biology  
held on October 2, 1996 in Mosonmagyaróvár.**

**Participants:**

Hungarian Party: Palkovits Gustáv  
Dr. Mészáros Ferenc

Slovak Party: Dr. Zoltán Hlavatý  
Dr. Ilja Krno

The main point of the agenda was the negotiation about the proceeding of the proposals and recommendations connected to the soil moisture monitoring and biology accepted by the Nominated Monitoring Agents in the 1995<sup>th</sup> Joint Annual Report.

The results of the meeting accepted by the Parties will be submitted as a proposal to the negotiation of the Nominated Monitoring Agents on October 10, 1996 in Győr.

Discussed items:

**1. General proposals**

**1.1. Definition of the impact area of the measures realised according to the Agreement.**

Experts of the two Parties agreed on the definition of the impact area. The definition was agreed by experts for surface and ground water, on meeting held on September 11, 1996 in Bratislava.

**1.2. Data exchange progress on the defined area.**

Experts of the both Parties stated that the data exchange in 1996 will be executed according to the time schedule.

**1.3. Evaluation of time series data.**

Experts of the both Parties agreed that will propose to do the evaluation of the soil moisture monitoring and the biology for the period before signing the Statute for the whole year 1992, where data exist. In the case when the Nominated Monitoring Agents will not accept this proposal, the evaluation will start at October 1, 1992.

**6. Soil moisture**

**6.1. Evaluation of the long time series data.**

The Hungarian Party stated that concerning the present network of soil moisture observation points included in the data exchange only two objects are observed from



1992 and two objects from 1993. The other objects are observed from 1995.

The Slovak Party suggested that the present network of the soil moisture monitoring should be extended also with objects from the flood protected area (agricultural area). On the Hungarian side with two objects of all three kind of groundwater level interaction with the soil profile, on the Slovak side with objects along the power channel.

Both Parties prepare proposals for the negotiation of Nominated Monitoring Agents on October 10, 1996 in Győr.

Experts of both Parties agreed on the following time schedule for the exchange of long term data series:

- soil moisture data for the period 1992-1995: by November 15, 1996.
- soil moisture data for the year 1996: by November 30, 1996.
- soil moisture data will be completed also with groundwater level data at the time of soil moisture measurements.

## **6.2. Precipitation, temperature and evaporation data.**

Experts of the both Parties agreed that precipitation, temperature and if available evaporation data will be exchanged for the evaluation of soil moisture data for the same time period.

- precipitation data - daily sum of precipitation
- temperature data - daily average temperature
- evaporation data - potential evaporation from open pool

The time schedule will be agreed later.

## **8. Biology**

### **8.1. Extension the data exchange with terrestrial Molluscs and phytocoenological data.**

Experts of the both Parties stated that it is possible to extend the data exchange with the terrestrial Molluscs and phytocoenological data.

Concerning the period 1992-1995 the Hungarian Party stated that in 1992 there was only one observation performed for the parameters included in the data exchange.

The Slovak Party suggested to include also these data with a note that they come from only one observation.

The method of the exchange of phytocoenological data will be specified on the meeting at October 10, 1996.

### **8.2. Agreement on the periphyton observation method in the Danube.**

Experts of the both Parties agreed that on the meeting at October 10, 1996 will be decided whether it is useful to observe the periphyton in the Danube old river bed.

The Hungarian Party stated that periphyton observation are carried out only in river branch system.

The Slovak Party stated that there are no regular periphyton observation. The Slovak Party expresses its interest for the results of the Hungarian experts.

Experts of the both Parties agreed that the 1996's biological data exchange will be finished by December 20, 1996. The exchange of the older data will be finished by January 15, 1997 if possible.

## **Miscellaneous**

The Slovak Party suggests to use the annexed form for the soil moisture monitoring evaluation in 1996.

The Hungarian Party will prepare a proposal after having examined the method according the Slovak suggestion.

These Minutes were prepared in Hungarian and Slovak languages. The English version was elaborated additionally. The English text will prevail in the event of any discrepancy.

Mosonmagyóvár, October 2, 1996.

**Palkovits Gustáv**  
*Hungarian Party*

**Zoltán Hlavatý**  
*Slovak Party*