# **FINAL STATEMENT**

#### I. BASIC INFORMATION ABOUT THE PETITIONER

#### 1. Name

SLOVENSKÁ SPRAVÁ CIEST (Slovak Roadway Administration)

## 2. Identification number 00 33 28

# 3. Registered office

Miletičova 19, 820 09 Bratislava

## **II. BASIC PROJECT INFORMATION**

#### 1. Name

D18 MOTORWAY – HRIČOVSKÉ PODHRADIE – KYSUCKÉ NOVÉ MESTO SECTION

# 2. Purpose

The purpose of the construction project is the construction of a motorway along an optimal route in terms of full traffic flow and traffic safety as well as in terms of the impact motorway construction and operation has on residents and the environment.

## 3. Users

Slovenská spravá ciest, Miletičova 19, 820 09 Bratislava

## 4. Placement

The route of the assessed D18 motorway section is led through land in the Žilina District and the Kysucké Nové Mesto District. In terms of land registries the construction work affects the following inhabited areas:

- Žilina District: Dolný Hričov, Horný Hričov, Žilina
- Kysucké Nové Mesto District: Rudinka, Kysucké Nové Mesto, Radoľa and Povina

# 5. Dates for construction commencement and completion

-	Start of construction	05/1999
-	Travel on half road surface profile	11/2000
-	Completion of construction work	06/2003

## 6. Detailed description of the technical and technological solution

The D18 motorway along the Žilina – Kysucké Nové Mesto section is designed pursuant to STN 73 6101 standards as a four lane, divided road in the D 26.5 category with a proposed maximum speed of 100 km/h lowered to 80 km/h in tunnels.

The directional routing of the motorway with respect to the anticipated division of the construction work into sections and in an attempt to use the existing  $1^{st}$  class (I/11) road has led to the current route for the road.

#### Basic technical information

Variant	Route length	Tunnels		Bridges	
	(km)	Number	Length (m)	Number	Length (m)
Shared section and Variant I	23.000	2	1 580	15	3 936.5
Share section	24.400	4	4 800	16	4 626.5
and Variant C					

#### Shared section

The shared section of the D18 begins at the D18/D1 crossroad. From the motorway crossroad the route of the D18 passes through level ground behind the Bratislava – Žilina rail line and exits to the north to the village of Horný Hričov. Starting at km 4.000 the route reaches a grade of 1.87% where it elevates after crossing a bridge over the rail lines and the I/18 road to a terrace where it follows the route of the I/18 road south from the village of Horný Hričov. Both roads follow each other continuing along the left bank of the Hričov reservoir, where the motorway continues on along an elevated section over demanding terrain. From km 9.400 the motorway continues along the current I/18 road from Žilina serving as a motorway collector. The D18 motorway leaves this route and continues on a bridge structure that crosses the road, rail line no. 120, the start of the Hričov reservoir, the II/507 road and the industrial zone that ends at the inhabited area of Považský Chlmec and enters into the "Vrch hora" tunnel (360m). After crossing a valley with an unnamed stream the route enters the "Považský Chlmec" tunnel (1020 m). The tunnels are placed in the southern section of the Hora and Hájiská hills so as to travel in such a manner that the majority of the tunnels themselves are run through sections of solid conglomerated rock, i.e. areas that are geologically stable.

Exiting from the "Považský Chlmec" tunnel the route travels on a bridge structure over the III/50757 road and the Kysuca River onto the route of the I/11 road that is already constructed as a divided road. Along the route of the I/11 road, the motorway continues to the western edge of Brodno (Žilina city district) to Kysucká brána.

In the area of Kysucká brána the route follows the I/11 road and travels in the space between this road and Kysuca. The large deviations in spatial and height dimensions requires the use of complicated technical measures – retaining walls and barriers, adjustment to the Kysuca waterway at a length of 350 m and reinforcement of the left bank (360 m). The shared section for the two variants ends at km 16.515.

# Variant I

The D18 motorway continues with a bridge structure on the right bank of the Kysuca River. Just south of Kysucké Nové Mesto, close to the former communal waste disposal facility a crossroad is to be built – the "Kysucké Nové Mesto – juh" motorway collector that allows for the connection of Kysucké Nové Mesto in both directions and at the same time forms a crossroad with the I/11 road. From this crossroad the motorway again bridges the Kysuca River and reaches the corridor of the current road. From this point the motorway continues to the northwest section of Budatínska Lehota along a surface route. Complications reappear in the bridged section to the southeast area of the village of Radola, where the current road will have to be extended for a length of 1 150 m due to the tight spatial dimensions in the given area. Two possible solutions are proposed in the village of Radola where the current crossroad is presently located:

a/ Elimination of the direct traffic connection to the Radol'a and Vadičovska dolina with the centre of Kysucké Nové Mesto with the existing bridge left in place for pedestrians to connect the neighbourhoods

b/ Construction of a new bridge over the motorway

Note: At the time of completing this evaluation the evaluator had more variants available for resolving the section from km 17.650 to 18.600 within the land use planning documentation (alternatively at ground level, underground or using an elevated section) as well as a change in the routing of the motorway at km 15.000 to 17.500.

From Budatínska Lehota the motorway crosses a bridge on the other side of the Kysuca River into the area of the forest park where it again moves above ground level so as to allow a fly-over crossroad with the road from Povina, which is proposed as a portion of the "Kysucké Nové Mesto – sever" crossroad. From Kysuca the motorway continues in a rural area with level ground on the right bank of the Kysuca River to the end of the assessed section at km 23.000.

#### Variant C

This route exits the route taken by Variant I at km 16.515 before bridging the Kysuca River. On the right bank the motorway makes a turn and enters onto the bridge over the Kysuca River from which it enters into the Dúbravy tunnel (1110 m). A component of the bridge section is the crossroad with the I/11 road, which also forms the southern collector. A complete crossroad with the I/11 road, which also forms the southern collector, was also completed as an alternative in the given area.

From the mouth of the north portal of the Dúbravy tunnel the D18 motorway bridges Vadičovska dolina over the edge of the football pitch where it continues at ground level next to the Radola Agricultural Collective and enters into the Budatínska Lehota tunnel (2 110 m). From the tunnel the motorway exits above the state I/11 road south of Povina, crosses the road and the river and ends up on the right bank of the Kysuca River, where the "Kysucké Nové Mesto – sever" crossroad is located. From the crossroad the motorway continues to the end of the section (km 24.000) in a similar manner as for Variant I.

In order to secure regional connections and service to surrounding areas the following 6 crossroads should be used according to the Report:

No. 1 – Hričovské Podhradie (km 1.370)

No. 2 - Horný Hričov (km 4.680)

No. 3 – Žilina – západ (km 8.731)

No. 4 – Žilina – sever (km 13.540)

No. 5 - Kysucké Nové Mesto – juh (km 18.300)

No. 6 - Kysucké Nové Mesto – sever (km 21.600 for tunnel I and 23.000 for Variant C)

#### **Tunnels**

The tunnels are designed as twin tube with independent tunnel tubes for each direction with a distance between the arches of 9.00 m. The technical design also includes tunnel ventilation and full electricity connections including signalisation.

Tunnel	Distance markers	Length (m)	Grade (%)	Section/variant
	(km)			
Vrch hora	10.900 - 11.260	360	+ 2.25	Shared section
Považský Chlmec	11.370 - 12.390	1 200	- 1.76	Shared section
Dúbravy	18.280 - 19.390	1 110	+ 1.94	Variant C
Budatínska Lehota	20.255 – 22.365	2 110	- 1.17	Variant C

### Bridge structures

A total number of 11 bridge structures with a total length of 3111.5 m are designed in the shared section. Variant I anticipates 4 bridge structures with a total length of 825 m. Variant C includes 5 bridge structures wit a total length of 1 515 m.

#### Road extensions and repairs

The execution of the D18 motorway pursuant to the submitted project requires the reconstruction and replacement of the I/11 road from Brodno to Kysucká brána with a total length of 2 800 m and an extension of the I/11 road between Oškerda and Radoľa with a total length of 1 150 km. In addition the construction work includes the connection of the airport and the construction of extensions for field roads.

## Waterway extensions and repairs

Adjustments to waterways are only considered for the Kysuca River at km 14.980 (bank reinforcement with a total length of 430 m on the left), at km 15.700 (adjustment of flow with a total length of 350 m), at km 16.280 (bank reinforcement with a total length of 360 m on the left), at km 18.900 for Variant C (bank reinforcement with a total length of 270 m on the left) and at km 20.370 for Variant C (adjustment of flow with total length of 450 m).

## Motorway drainage

The motorway will have drainage sewers along its entire length via independent drainage sewer system that drains into local waterways. The sewers will be located in the centre dividing area and before draining into the recipient all collected rain water will be cleaned in 13 sedimentation tanks.

#### **III. DESCRIPTION OF THE ASSESSMENT PROCESS**

#### 1. Completion of the Assessment Report

The Assessment Report (hereinafter AR) was completed pursuant to § 14 and §15 of Slovak National Council Act No. 127/1994 Coll. on Environmental Impact Analysis (hereinafter only the Act). The elaborator of the environmental impact assessment report for the D18 Hričovské Podhradie – Kysucké Nové Mesto motorway section was *ENVICONSULT s.r.o. Žilina*. The task coordinator was *RNDr. Anton Darnady* and the responsible task resolver was *Mgr. Ivan Pirman*.

The AR was preceded by assessments for the two variants of the D18 motorway route (Enviconsult Žilina, 1996). The assessing authority (Slovak Ministry of the Environment) defined the Dolný Hričov – Považský Chlmec – Kysucké Nové Mesto section for further assessment. The original route of this variant of the evaluated project represented a single variant solution without any grouping into sub variants. An objecting statement from Kysucké Nové Mesto gave rise to the need to find a new, technically feasible solution that was civically acceptable. A total of 5 modified routes for the D18 motorway were completed for the Kysucké Nové Mesto section. Pursuant to the council's conclusions dated 27.1.1997 a request was made to assess the route of the Kysucké Nové Mesto – Radol'a motorway section in two variants. These were marked as Variant I and Variant C for assessment purposes.

# 2. Evaluation of the Assessment Report and the statements to the Assessment Report

The evaluation of the AR was completed pursuant to § 16, 17 and 18 of the Act. The petitioner for the project, the Slovak Roadway Administration in Bratislava, submitted the AR to the Slovak Ministry of the Environment (hereinafter only "Ministry") for the D18 Hričovské Podhradie – Kysucké Nové Mesto motorway section for the additional process of assessment on 17.11.1997. The Ministry sent the AR to all interested parties on 21.11.1997.

The following parties provided statements to the Ministry in relation to the AR:

Slovak Ministry of Health, Spa and Spring Inspectorate, Ing. Ján Baláž, Director, 19.1.1998

The Slovak Ministry of Health, Spa and Spring Inspectorate, in terms of the protection of natural therapeutic sources, the protection sources of natural mineral table water as well as the protection of natural therapeutic spas has no basic comments pursuant to Act No. 277/1994.

## Žilina District Office, Ing. Ján Béreš, Head of the Road Transport and Roadway Department, 14.1.1998

The Žilina District Office, Road Transport and Roadway Department has no comments to the submitted report.

# Kysucké Nové Mesto District Office, Land, Agricultural and Forest Management Department, Ing. Elemir Šplhák, 14.1.1998

The Kysucké Nové Mesto District Office states that the construction work will result in the collection of agricultural lands, interference with land fund organisations, erosion of the soil and the collection of forested lands; the largest collection of such land will occur within the completion of Variant I.

### Slovak Ministry of Defence, Infrastructure Section, Illegible Signature, 5.1.1998

The Slovak Ministry of Defence, Infrastructure Section, recommends completing the embankment variant for technical and economic reasons under the anticipation that the completed measures will lower the impact of the construction work on residents.

### State Aviation Inspection, Aviation Ground Facilities Section, Ing. Ivo Hrušovský, Director, 29.1.1998

The State Aviation Inspection agrees with the submitted report under the condition that both variants A and B respect the protective zone around the Žilina - Hričov airport in terms of height restrictions.

# Slovak Ministry of the Environment, Geological Factor and Rational Soil Use Section, RNDr. Ladislav Andor, Section Director, 26.1.1998

Along the route of the motorway it is necessary to consider the possible filling in of gaps in old organic sediment in the edge sections of fluvial silt.

As the route leads through a flysch zone it is necessary to take a more detailed look at the stability questions with regards to favourable conditions for the start of deformation processes.

The Geological Factor and Rational Soil Use Section considers the execution of Variant I as more suitable for the geological environment (avoidance of tunnel cutting in flysch complexes) and in terms of technical and economic measures.

### Kysucké Nové Mesto, Ing. Ladislav Suhaj, City Mayor, 21.1.1998

The City of Kysucké Nové Mesto on the basis of the public discussions held in the city on December 1997 and January 1998 and the city council in principle does not agree with the Variant I route of the D18 motorway.

The statement provides the following reasons:

- The land use plan for settled areas of Kysucké Nové Mesto approved by the city council in 1994 placed the motorway into Vadičovska dolina,
- Variant I divides the city into two separate sections,
- The proposed route of the motorway pursuant to Variant I to a decisive degree impacts the only possible development direction for the Kamence section of Kysucké Nové Mesto
- Construction following Variant I will result in a direct impact into the supra-regional Kysuca River biocorridor over virtually the entire length of the proposed route

- Due to worsening dispersion characteristics, Variant I will have a negative impact on the health of inhabitants and noise impacts will result due to the placement of the proposed route approximately 130 m from existing structures,
- The proposed Variant I will liquidate a main traffic connection a ground level crossroad between the state I/11 road and the state 3<sup>rd</sup> class road between Kysucké Nové Mesto and Vadičovska dolina (extends the travel distance from the entire Vadičovska dolina and the Budatínska Lehota city district to the centre of the city and Neslušska dolina.

## Mayor of Kysucké Nové Mesto, Ing. Ladislav Suhaj, 9.2.1998

The city of Kysucké Nové Mesto confirms the prior statement from the city with regards to the routing of the D18 motorway, which requested solution Variant C. The Variant C solution was not accepted by the elaborator.

## Žilina District Office, Environmental Department, Ing. Jozef Pálfy, Department Head, 19.1.1998

In additional levels (of project documentation) it is necessary to incorporate the management of individual types of waste that are generated (specification of the manner of disposing of various types of waste that are generated during construction work, a description of the location of wild trash dumps and clarification of the manner of their clean up as well as specification of the management of generated waste)

Within the Report (Specific Protected Species of Plants and Wildlife Chapter) incorrect and old categories for the types of plants are used that are not in conformance with valid regulations. The connection between the report and Slovak Socialist Government Decree No. 24/1988 Coll. on the Mala Fatra National Park in the form of Slovak National Council Act No. 287/1994 Coll. on Natural and Environmental Protection is not clear in terms of the Interference into Protected Areas and USES Elements and the Creation of Barrier Elements Chapter.

Partial research of the terrain appears to be insufficient with regards to the presented attributes and affects the overall results of the material itself.

# Kysucké Nové Mesto District Office, Environmental Department, Ing. Stanislav Sidor, Head of the Department, 19.1.1998

The Environmental Office requests that Variant I include the alternative construction of a new bridge over the motorway so as to secure direction connection of the villages of Radola, Lopušné, Pažite, Dolný Vadičov, Oškerda and Budatínska Lehota.

Some bridge crossings and waterway adjustments will lead to interference into the supra-regional Kysuca River bio-corridor, mainly into growth on the banks of the river. For this reason replacement landscaping areas must be defined.

The elimination of a portion of the Topoľový lesik supra-regional bio-corridor requires compensation with replacement plantings of the same tree species so as the position of this forest moves in a south and southwest direction.

The route of the motorway between km 20.000 to 20.500 forms a barrier. The barrier effect must be eliminated either using a passage under the road or by placing the road under the ground.

After resolving the fly-over crossroad it is necessary to lead the route of the D18 motorway over certain service roads (mainly the Kysucké Nové Mesto – sever collector).

The completion of Variant I will lead to the crossing of small local waterways. It is necessary to resolve these using suitable culverts or passages that would not block the migration of wildlife.

The completion of Variant I on the surface will lead to the liquidation of the Radol'a spring near the road with yield of 9 l/s.

The manner of removing and disposing of rainwater from the surface of the motorway should be resolving using additional means and not just settling (sedimentation) tanks.

During motorway construction and operation it is necessary that an accident plan be completed for an accident involving an oil leak.

Variant I appears better with respect to the analysis of anticipated impacts of individual air pollution components that can damage human health.

A waste handling and disposal plan must be completed for waste that will be generated during motorway operation.

In terms of waste management Variant I is preferred.

## Žilina Regional Office, Road Transport and Roadway Department, Ing. Jozef Choluj, Department Head, 4.2.1998

The assessment report does not exhaustively resolve the elimination of the motorway's barrier effect for migration routes of terrestrial fauna. For the purposes of effectively evaluating the motorway's effects on the biotope due to the barrier effect and emissions, the Regional Office considers it necessary to rework this section of the report.

During construction it is recommended to secure proper and regular ecological supervision in the interest of decreasing the negative consequences to the environment caused by construction equipment.

The Regional Office agrees with Variant I for the D18 Hričovské Podhradie – Kysucké Nové Mesto motorway.

## District Mining Office in Prievidza, Ing. Libor Anovčin, Office Chairman, 5.2.1998

In the wider area around the motorway, construction activities can be found the protected reserve of Považský Chlmec – Všivák (protected reserve of cretaceous conglomerate rock to ensure unrestricted and complete access for mining) and Radoľa (protected reserve of raw materials for bricks to ensure unrestricted and complete access for mining).

For the purposes of lowering the negative environmental impacts during the process of obtaining raw materials for the construction of the motorway, the District Mining Office recommends defining a condition within the final statement that the raw materials used for motorway fills be first extracted from open quarries, pits and gravel beds (included abandoned) including materials for waste piles (mining locations at Lietavská Lučka, Straňavy – Polom or extraction sites with unreserved raw materials – Lopušné Pažite). Only in extreme cases can the opening of new locations for mining operations be allowed.

The proposed storage of unsuitable materials into the mined spaces of the Lopušné Pažite quarry in unsuitable, in addition this would restrict mining operations for other materials located below the current level of mining operations. Also the reserve of raw materials for brick production activities in Radoľa is not currently being mined and protection for this source is currently an increased level of protection for the quarry, one in which no construction or equipment may be placed that does not directly related to the mining of the reserve.

# Village of Radoľa, Božena Jantošiková, Mayor, 5.2.1998

The village of Radol'a does not agree with the routing of the D18 motorway along Variant C for the following reasons:

- The variant passes through developed areas of the village of Radol'a
- Exhaust gases and noise from both tunnels will have a negative environmental impact (tunnel ventilation openings are located directly above the village.
- The routing of Variant C would create a closed island from the village, one that would be prevented from additional planned development in the village
- The sports area (building and fields) would be damaged or destroyed
- At least 5-fold higher costly investment

The village recommends the construction of Variant I wherein it requests:

- The construction of effective and attractive noise barriers on the side of the village
- The construction of a bridge over the Kysuca River for personal vehicles and other vehicles up to 3.5 t along with the preservation of current regional connections to the Vadičovska dolina towards Nesluša
- A resolution for the construction of the D18 motorway in such a manner as to create protection for the village from hundred-year water from the Kysuca River
- The pumping station for sewage from the village of Radola should be respected as it is designed in the space between the I/11 road and the Kysuca River.

Kysucké Nové Mesto District Office, Fire Protection Department, napor. PO Ing. Ferdinand Kubišta, Head of Fire Protection Department, provided without a date

Variant C is recommended in terms of fire prevention and protection.

Kysucké Nové Mesto District Office, Regional Development and IOV Department, Ing. Jaroslav Švábik, Department Head, 27.1.2998

The Regional Development and IOV Department recommends Variant C as it has the lowest degree of negative impacts in the Kysucké Nové Mesto – Radoľa section.

# Village of Povina, Margita Šplhaková, Village Mayor, 3.2.1998

The village agrees with the routing of the D18 motorway using the route of Variant I. It requests that the road connections between the village and Kysucké Nové Mesto be preserved. It also requests that the banks of the Kysuca River be protected from hundred-year water, for both the right and left banks.

Kysucké Nové Mesto District Office, Road Transport and Roadway Administration Office, Ing. Ján Adamčik, Department Head, 30.1.1998

It is hard to agree with the statement that the noise emission loads in the areas of contact would be at the same level and intensity as if the D18 motorway was never completed. The D18 will be a portion of the European motorway network.

The assessment of the environmental impacts for Variant C in the area east of the village of Radola is likely over-estimated.

It is not possible to agree with the resolver that the construction of a full crossroad south of the city (Variant I) is a compromise. An assessment of the effectiveness of moving the crossroad to an area north of the city is proposed.

A direct transportation connection between Kysucké Nové Mesto, Radoľa and Vadičovska dolina via the central crossroad in Radoľa is irrevocably excluded.

The department does not agree with the construction of Variant I, it demands the completion of Variant C.

# Kysucké Nové Mesto City Council Commission for the Routing of the D18 Motorway in the Kysucké Nové Mesto Land Registry Area, written by Ing. Ján Hartel, Representative of the Mayor, 2.3.1998

The commission recommends completing an alternative route for the D18 motorway embedded below the ground.

The evaluation and draft final statement was completed by RNDr. Vladimir Ira, CSc. The evaluator is recorded into the list of professionally competent individuals for the completion of environmental impact assessments pursuant to § 42 of Slovak National Council Act No. 127/1994 Coll. and § 9 of Slovak Ministry of the Environment Decree No. 52/1995 Coll. on 25.2.1997 under number 172/97-OPV.

### **Evaluation of the statements**

Pursuant to § 18 of Slovak National Council Act No. 127/94 Coll. on Environmental Impact Assessment the statements shown herein were sent to the Slovak Ministry of the Environment. The table below shows an overview of the individual variant supported by the affected authority or organisation, while some of the institutions did not make a selection of which variant it supports (from context it is possible to expect consent with the construction of the motorway if certain conditions are followed and recommendations are made in the statement) while others continued to show support for variants that were discussed in the previous level of project documentation. No statements from resident initiatives or civic organisations were delivered to the Ministry. All statements from residents are presented individually.

No.	Affected authority or village	Supported variant
1	Slovak Ministry of the Environment, Geological Factor and Rational	Variant I
	Soil Use Section	
2	Slovak Ministry of Defence, Logistics Section	Variant I
3	Slovak Ministry of Health, Spa and Spring Inspectorate	Variant C
4	Slovak Environmental Agency, Banská Bystrica	Variant C
5	Žilina Regional Office, Road Transport and Roadway Administration	Variant I
6	District Mining Office in Prievidza	Incorporate into land use
		planning documentation
7	K. Nové Mesto District Office, Environment – State Waterway	Variant I
	Administration Representative	
8	K. Nové Mesto District Office, Environment – Environmental	Variant I
	Protection Representative	
9	K. Nové Mesto District Office, Environment – Air Protection	Variant I
	Representative	
10	K. Nové Mesto District Office, Environment – Waste Management	Variant I
	Representative	
11	K. Nové Mesto District Office, Environment – State Construction	Variant I
	Administration Representative	
12	K. Nové Mesto District Office, Land, Agricultural, Field and Forest	Variant I will lead to a larger
	Road Administration	collection of agricultural
		land 30/7.6
13	K. Nové Mesto District Office, District Hygienist	Variant C
14	K. Nové Mesto District Office, Regional Development and IOV	Variant C
	Department	
15	K. Nové Mesto District Office, Fire Protection Department	Variant C
16	K. Nové Mesto District Office, Road Transport and Roadway	Variant C
	Department	
17	Žilina District Office, Environment – Waste Management	Incorporate into land use

	Representative	planning documentation
18	Žilina District Office, Environment –Environmental Protection	Incorporate into land use
	Representative	planning documentation
19	Žilina District Office – Road Transport and Roadway Administration	Agrees with the report
	Department	
20	State Aviation Inspection, Ground Aviation Equipment Department,	Agrees with the report
	Bratislava	
21	Mayor of Nové Mesto	Variant C
22	City office, K. Nové Mesto	Variant C
23	Petition from residents of Povina (Ms. Šplhaková)	Variant I
24	Petition from K. Nové Mesto residents (2 400 signatures, Mr.	Variant C
	Jarabica)	
25	Petition from residents of Radoľa (Ms. Janoštiaková)	Variant I
26	Petition from residents of Radoľa (78 signatures) (Mr. Krivaček)	Variant C
27	Elaborator – RNDr. Ira Vladimir, CSc, Bratislava	Variant I
28	Village of Povina	Variant I
29	Village of Radoľa	Variant I

# 3. Discussion of the Assessment Report with the Public and Conclusions from the Discussions

The report was discussed with the public at public discussions called by the petitioner in cooperation with the mayors and municipal offices in the affected villages and cities.

A written record was taken from every public discussion which presented the course of the discussion, questions raised by participants in the discussion and the answers to the questions provided by the petitioner, project designer and the elaborator of the Report. Every record was signed by the statutory representatives of the local government (mayor) who confirmed with his or her signature that the conclusions in the record corresponded to the actual course of the discussion and conclusions accepted at the public discussion held at the appropriate village.

# Public discussion of the Report in the village of Dolný Hričov held on 13.1.1998

The following questions were raised at the discussion:

- Work on Ovčiarsko commenced and the residents had not yet received money,
- It is necessary to resolve the impact of both motorways on the village with regards to the position of the D1 and D18 motorways and the position of the village of Dolný Hričov itself,
- With regards to the unfavourable position of the village between the two motorway sections the mayor of the village requested compensation shown in a letter dated 19.2.1997 (noise barriers for the village, the construction of sewers and water mains in sections of the village, resolution of the connection of the village to the airport in the direction of Pov. Bystrica with an exit off of the D1, connection of the village to the D18, consideration for a rest area near the village, the use of primarily village mechanical and transportation capacity during motorway construction, contributions to the village financial funds, respect for prior requests, submission of project documentation for village review and SKK 5 million for compensation with regards to village roads).

#### Statement from SSC:

- Exploratory drilling for Ovčiarsko tunnel belongs to the D1 construction project (public discussion held in 1996) and the lands were not purchased due to geological research,
- Requests brought up at the public discussion of the D1 motorway section are incorporated into the land use planning decision,
- Requests are justified, all technical measures (noise walls, landscaping, etc.) to lower the negative impact to the environment caused by the motorway will be accepted,

- SSC as the investor cannot provide any payment or compensation if it is not allowed by valid legal regulations (SSC can contribute to the village land use plan, resources to secure drinking water fro the village may be requested from the environmental fund),
- The conditions related to the placement of noise barriers on the village side of the rail lines is a part of the concurrent motorway construction and the reconstruction of the rail lines if the deadline for the shift in the rail lines is extended then the noise barriers will be placed near the motorway,
- The village can present its requests in the village statement to the Slovak Ministry of the Environment,
- The village will have the opportunity to review the detailed technical solution, the construction process, etc. during the land use planning and construction permitting processes where the construction offices (District Office and the Slovak Ministry of Transport, Post and Telecommunications) will respect authorised comments and conditions in their decisions

## Public discussion of the Report in the village of Rudinka held on 14.1.1998

The following questions were raised at the discussion:

- The village agrees with the proposed route however with regards to the poor transportation connections for the villages of Rudina, Rudinka, Rudinska and Nesluša to Žilina the construction of a 3<sup>rd</sup> class road towards Žilina along the Kysuca River was requested,
- Residents expressed concern that during the reconstruction of the rail lines to a design speed of 120 -160 km/hour the Brodno station would be closed meaning that Rudinka, Rudina and Rudinska would not have rail transport and would have a problem with commuting to work,
- Preservation of the bus stop in Brodno next to the I/11 road along with the possibility to walk under or over the motorway was requested.

#### Statement from SSC:

- Within the elaboration of documentation for the land use planning decision for the motorway, the construction of a 3<sup>rd</sup> class road (Vranie Rudinka) will be resolved in the section from the Brodno crossroad to the bench for pedestrians in Vranie,
- The question of continued rail service to the Brodno station must be discussed with Slovak Railways,
- The bus stop in Brodno will be preserve at Kysucká brána, Brodno and on the extension of the I/11 road to Vranie.

## Statement from village mayor:

The village of Rudinka agrees with the construction of the motorway under the condition that a connection to the 3<sup>rd</sup> class road to Vranie is made

### Public discussion of the Report in the villages of Radol'a and Povina held in Radol'a on 20.1.1998

The following questions were raised at the discussion:

- Mr. Krivaček (Radoľa) proposed a new variant behind Oškerda with an expansion (excavation) of Kysucká brána in order to ventilate the entire valley along the Kysuca River, behind Radoľa and Budatínska Lehota with a connection to the I/11 road north of Povina,
- The representative for the mayor of Radola stated that during the construction of the I/11 road residents had already been warned that it was one half of a four lane road (construction permit was obtained under the condition that houses were moved away from the I/11 road so that it would be possible to expand the I/11 road in the future),
- After weighing the benefits and drawbacks of both variants the representatives of the villages received a
  mandate from the residents to refuse to support Variant C and to prefer Variant I under the condition that
  effective and aesthetic noise blocking measures be taken along with the construction of a bridge over the
  Kysuca River for personal vehicles (or vehicles up to 3.5 t) without any removal work, the creation of

protection against hundred-year water and respect for the village sewer pumping station (proposed in the area between the I/11 road and the Kysuca River),

- The mayor of the village of Povina on the basis of the mandate from residents supported the execution of Variant I under the condition that flood protection measures be constructed on the left bank of the Kysuca River as an investment induced by the motorway construction,
- The residents of Radol'a would like to accept a solution that brings the least harm to the village and therefore Variant C, for them, is unacceptable,
- A resident of Povina submitted a question as to what flood protection measures would be in place in the event Variant I was completed,
- Residents of Radola support Variant I and recommend that it follow the original grade,
- What demolition work will be necessary during the completion of Variant C?
- What with the emissions from the tunnel?
- How will the village road connections to the entire region be preserved?

#### Statement from SSC:

- The directional and height characteristics of the motorway route must be resolved pursuant to valid standards for designing motorways and speedways and interference into Kysucká brána in this case with regards to the configuration of the terrain and environmental protection is impossible,
- The I/11 road was constructed as half of the future motorway in that once capacity was reached the construction of the full profile would occur,
- The village will be protected with noise barriers,
- The proposed bridge over the Kysuca River is resolved in the land use planning documentation and requires no demolition work,
- The proposed Variant I is resolved in such a manner that the future motorway will be protected from hundred-year water (900 m<sup>3</sup>) from the Kysuca River,
- The motorway will respect the village sewer pumping station,
- Povina flood protection with a levee or a wall will be resolved within induced investment activities,
- Construction of a half-motorway profile (planned in 1999) represents the construction of 2 travel lanes including all fly-over crossroads and limited access for motor vehicles,
- The first draft of Variant I was proposed as a bridge structure, based on the comments from K. Nové Mesto, this was reworked into a surface variant,
- There will be no demolition work associated with Variant C,
- Emissions will be sent to Vadičovska dolina in cool morning periods for Variant C on the basis of the completed microclimate study,
- Regional transportation has been resolved in such a manner as to fully preserve all village connections.

Statement from the mayor of Radola: agrees with the form of the record Statement from the mayor of Povina: agrees with the form of the record

## Public discussion of the Report in the city of Žilina held on 19.1.1998

The following questions were raised at the discussion:

- Residents requested protection of and noise blocking measures for the recreation area close to the proposed motorway,
- How will forest connections be secured?
- How will the crossing to the forested area be secured through a four lane collector road?
- Is it possible to construct the Strážov collector with a special roadway cover in order to lessen noise?
- Is anyone interested in the railway noise, which is to be reconstructed to 120 km/h?
- Why aren't the motorway and collector resolved at the same time?
- Request from representative Englard to resolve the connection of Žilina districts Vranie and Rudinka with the construction of a 600 to 800 m long 3<sup>rd</sup> class road.

Statement from SSC:

- Based on the study the recreation area will not be affected by noise, in Strážov the noise will be lower than the allowed level of noise and noise characteristics will be monitored.
- Access will be secured by a bridge at km 8.7,
- Roadway covers to lower noise exist and use can be verified by the designer,
- The noise issue must be resolved during the reconstruction of the rail line a common solution cannot be reached at the discussion, in addition the motorway is placed 10 above the ground and the rail lines are along the Hričov banks,
- Connection of Žilina, Vranie and Rudinka via a 3<sup>rd</sup> class road is resolved in the land use planning documentation and is acceptable.

## Statement from the mayor of the city:

- On the right of the motorway at distance markers km 8.000 to 8.500 a resettlement location has been prepared in the position of the changes made in the land use plan for residents that are not adapting, which will exclude the temporary collection of land for D18 construction purposes,
- The city requests a safe crossing for pedestrians across the I/11 road in Brodno (near the existing rail crossing) in the form of an underpass, and overpass or a CSS.

## Public discussion of the Report in the village of Horný Hričov held on 13.1.1998

The following questions were raised at the public discussion:

- Connection of the village to the motorway,
- Securing a bio-corridor for wildlife,
- Price per m<sup>2</sup> of purchased land,
- Why hasn't a noise barrier been proposed for the village?
- Echo has been observed in the village,
- An area 70 m wide and 50 m long has been created between the I/18 road and the motorway, how will it be used and can is be forested?
- Roads will be destroyed and polluted during construction work.

## Statement from SSC

- Originally designed motorway on and off ramps (near Slovnaft) will not be completed due to the proximity
  of the Dolný Hričov crossroad,
- A passage under the motorway and the I/18 road at km 5.7 will be created as a wildlife corridor,
- The purchase price for the land is 20 SKK/m<sup>2</sup>,
- Noise barriers are not proposed as the calculations do not provide justification,
- If a noise barrier was constructed the noise would be retained by the barrier and the surrounding peaks and the noise would be even greater,
- The entire area will be resolved using the village land use plan area would have to be purchased, planted and then sold to a specific owner and maintenance entity (SSC only administers and maintains areas that directly relate to motorways),
- During construction roads will be cleaned and they will be reconstructed after construction work is complete.

Statement from the mayor of the village: the form of the record corresponds to the truth

#### Public discussion of the Report in the city of Kysucké Nové Mesto held on 20.1.1998

The following questions were raised at the public discussion:

- One resident of Budatínska Lehota has land near the motorway (Var. I) and would like to open an auto service facility connected to the motorway,
- City Council members read aloud the city's statement regarding the Project from 1996 (sent to the Slovak Ministry of the Environment, and final statement sent to SSC in December 1996) among others, the proposed motorway does not comply with the valid land use plan,
- Proposal to resolve the motorway via Vadičovska dolina (variant was removed from the project),
- Traffic will again go through the municipality and come in contact with the Kysuca River,

- A number of residents expressed agreement with Variant C,
- Why haven't the residents of Vadičovska dolina responded to the motorway?
- What about the hundred-year water?
- When people are forced to leave will the state provide a flat for them?

#### Statement from SSC:

- There will be no auto service stations on Slovak motorways, a motorway connection to a private property cannot be accepted,
- The expansion of the I/11 road to a four lane speedway along with the ability for the road to transform into the D18 motorway has been approved in the land use plan. Reserve is in place for the construction of fly-over crossroads as well,
- It is no longer possible to revisit the issue of the selection of motorway corridors D1 and D18 sections are in upper levels of preparation or they are already under construction,
- The redistribution of traffic on motorways and regional roads is the correct solution, if the motorway was not built in 2005 it would be necessary to construct a four lane motorway from the I/11 road in order to accommodate all traffic,
- The motorway will not load the Kysuca River, the motorway is located between the I/11 road and the Kysuca Rover,
- The residents of Vadičovska dolina have not responded to the Report as it does not apply to them; they responded to the Project,
- Protection against hundred-year water is resolved within the land use planning documentation the motorway will form a levee against hundred-year water.

Statement from the mayor: agrees with the completion of the record in that nearly all participating residents were in favour of Variant C but not a majority.

# Discussion towards the stabilisation of the D18 Hričovské Podhradie – Kysucké Nové Mesto Motorway held on 2.2.1998 at the Žilina Regional Office

Representatives of the petition committee from Kysucké Nové Mesto provided notice of the presentation of a petition and a statement to the Kysucké Nové Mesto City Office and the Slovak Ministry of the Interior in which a rejection of Variant I was expressed. They did not express any statement with regards to the level to which the assessment report was completed.

The report elaborator represented by RNDr. A. Darnady explained the genesis of the assessment and explained the extremely negative internal rate of return (IRR = -1.92). He recommended Variant I along with measures to eliminate negative impacts.

The elaborator for the land use decision documentation represented by Ing. Jakubik and Ing. Rajkova provided information on the elaboration of Variant I after surveying the area on a scale of 1:1000 with respect to the requests made by Kysucké Nové Mesto to lower negative environmental impacts. They stated that the draft Variant I accepts the prepared modernisation of the rail lines and Važska road, respects protection for bank growth, is entirely equipped with sewer drains and creates protection for hundred-year water from the Kysuca River.

The mayor of Kysucké Nové Mesto stated that those representatives of Kysucké Nové Mesto present are the representatives of the people and that a professional statement regarding the report would be sent by 8.2.1998 to the Slovak Ministry of the Environment.

The representative of the mayor of Radola appreciated the professional level of the report. He warned of the fact that the expansion of the I/11 road into a four lane motorway had been planned since its construction. He informed that the representatives of the villages had a mandate from the residents not to agree with Variant C. Support for Variant I was conditioned by the preservation of the connection between the village and Kysucké Nové Mesto via a bridge for small personal vehicles or vehicles up to 3.5 t and the construction of noise barriers.

The mayor of Povina informed that she had obtained a mandate from the residents of the village not to agree to Variant C. Support for Variant I was conditioned by the preservation of connections with Kysucké Nové Mesto and the construction of flood protection for the village (left bank of the Kysuca River) against hundred-year water.

The representative of the Slovak Ministry of Transportation, Post and Telecommunications warned of the limited means of financing for securing the motorway program within the Slovak Republic and the lack of feasibility for investment into Variant C. According to her the report showed that Variant I under the prerequisite completion of recommended measures to limit negative environmental impacts met all hygienic limits.

The record from the discussion presented the following conclusions:

- 1. All comments to the report must be recorded, justified and sent to the Slovak Ministry of the Environment,
- 2. The elaborator of the land use planning documentation must inspect other possible motorway variants,
- 3. The position of the motorway along the route of the existing I/11 road is approved in the approved land use plan for Kysucké Nové Mesto,
- 4. Subsequent motorway variants will be selected based on all professional documents and statements from professional authorities and organisations as well as from affected villages and cities and the completed professional evaluations.

# Meeting towards the stabilisation of the D18 Hričovské Podhradie – Kysucké Nové Mesto Motorway route, Radoľa section, held on 23.6.1998 at the Slovak Ministry of the Environment in Bratislava

All interested parties participated in the working meeting. The goal of the meeting was to find common ground between the statements regarding the placement of the motorway route along the Radola - Kysucké Nové Mesto section. In spite of a mutual explanation of the reasons behind such statements, common ground between the statements on the placement of the motorway was not reached and each party continued to defend their statements as shown on page 9 of this final report.

# 4. Other relevant statements, comments and expert evaluations that were sent with regards to the assessment report

# Ján Kriváček, Radoľa 279, 023 36 Kysucké Nové Mesto, 12.1.1998

Detailed written statement to the documentation for the proposed change to the route on the land registry area of the village of Radol'a (Brodno)

## Vladimír Bačik, Hričovská 5, 010 01 Žilina – Strážov, 21.1.1998

Does not agree with the design study in the scope in which it was prepared. In his opinion the residents living from Hradska in Strážov to the Lučký neighbourhood were threatened with surface water contamination. The project does not contain any exits, underpasses or overpasses

## Ing. Miroslav Zelina, Rajecká cesta 1, 010 01 Žilina, 21.1.1998

Does not agree with the construction of the I/18 Žilina – Strážov road due to the threat to two structures. One structure is a residential building with land owned by Ing. Zelina.

# Slovak Environmental Agency, Centre for Environmentalism and Environmental Education Banská Bystrica, Ing. Vladimír Benko, Director, 27.1.1998

- In terms of crossings the section at the crossing with the Strážov pond and the Hričov reservoir (km 9.000 10.000) is very risky for the ecosystem of the reservoir due to a breach of its ecological stability and function. It is necessary that the motorway in this section be led over a bridge structure.
- The directional and height characteristics of the motorway route must be resolved via higher bridging over the waterway at km 12.400 13.000 and in the area of Kysucká brána at km 15.000 17.000 due to protection of preserved alluvial elements. During the extension of accompanying roads under Brodnianka it is necessary to preserve this significant geological profile (Update to Kysucká brána protected area)

- Before excavated materials can be moved from the construction site to the waste facility proposed near Malé Vreteno it is necessary to secure sufficient protective archaeological research of this area
- It is necessary that the directional and height characteristics of the D18 motorway route be adjusted in such a way as to retain the continuity and compatibility of the bank zones and for semi-terrestrial wildlife including additional plantings and reconstruction of slope growth in a width of at least 10 m
- It is recommended to consider resolving the fly-over crossroads at km 18.300 and 21.450 in a manner so that the D18 in this section is led over service roads, which would allow for more effective bridging of waterways
- An underpass for taller terrestrial wildlife must be resolved in the area near the crossroad at km 21.450 (towards the Škorča-Tábor bio centre)
- Replacement plantings are recommended for the collected alluvial growth areas in the Topoľový lesik pri Kysuci bio centre.
- A slight shift in the route from the local Okolie vodojemov bio centre is recommended with a protective line of green space (km 22.000 to 23.000)
- The unsuitable curved drains at km 21.000 should be resolved at the stream crossing from Budatínska Lehota under the parallel I/11 road
- The areas around the tunnel portals should be stabilised and received landscaping
- The need to make the two bridge crossings at km 17.000 and 18.000 over the Kysuca River should be reconsidered as this will lead to increased interference into the growth on the banks and the Kysuca waterway

The execution of Variant I would result in a significant impact on the waterway channel and into the alluvial growth along the Kysuca River and other affected waterways. The presented construction consequences on the Kysuca ecosystem cannot be eliminated; they can only be lessened under the condition that the conditions stated in the statement are followed.

Ing. Peter Šuň, Trnavská 19/19, 010 08 Žilina, Ing. Miroslav Zelina, Rajecká 1, 010 01 Žilina, Vladimír Bačik, Hričovská 5, 010 01 Žilina, for the petition committee, 4.2.1998

Proposed not leading the I/18 connection road to the D18 motorway in the area of the slag field in Strážov.

## Ján Kriváček, Radoľa 279, submitter of the petition, 31.1.1998

The residents living near the state road I/11 (78) have expressed their discontent with the fact that the D18 motorway route was led through the land registry area of the village of Radola in Variant I, and request that the route of the road be led following Variant C, i.e. a bypass of the village of Radola from the southeast side.

Ing. Peter Šuň, Trnavská 19/19, 010 08 Žilina, Ing. Miroslav Zelina, Rajecká 1, 010 01 Žilina, Vladimír Bačik, Hričovská 5, 010 01 Žilina – Strážov, in the name of the petition committee (attachment with around 200 signatures), 19.1.1998

Residents feel that they have been damaged and they do not agree with the proposed solution or with the form of the specific execution of the proposed solution for the motorway collector in the scope of the constructed road as a double lane city road with a pavement for pedestrians

Ing. Štefan Holtan, Radoľa 262, Štefan Hudec, Radoľa 334, Ing. Ján Kultan, Radoľa 272, Stanislav Tichý, Radoľa 324, Mgr. Alena Prievozniková, Radoľa 384, petition committee, 5.2.1998

The signing residents reject the routing of the D18 motorway pursuant to Variant C. This route of the D18 motorway has a very negative impact on residents of the village and its environment

Ing. arch. Ladislav Mandáček, ul. Matice Slovenskej 971/12, Kysucké Nové Mesto, Ing. arch. Anna Jariabková, ul. Clementisova 1053/7, Kysucké Nové Mesto, Stanislav Jarabica, ul. Lipová 807/4, Kysucké Nové Mesto, Ing. Ján Kándrik, Neslušska cesta 1220, Kysucké Nové Mesto Alžbeta Kalužniková, Budatínska Lehota 156, petition committee, 5.2.1998

Residents of Kysucké Nové Mesto reject the routing of the D18 motorway route pursuant to Variant I. This route for the D18 motorway intersects a residential area with 17 000 district residents and has a permanent and irreversible negative impact on the city residents and its environment. They insist on Variant C.

# Jana Bendová, Povina 199, Zuzana Vnuková, Povina 68, Miluša Bendová, Povina 104, Anna Falátová, Povina 234, Katarina Verliková, Povina 239, petition committee, 17.2.1998

The residents of the village of Povina reject the routing of the D18 motorway pursuant to Variant C. The presented route of the D18 motorway has a very negative impact on the residents of the village. Exhaust gases and noise from the tunnel would negatively impact the lives of residents in the lower section of the village.

## 5. Further developments in assessment

The petitioner after discovering the reaction of the residents and affected authorities reassessed the possible technical solutions in the section for Kysucké Nové Mesto and Radoľa and proposed that a **possible technical solution was one alternative of embedding the motorway underground at km 17.650 and 18.600.** The technical solution would lead to a modification of the section in that the anticipated negative impacts of the original surface Variant I would be minimised. This fact would subsequently impact the evaluation of the variants and partially change the weights of the criteria used for assessing the variants. This would exclusively apply to the variant with the embedded underground section of the motorway in the given section.

#### IV. OVERALL EVALUATION OF THE IMPACTS OF THE PROPOSED ACTIVITY

In the section from Hričovské Podhradie the motorway is led outside developed areas so no significant motorway impacts on residents are anticipated. Over the Hričov reservoir the motorway will be led as an elevated motorway, which requires significant interference into the water system and technical solutions will need to be executed in close cooperation with professional environmental protection bodies, specifically related to water fauna and water flora.

In the Kysucké Nové Mesto section the multi-criteria evaluation for various weighted main groups shows that when socio-economic criteria are removed, 69.5 percent of preference was given to the suitable execution of Variant C, which in this case received a preference of 52.9%.

At a balance of both main criteria groups (technical-economic and socio-economic) it is best to complete Variant I, which achieves a preference of 53% in this case.

Sensitivity analysis shows that from a value weight of 0.41 the preference for the variants changes meaning that the value of preference for technical and economic criteria of 41% and higher means that the execution of Variant I becomes more suitable.

The results of a comparison of variants within the main criteria groupings shows that during the evaluation of socio-economic factors alone tunnel Variant C is more suitable with a preference of 63.1%. If only technical and economic criteria are considered, embankment Variant I would be more suitable with preference of 66.5%

In terms of direct impacts on residents (noise, dust and barrier effects) and the environment created by the motorway the tunnel Variant C is more suitable. In terms of impacts on the environment as well as technical traffic and economic factors, Variant I is more suitable.

During a comparison of variants pursuant to the individual aspects we reach an assessment from which it extends that Variant I interferes with the supra-regional bio-corridor of the Kysuca River where it is likely to result in the destruction of bank green spaces during construction; Variant I also creates partial barrier effects, Variant I can also fundamentally change the characteristics of the Kysuca River, etc.

The route of Variant C is around 1.4 km longer with anticipated expenses of around SKK 4.8 billion higher. In terms of time demands for the execution of the construction work, Variant I is more suitable. In terms of the conditions for traffic service both variants are comparable. In terms of impact on land and regional development the more suitable variant is Variant C, in addition the intensity of the impact into residential areas in the case of Variant C is also lower; in terms of impact to residents Variant C is also considered to be more suitable (during construction Variant C is considered to have slightly higher impact on residents).

Interference that could occur during Variant I (interference into the supra-regional bio-corridor of the Kysuca River, barrier effects, destroyed bank green space in a length of around 2.8 km, interference into waterways and waterway conditions, etc.) is avoided in the case of Variant C. Variant C preserves the natural conditions of the valley bed of the Kysuca River. The principle negative impact of Variant C is the interference into an unstable, risky hydro-geological environment that on the basis of current knowledge virtually eliminates the completion of this variant.

#### V. CONCLUSIONS

### 1. Final statement with regards to the activity

On the basis of the results of the assessment contained in the assessment report, received statements, records from public discussions and evaluations, the planned "D18 Motorway in the Hričovské Podhradie – Kysucké Nové Mesto Section" activity is recommended under the condition that the measures shown in Point V.3 herein are followed.

#### 2. Recommended variant

Variant I, embedded underground as long as necessary measures are followed, and Variant C for the D18 motorway in the Hričovské Podhradie - Kysucké Nové Mesto section are comparable in terms of anticipated environmental impacts.

Variant I (alternative section embedding the motorway underground at km 17.650 – 18.600) is possible only under the condition that measures related to the protection of the environment, affected residents and municipalities and the conditions shown in Chapter V.3 herein are all followed.

# 3. Recommended conditions for the activity preparation and execution phase

Measures that must be accepted and followed during construction project preparation and execution and have been generated from the assessment results and the statements from the affected municipalities, the public and affected authorities. Measures that are proposed at a later time must be completed individually for individually grouped environmental categories. Some measures will have general validity; others are specific to given impacts or areas. A submitted petition must be considered as a framework that corresponds to the level of project preparations. In addition to the recommended conditions for the activity preparation and execution phase shown in the Assessment Report, the following conditions must be followed:

- 1. Detailed geological engineering research must be completed for the entire route with the purpose of determining the geotechnical characteristics of the area and to establish conditions for demolition measures.
- 2. During research work the following must be the subject of specific focus:
  - \* Establishing the contact areas between individual sections with rock bases,
  - \* Defining the degree and scope of disintegration of the rock bases,
  - \* Use lab or field testing to determine the physical or chemical characteristics of the soil including the soil's modulus of deformation and modulus of elasticity as well as the tensile, compression and shear strength of the soil,
  - The cutting and drilling characteristics of the soil,
  - \* Soil classification in order to propose boring equipment pursuant to classification set in appropriate standards,

- An evaluation of portal section stability,
- \* Completion of detailed analysis of the geological environment around the construction project including surface soil fissure with mapping of lines, layer composition and moisture content, layer slope, size and the dynamics of slope breaches.
- 3. Complete hydrological research on selected sections of the route in order to define the status and direction of surface water flows in connection with the presence of drinking water as well as qualitative assessment of their current condition.
- 4. Hydro-geological research is to be used to determine the presence of the preferred rainwater drainage routes and ground water flows that are crossed by the motorway roadbed so as to lessen barrier effects, which could lead to the formation of rainwater accumulations and thereby lower soil yields.
- 5. The risk of impacting the yields of water sources for municipalities must be recorded in the completed hydrogeological assessment. In the event that the construction of the tunnel will affect the yield of water sources, replacement water sources must be proposed in order to supply residents with drinking water. The final hydro-geological research assessment must be send to the Slovak Ministry of the Health to the Spa and Springs Inspectorate Section.
- 6. Increased attention must be paid to the collection of soils with an assessment of quality, the use of removed materials and an inventory of biotopes in the directly affected areas.
- 7. Reassess the parameters of proposed bridge structures on the motorway and passages under the motorway in terms of migrating wildlife; if necessary propose appropriate adjustments. Locate the exact migration routes for large animals and amphibians.
- 8. Special attention must be given to establishing the conditions for technical work depending on the status of water bodies.
- The effectiveness of noise measures within the proposed technical solution pursuant to Slovak Ministry of Health Decree No. 14/1977 Coll. is to be assessed at critical areas where the motorway passes close to villages.
- 10. Areas for depositing soils along with a specification of such soils must be determined in cooperation with the consenting authority.
- 11. Significant biotopes and geo-fund locations must be shown in the land use planning documentation related to the construction of the motorway in order to more closely define environmental protection conditions.
- 12. Within additional project levels it is necessary to propose adequate corrective measures (drainage, retaining walls, anchoring, pre-stressing of slope bases and an exchange of low bearing bases) with emphasis on the areas around cuts, bridge pillars, elevated motorway sections and the tunnel.
- 13. Within additional levels of project preparation it is necessary to respect the current railway equipment as well as the development aims that are included in the "Bratislava Žilina Kosice and Žilina Čadca Track Modernisation Program and Conformance with Reconstruction of These Tracks" modernization study that was completed by SUDOP TRADE KOSICE.
- 14. The Slovak Ministry of Defence requests that additional levels of project documentation be discussed with the appropriate Military Accommodation and Construction Administration (VUSS).
- 15. The road crossing between the village of Radoľa and Kysucké Nové Mesto must be preserve so as to allow the direction reconnection of the villages of Radoľa, Lopušné, Pažite, Dolný Vadičov, Oškerda and Budatínska Lehota.
- 16. A road connection between the villages of Vranie and Rudinka in the section from the Brodno crossroad to the bench for pedestrians in Vranie must be resolved so as to secure suburban transportation for the employed residents of Rudinka and Vranie and to satisfy the road connections between Rudina, Rudinska and Nesluša with Žilina (lowering the traffic loads on Kysucké Nové Mesto).
- 17. Flood protection on the left bank of the river in the form of a levee or a wall must be resolved within the induced investments.
- 18. A pedestrian crossing in the form of an overpass or an underpass must be secured for crossing the I/11 road in Brodno (at the location of the existing rail line crossing).
- 19. Within the land use planning documentation it is necessary to define replacement locations for landscaping plantings; in addition the various bridge work and the waterways will lead to interference into the Kysuca supra-regional bio-corridor, mainly into the growth on its banks.

- 20. The collection of a portion of the Topoľový lesik supra-regional bio-corridor must be compensated for with replacement landscaping plantings of suitable trees and with a shift in the edge of this forest in a north, northwest direction. This fact must be incorporated after consultation with the consenting authority within the land use planning documentation or within the construction permitting documentation.
- 21. Verify the possibility of eliminating any eventual barrier effects in the section from km 20.000 to 20.500. In the area o the fly-over crossroad at km 21.450 it is necessary to verify the passage for land animals (direction towards the Škorča-Tábor bio-centre).
- 22. The completion of Variant I will lead to bridging of various local waterways which must be resolved using various openings that should not restrict the migration of wildlife.
- 23. The directional and height characteristics of the motorway should be resolved so as to increase the height of the bridging over the waterway at the section from km 12.400 13.000 and in the area of Kysucká brána at km 15.000 17.000 in order to protect preserved alluvial areas.
- 24. Access must be preserved to the significant geological profile (update of Kysucká brána protected natural area) when extending the service road under Brodnianka.
- 25. Within the project documentation it is necessary to complete detailed plans for managing individual types of waste (specification of the manner for disposing of individual types of waste that are generated during construction work and specification of the manner of managing generated wastes).
- 26. In order to lessen the effects of emissions generated during the construction of the motorway and their impact on residents and the surrounding environment it is best to apply exhaust reducing measures in the form of protected green areas (normally in combination with noise barriers). In addition these functions also positively affect the aesthetic perception of the motorway. The specific design for landscaping measures should be completed after definitive placement of the route on motorway plans.
- 27. Exhaust gases from tunnel sections will be concentrated into tunnel exhaust areas. The placement of these areas must secure sufficient dispersion of exhaust gases and they must naturally respect the interests of natural and environmental protection, the protection of water sources, etc.
- 28. Environmental impacts are anticipated during construction on the section that crosses the Strážov Pond and the Hričov reservoir (km 9.000 to 10.000) on the water ecosystem of the reservoir due to a breach of ecological stability and function. In this location the D18 route should be placed on a bridge structure.
- 29. The directional and height characteristics of the route should be resolved after agreement and after considering the conditions of the Váh River with regards to increased heights under the bridge structures in the km 12.400 to 13.000 section and in the area of Kysuca brána at km 15.000 to 17.00 in order to secure preserved alluvial areas. Access must be preserved to the significant geological profile (update of Kysucká brána protected natural area) when extending the service road under Brodnianka.
- 30. The directional and height characteristic of the route of the D18 motorway should be adjusted so that the continuity and compatibility of the bank zones be preserved for semi-terrestrial wildlife including planting and reconstruction of bank growth. Connecting replacement plantings are recommended for collected alluvial growth in the Topoľový lesik pri Kysuci bio-centre.
- 31. A slight shift in the route from the local Okolie vodojemov bio-centre is proposed with a protective green space (around km 22.000 to 23.000).
- 32. A solution for stabilising and landscaping around the tunnel portals is recommended.
- 33. The route of the motorway near Kysucké Nové Mesto should be placed as close as possible to the Kysuca River.
- 34. The tunnel in the area of Budatínska Lehota should be extended so that the exit from the tunnel is placed outside of the developed area of the village (e.g. north of the current river channel).
- 35. The route of the motorway should be placed closely in parallel with the I/11 road to just in front of the village of Povina.
- 36. The need for a northern motorway collector in Kysucké Nové Mesto should be considered. Its construction would prevent the transit of freight and commercial vehicles through the city to the industrial areas to the south and west of the city.
- 37. Consider the connection of Rudinka via a newly constructed road towards Žilina.
- 38. A separate plan for revitalising the banks of the Kysuca River must be completed for the embedded motorway in cooperation with the consenting authority and the given Kysuca River basin.

### Measures to be taken during construction

- 1. During construction regular environmental supervision must be secured (upon agreement with the consenting authority) in the interest of limiting the negative impacts of the construction of the motorway on the environment caused by construction equipment and unjustified and unnecessary destruction of the environment around the construction site.
- 2. An "environmental construction plan" that is to contain the proposal of construction principles in relation to the environment and a proposal for inspection of adherence to these measures within the construction schedule must be completed for the construction phase of the project; this must also be submitted to state environmental authorities for confirmation. A component of this plan should also be a proposal of preventative measures, a plan of protective measures to be taken during accidents and a proposal of measures to be taken to eliminate the consequences of an accident.
- 3. Dust generated on access roads near residential areas must be limited (spray down) and mud that forms from construction traffic must be cleared from roads during rainy periods.
- 4. Freight traffic routes are to be diverted from residential areas.
- 5. Excavation work must be announced to the Archaeological Office of the Slovak Academy of Sciences before such work commences.
- 6. Construction yards must be placed in locations with lowered agricultural value in terms of production yields and away from areas with significant biotic areas, ideally after consultation with professionals in terms of soil, biotope and environmental protection.
- 7. Reinforced areas must be constructed below parking lots for vehicles and construction equipment with insulation from the foundation and drainage for these areas with cleaning via grease separators and sedimentation tanks.
- 8. The placement of construction site structures is to be resolved in such a manner as to result in the least collection of soil as possible.
- 9. The dispersion of plants must be preserved in used agricultural areas.
- 10. During motorway construction and operation it is necessary to have a completed accident plan in the event of an oil-based material leak.
- 11. For the purposes of lowering the negative environmental impacts during the process of obtaining raw materials for the construction of the motorway, raw materials used for motorway fills must first be extracted from open quarries, pits and gravel beds (included abandoned) including materials for waste piles (mining locations at Lietavská Lučka, Straňavy Polom or extraction sites with unreserved raw materials Lopušné Pažite). Only in extreme cases can the opening of new locations for mining operations be allowed. The environmental impact of mining must be assessed pursuant to Slovak National Council Act No. 127/1994 Coll. in the event that newly opened extraction areas are opened with capacity related to the size shown in Annex 1 to the Act.
- 12. Special attention must be provided to the protection of water sources during construction work as there is an increased risk of a leak of hazardous materials, mainly fuels and oils from construction equipment, during such work.
- 13. During construction work in protected areas around water sources a plan of accident response measures must be completed pursuant to valid legislation that must be submitted for approval from the water management authority.

#### Measures to be taken during operations

The bridge sections over the river and the streams are associated with locally lowered temperatures due to faster temperature losses when compared to the surrounding earth surfaces and the collection of cold air in the lowest areas. Lowered roadway surface temperatures are frequently associated with twisting and the possible formation of frost and ice. Frost and ice signals should be installed in these motorway sections.

## Noise

Proposed measures to limit the impact of roadway traffic stem from the calculations shown in the noise study, which is a component of the Assessment Report.

- 1. Barrier materials and structures must comply in terms of function, stability, safety, aesthetics and barrier integration into the environment.
- Noise blocking measures are suitable for installation in areas along the motorway away from bridge structures in locations where the spatial conditions allow and include earthen walls, noise absorbing coverings or combinations.
- 3. Noise barriers must be constructed in areas where noise limit values are exceeded in a proven manner during motorway operation.

#### Measures for protecting surface water during operations

In no case is any wastewater allowed to be drained into standing water.

#### Surface environment and reliefs

Measures related to the surface environment can only be proposed in a general form at current. The specific procedures for removal operations require knowledge of the characteristics at the level of results of completed geological research and will therefore have to be completed in additional levels of documentation.

Interference into reliefs (excavation and fill work) must be lessened via landscaping activities: revitalisation of nearby green spaces, landscaping work for the slopes of cuts and replacement landscaping plantings.

#### Mineral raw materials

Existing reserves of mineral raw materials should be used to the largest extent possible.

#### **Biotope**

- 1. Landscaping with accompanying woody vegetation should be completed. We propose completion of these measures depending on the total length of the selected variant. The use of suitable species of trees, plants and shrubs must occur during such planting work.
- 2. Motorway barrier effects will be lessened by leading the motorway over bridge structures. The bridge structures must be completed in an appropriate size depending on the location and nature of the bridged area, wherein sufficient crossing areas must be left along with space for the original waterway and banks.
- 3. Interference into the natural areas of the Kysuca waterway must be minimised.
- 4. Replacement landscaping plantings must be completed for all tress and shrubs that are removed away from forested areas on the basis of the bio project.

## Agricultural production and forest growth

- 1. Extension of field roads are to be constructed and a project of economic and technical measures must be completed and executed for the affected area.
- 2. Technical measures must be taken to limit soil erosion above and below the route of the motorway. Growth areas at the edges of the route must be forested with trees and shrubs in order to create grown up areas to prevent damage due to root damage and winds. Consider the construction of crossings under the motorway to allow for the extraction of timber.

#### Socio-economic aspects

In terms of the construction of the motorway it is necessary to closely cooperate with the investor and the supplier of the construction work along with residents in order to minimise the impact of construction work on the affected municipalities and residents.

Cooperation is also ordered during updates to land use planning documentation for the affected municipalities.

# Acceptability of the activity for the municipalities

1. Construction project supplier cooperation is required with the municipalities during the definition of the definition of the route of the motorway, the schedule for operating equipment, the manner of maintaining municipal roads, traffic signs and traffic management during construction.

2. Compensation will be provided for collected agricultural land, forested areas, etc. in the event that material damage occurs.

### Material damage to residents

- 1. In the mean time a solution must be found for legal property settlement regarding real estate along the route of the motorway.
- 2. Primacy should be afforded to securing the completion of a "Registry of Record for Renewed Land (ROEP)" for the land registry area of the affected villages and cities (task for the Slovak Ministry of Agriculture or the regional government).
- 3. Respect must be provided to access roads to agricultural and forest lands so that no negative impacts to their management within the agricultural and forest land funds.

# **Agricultural production**

If possible we recommend avoiding any division of planting fields into irregularly used and non-functioning lengths along the motorway route. During the selection of the motorway route preference must be given to crossings of planting fields in the lowest productive categories.

## **Agricultural lands**

- 1. Pursuant to the Agricultural Land Fund Act we propose the use of cover crops and a suitable range of base soil materials particular in terms of the fluvial soil type and appropriate application on other infertile areas or on thin soil layers along the Váh River so as to create high yield soils
- 2. On temporarily collected lands measures must be completed after construction work finishes in order to recultivate these areas and to return them to their original use.

#### Storage of extracted materials

- 1. We propose to use the existing spaces used in the extraction of mineral resources as storage locations for unsuitable materials.
- 2. After the materials are stored it will be possible to re-cultivate this area using top soil excavated from land collected for motorway construction. We consider this solution to be the most environmentally acceptable.
- 3. Locations that are suitable for the storage of excess soil must be determined in cooperation with the consenting authority.
- 4. Before excavated materials from the motorway construction are stored at the waste facility proposed in Malé Vreteno it is necessary to secure protected archaeological research in this location.

# 4. Explanation for the final statement including an evaluation of written statements pursuant to § 18 of Act No. 127/1994 Coll.

The final statement was completed pursuant to § 20 of the Act in cooperation with the Slovak Ministry of Transport, Post and Telecommunications on the basis of all available supporting materials, the results of the assessment report and related documentation, statements from affected authorities, the consenting or appropriate authorities, the results of public discussions as well as statements and evaluations from residents.

The Slovak Ministry of the Environment properly considered every comment and statement from affected authorities, experts and residents. All objections submitted in writing or in oral form were discussed by the Ministry with the petitioner, the elaborator of the assessment report, some elaborators of partial sections of the assessment report and other evaluators.

Justified comments were transposed into the proposed measures (V/3).

During assessment a modification was made to Variant I along with a solution for embedding this route underground with preservation of the roadway connection between Kysucké Nové Mesto and Radoľa with a minimisation of the anticipated environmental impacts on the villages and municipalities.

The resolution of the Hričovské Podhradie – Kysucké Nové Mesto motorway section (in the Kysucké Nové Mesto – Radoľa section designed in two variants for the purposes of the Report marked as Variant I and Variant C) is not

principally in breach of valid land use planning documentation. The motorway's environmental impacts will occur during the construction of the motorway and during the operation of the motorway. In terms of the environmental impact assessment for Variant I (embedded) and Variant C the conclusion was reached that the scope and intensity of the negative effects on residents and the environment are comparable. Variant I is relatively easier to complete in terms of technical aspects and is more suitable in terms of the traffic and technical point of view.

## 5. Required scope of post-project analysis

A separate monitoring project must be proposed on the basis of the identified impacts of the construction and operation of the motorway on the individual elements of the environment and from the proposed mitigating and protective measures as follows:

- Monitoring of slope stability in the areas around cuts and bridge structures (as a routine activity during motorway maintenance and operations)
- Monitoring the development of slope erosion with steep grades (as a routing activity during motorway maintenance and operations)
- Monitoring of the level and quality of ground water in the areas of Dolný Hričov, Oškerda, Rudinka, Radoľa,
   Kysucké Nové Mesto and the solid surface above the tunnels
- Monitoring of the level and flow of surface waterways affected by the construction and operation of the motorway and monitoring of the level and flow of water released into the recipients (STN 75 7241)
- Monitoring of the noise and emission loads in locations that are in direct contact with the motorway (northern edge of Dolný Hričov, Brodno, Vranie, Oškerda, Kysucké Nové Mesto and Radoľa)
- Monitoring of the quantitative and qualitative changes in the composition of vegetation at established transit sections and in justified cases also monitoring of the anthropization of communities and the content of heavy metals present in selected plant species
- Monitoring of the changes in ecological stability as well as the related protective functions of the proposed
   Topoľový lesik supra-regional bio-corridor on the development of emissions
- Monitoring of migration corridors (particularly the functionality of the underpass in the Kysucká brána area
- Monitoring of the intensity and structure of transportation in attached communication networks

## 2. Proposed inspections of adherence to established conditions

Inspections of adherence to established conditions should be completed in the form of the submission of a final report from monitoring work by the petitioner to the consenting authority as follows:

- At annual intervals during construction work and once upon operations have started
- Later at intervals stipulated by the consenting authority on the basis of the results of the initial monitoring

## VI. CONFIRMATION OF THE ACCURACY OF THE INFORMATION

1. Name of the elaborators of the final statement

Slovak Ministry of the Environment, OPV Ing. Milan Luciak

Slovak Ministry of Transport, Post and Telecommunications

Roadway management section

Ing. Gejza Végh Section Director

2. Confirmation of the accuracy of the information

Slovak Ministry of the Environment

Ing. Alexander Daňo OPV Director

3. Date of issuing the final statement:

27.7. 1998

MINISTERSTVO ŽIVOTNEHO PROSTREDIA SP Pam Chich in Stura I 812 35 B A 4 T I S L A V A