EXECUTIVE SUMMARY OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROJECT FOR THE CONSTRUCTION OF 720-863KM SECTION OF THE CHITA-KHABAROVSK "AMUR " ROAD

1 INTRODUCTION

1.1 GENERAL INFORMATION

This document covers a description of matters related to environmental protection (EP) during the planning, design and construction of the Section of the Chita-Khabarovsk "Amur" Road.

Environmental Impact Assessment Report sections (EIAR) were prepared during the stage of engineering design, which obtained all necessary approvals by the State Committees of the Natural Resources of the Chita and Amur regions.

1.2 THE NEED FOR THE INVESTMENT

The construction of different sections of the Amur road has been underway since 1978.

To speed up the construction on the basis of the Program of development of the road network "Roads of Russia of XXI century", which was reviewed and approved at the session of the RF Government dated June 28, 2001, the Government of Russian Federation issued directions aimed at accelerating construction of the project.

The construction of the Amur road will make it possible to use motor transport for freight services and passenger transportation in the road direction and it will serve as a basis for the road network development.

1.3 BASIC LEGISLATIVE ACTS REGULATING THE USE AND PROTECTION OF CERTAIN KINDS OF RESOURCES

- The law of the RSFSR "Protection of environment" of December 19, 1991 (amended by Laws of the Russian Federation of 21 February 1992 No.2397-1, 2 June 1993 No.5076-1, 10 June 2001 No. 93-FZ, 27 December 2000 No. 150-FZ, 30 December 2001 No. 194-FZ, 30 December 2001 No. 196-FZ);
- Water Code of the Russian Federation of November 16, 1995. No.167-FZ (amended by Federal Law of 30 December 2001 No. 194-FZ);
- Land Code of the Russian Federation of 25 October, 2001;
- Forests Code of the Russian Federation of January 22, 1997 No. 22-FZ;
- The RF Law "Atmosphere protection" of 4 May 1999 No. 96-FZ;
- The RF Law "Mineral resources" (amended by RF Laws of 3 March 1999 No. 27-FZ, 10 February 1999 No. 32-FZ, 2 January 2000 No. 20-FZ, 14 May 2001 No. 52-FZ and 8 January 2001 No. 126-FZ);
- The RF Law "Industrial and consumption waste" of 24 June 1998 No.89-FZ (amended by the RF Law of 29 December 2000 No. 196-FZ;
- The RF Law "Fauna" of 24 April 95 No. 52-FZ;

- The RF Law "Sanitary and epidemiological safety of the population" of 30 March 1999 No. 52-FZ (amended by the RF Law of 30 December 2001 No. 196-FZ);
- The RF Law "Territories under special protection" of 14 March 1995 No. 33-FZ
- etc.

To make an estimation of pollution the following documents were used: normative and methodological documentation approved by the respective bodies of the State Hydrometeorological Service, the State Ecological Expertise of the Committee of Natural Resources of Russia, the Ministry of Public Health, as well as documents of different ministries and institutions.

In accordance with Clause 5.2 of the Regulations on the environmental impact assessment in the Russian Federation, approved by the order of the Ministry for natural resources of the Russian Federation, “the Customer together with the designer shall arrange public hearings or discussions of project and other proposals…” in mass media.

2 PROJECT DESCRIPTION

The Amur Project Component was developed as part of the program for the construction of a route between Chita and Khabarovsk.

2.1 GENERAL INFORMATION

The 720–863 km section of the Chita - Khabarovsk road is located on the territory of the Chita and Amur regions and links the Central part of Russia and the Far East.

Analysis of the two right-of-way alternatives was carried out at the initial stage of the project design. According to the first scenario, the road was to be constructed in the significant distance to the North of the Moscow- Vladivostok railway road and adjacent settlements. The second scenario envisaged laying the road to the South from the railway road until km 767, crossing the railway road and its further continuation to the North of the railway road. The second scenario is located closer to the existing infrastructure.

The environmental assessment of the two alternatives resulted in the conclusion that construction of the road according to the first scenario is less preferable from the environmental point of view as the size of the wood land to be taken would have been 311 hectares more than for the second scenario. In addition 30% more water bodies would have to be crossed by the road than in the second scenario. Naturally construction of the road in an uninhabited territory would have resulted in a bigger impact on the flora and fauna as it would have led to a greater transformation of an untouched territory. Greater length of the first scenario (by 113.5 km) would have required more service roads than the first scenario, which would incur increased atmospheric emissions of polluting substances.

The second scenario was subjected to further elaboration at the next stages of project design as more advantageous both from economic and environmental points of view.

A “zero” alternative was not considered due to the high strategic importance of the road for the development of the Russian East.

The construction of this road section started in 1978 according to the Feasibility Study (FS) made by Soyuzdorproekt Institute. Construction proceeded

slowly and in 1994 it was decided to update the FS in accordance with the latest standards. This work was done by the following design organizations: IrkutskgiprodorNII Research Institute and Khabarovsk branch of GiprodorNII Research Institute.

The FS passed the necessary ecological review ("expertiza") in Natural Resources Committees of the Chita and Amur regions and was approved by the decree # 87 from 26.05.95 of the Federal Roads Department of the Russian Federation Ministry of Transport.

In 2001, upon the instruction of the Far East Directorate for Roads Construction, the IrkutskgiprodorNII Research Institute prepared the Substantiation of Investment report for the construction of the 720-863 km section of the Chita - Khabarovsk road, which updated the previous environmental studies, including extended analysis of the impact on the adjacent forests , and an archeological survey. No objects of an archeological, historical or cultural value were found in the right of way of the road, which has been confirmed by approvals from the Cultural Heritage Committees of the Chita and Amur regions from 20.04.00 and 26.12. 01 correspondingly.

At present, all the required permits for the engineering design of the 720-863 km road sector have been obtained, including such on the environmental impact assessment as per the approvals of the Natural Resources Committees of the Chita and Amur regions from 18.01.02 and 12.02.02 correspondingly.

The completion of construction of this section of the Amur road and the construction of a complex of roadside maintenance and service facilities will improve the operational performance of the regional transport network. This will increase the local freight turnover and enable the transit cargo transportation through the territories of the Chita and Amur regions with optimal speed, and in good conditions. It will also support enterprises and social institutions as a result of the increase of tax proceeds into the local budget.

The change of the social and economic conditions as a result of implementation of the activities under review will come about through the increase in of demand for manpower resources, the creation of additional jobs which will be a stabilizing factor for these territories facing the reduction of production volume and an increasing exodus of population. The new road will improve the social conditions and stimulate the development of local industry. The road will make a great contribution into the region's development and improve the social and economic conditions of both the region's population and all the adjoining areas.

2.2 BASIC TECHNICAL PARAMETERS OF THE ROAD

In accordance with the estimated traffic volume and according to the RF standards, the 720 – 863 km section of the Chita-Khabarovsk "Amur" road belongs to Technical Category III.

- Estimated traffic speed– 100 km per hour;
- Estimated traffic speed in cross-country (difficult sections) – 80 km per hour.

The beginning of the reviewed road section is determined at 720+071 km near the settlement of Amazar. The end of the road section is determined at 863+446 km. The total section length is 137.48 km.

The route of the section within the Chita region boundaries lies in the northeastern direction to the border with the Amur region. The general direction of the road coincides with the direction of the existing Moscow - Vladivostok railway.

The reviewed road section runs parallel to the railroad. At km767 the road crosses the Railway near the settlement of Zhanna in order to avoid the Bolshaya

Chichatka river, crossing its watershed area on the administrative borderline of two regions.

From km 767 to the end of the section (863 km), road route lies to the North of the railway at the distance of 1-3 km, in a rather crossed terrain. In accordance with the conditions of the rugged countryside and the necessity of blending the route with the landscape, the route on the scheme is an alternation of straight lines and curves. The radii of the curves on the scheme are 1000-3000 meters with the exclusion of complex tight areas, where the radii of the curves are assumed as 600-1000 meters.

The basic standards assumed for project line of the longitudinal profile:

- The maximal longitudinal inclination for the estimated speed of 100 km per hour – 50‰;
- The maximal longitudinal inclination for the estimated speed of 80 km per hour – 60‰;
- The minimal radius of convex curve in the longitudinal profile – 10 000 meters;
- The minimal radius of concave curve in the longitudinal profile –3 000 meters.

The level mark of the earth fill was calculated with the account of snowfall, permafrost conditions and ground and surface waters levels. The reviewed road section uses the second principle of developing road constructions – with partial allowance of deformation in the base of earth fill in the form of construction settlements. The level of earth bank in the fill was established by the estimation 0.97–1.0 meters free from snow; the minimal heaving over the earth surface in places without hard surface –1.60 meters; considering the permafrost – 2.5 meters.

The project line of the longitudinal profile is characterized by the alternation of fills and cuts of soil. The maximal height of any fill is 24. 8 meters; the maximal depth of any cut is 19 meters. The cuts are made, as a rule, in the rocky ground; the vegetation layer on the surface of the fill will not be removed. To redirect the surface runoff water, the drainage channels would be constructed. Along all the length of the designed section, with the exception of rocky areas, the upper layer of the road bed (embankment) of 1-meter depth is made of stable (non-heaving) ground. The ground for the construction of the road will be provided from the cut sites and 29 local reserves containing grounds of rocky nature and large debris.

The permanently withdrawn land strip includes the road bed and drainage ditches plus 1-meter. The temporary land withdrawal is planned for the preparation of soil reserves and access to them, for the areas to make stockpiles of excess ground, building sites and temporary facilities. To facilitate engineering transport during the construction period, there will be made a temporary drainage strip (4 m wide) on both sides of embankment. In places of cuts from the rocky grounds, the width of the temporary drainage strip is assumed as 10 meters to provide the safety distance between the edge of the cut slope and the strip for traffic.

The design of the road coating will take into consideration the transport and maintenance characteristics, category and purpose of the road, character and prospective traffic volume. The first stage of the construction will involve a covering of transitional type; the second stage, after the stabilization of the road bed, presupposes road coating with an improved covering: one-layer coating of hot fine-grained thick asphalt concrete. Meanwhile, the road coating of the first stage will be used as the lowest layer of the base of the road coating of the second stage.

The road width is assumed to be 7 meters with the two lanes of 3. 5 meters each; the total width of the right of way – 12 meters.

2.3 BASIC PARAMETERS ON FACILITIES, CROSSINGS AND INTERSECTIONS

The Amur Road section of 720-863 km crosses 46 permanent and temporary water bodies, amongst which the largest are rivers Amazar, Bolshaya and Malaya Omutnaya, Urka.

Small – size facilities are made from ferroconcrete round pipes of 1.5 meter diameter of long sections, one- two- and three holes – 78 pieces; oval ferroconcrete pipes of 2.5 x 2.0 meters – 11 pieces; metal corrugated pipes of large diameter, one- and two holes – 14 pieces.

The design envisages the construction of 42 bridges and bypasses with the total length of 2,294.37 meters on the road section, including:

- Small bridges – 15;
- Middle bridges – 22;
- Long bridges – 5.

The size of the roadway is in compliance with the present standards. The bearing structures of bridges are designed for temporary moving loads A–11 and NK-80.

The reviewed section of the federal Amur road crosses local roads of categories IV-V, therefore all the crossings and intersections are made on the same level, with transitional speed lanes or without them, depending on the importance of the crossing or adjoining road and the traffic volume on it.

The crossing with the Moscow - Vladivostok Railway will have two levels including an overpass.

In addition to the above mentioned examples the fire exits into the forest as well as service roads where the road slope is more than 50% are planned to be constructed. In total there will be 37 intersections and crossings, including crossings of 3-G-1 type – 7, technological crossing – 1; intersections of 3-B-2 type – 5, 3-V-2 type – 5, 3-G-2 type – 16 pieces, individual intersection– 1, service road – 2.

The construction of buildings and road maintenance and services facilities is planned in parallel with the construction of the second stage of the road.

3 CURRENT ENVIRONMENTAL CONDITIONS AND THE ASSESSMENT OF ENVIRONMENTAL IMPACT

The current condition of the environment is given on the basis of engineering and environmental research data.

3.1 NATURE AND CLIMATIC CONDITIONS

3.1.1 Climate

The climatic conditions of the region are severe. The winter is cold with little snow. The summers are hot. The average annual temperature is - 4.4^{0}C. The ground

is usually snow-covered from the end of October till the end of March–beginning of April. 6-10% of the rainfall is snow, rain and wet snow accounts for 3-4%. Frost formation and icing of roads is typical for this region.

Average wind speeds are 1.3-1.6 meters per second. The prevailing directions of wind are from the north and northwest.

The construction of the road may affect the condition of ground and surface waters which may result in frost formation and icing of the ground.

3.1.2 Relief

The area is cross-country with complex relief forms. In the Chita region the road passes through the mountainous terrain of the eastern Zabaikalie region – the Daur Raise. The relief of the section presents mountains of average altitude, the mountains have smooth contours, with massive rounded or oval tops and gentle slopes of broad valleys. In the Amur region the road passes the spurs of the Stanovoi Ridge, the Prishilkinskaya mountains and valleys area. The relief is low mountainous with chines, slopes and mounds.

3.1.3 Geology

The road terrain is characterized by heterogeneous grounds and is of the Eastern Zabaikalie, which is a part of a large geotectonic region – the Okhotsk Branch of the Mongol-Okhotsk folded region.

In the Chita region there are the Paleozoic intrusions presented by granites, diorites, grandiorites, quaternary sediments presented by dealluvial, dealluvial and proalluvial, alluvial formations. In the Amur Region there are many intrusions, such as grandiorites, corniferous and biotite porphyry-like of different maturity, rhyolite and dacitic porphyries. Quaternary sediments are mainly dealluvial and alluvial formations alluvial sediments occur in the valleys of brooks. There are areas with large content of peat.

In general, the terrain of the area surrounding the road could be described as typical high-temperature permafrost (average annual temperature is up to -1.5^0C) ground. The terrain seismicity is 7 grades.

3.1.4 Fauna.

The fauna of the territory consists of ungulates (musk-deer, elk, deer), predators (brown bear, wolf, lynx, sable, otter), rodents (squirrel, chipmunk) and other animals belonging to the taiga species. The following rare specimen of animals, included in the Red Book, can be met in the region: Japanese crane, white-chested bear, red wolf. The birds: wood-grouse, hazel hen, waxwing and others. However there are no Red Book animals in the right of way area, which has been confirmed by the approval of the regional environmental authorities.

Due to the proximity of the railway to the road and the noise it makes, animals do not stay near the area. Some migration of animals across the road does take place, mostly ungulates. It is however not of a large-scale nature. As the road has already been built in some parts, there are no special recommendations for responding to animal migration. Moreover, the earlier built railway which runs some distance away from the road is a large obstacle in itself to animal migration.

The rivers are a home to the following species of fish: white-fish, umber, minnow, gudgeon, Amur pike, crucian and Amur ide. The majority of the rivers which will be crossed by the road section under review are of a low value to the commercial fishing industry, apart from a few water bodies which belong to the 2nd category of significance for the fishing industry (which do not represent spawning places, wintering pits, artificial breeding water bodies for fisheries and other water flora and fauna, and are not used for preservation and reproduction of fish resources, that are highly sensitive to the oxygen content)

3.1.5 Quality of surface and ground waters. Assessment of effect on the surface waters

The hydrographic network of the road area is made up primarily of brooks, streams, small to comparatively large rivers included in the basin of the Amur river. Streams are of the mountainous and semi-mountainous types: the bottoms are made up of pebbles and sand; their main source is rain. Summer is a time of numerous floods, in winter the streams are frozen. Most of streams are small and temporary ones.

Spring high water in rivers is barely noticeable as it doesn't snow much in winter. The high water usually begins in April and is over in about a month and a half, to be more exact it is connected with the beginning of the flood period. In most cases the flood is caused by a mixture of melted snow and rain.

During the rainfall period when large floods can take place, vast area of river valleys are flooded and bad conditions for natural drainage stimulate swamping of lower parts and cause their constant and considerable water levels. The flood period ceases by October. In November the rivers are frozen, the average length of freezing is 160-165 days. The ice breaks in April-May with ice drifting often leading to ice jams. Small rivers do not have ice drifting because all the ice melts on the spot.

In terms of its chemical composition, the water of the rivers in the area meets the requirements for the good quality water in all seasons.

The hydro-geological conditions in the Chita region are characterized by the presence of surface waters, which are mainly spread over flat basins, in the valleys of rivers and brooks, forming swamping areas – pigweeds, swamps, as well as ground waters in alluvial sediments of the valleys of brooks and rivers.

The hydro-geological conditions in the Amur region are characterized by quaternary sediments and interstitial grounds. The aquifer is made of light loamy sands, light loamy sands and loamy sands with a small content of peat.

The exhaust gases from cars which will use the bridges together with dust, and runoff can contaminate the surface water when mixed with melted snow and rain containing a whole range of detrimental impurities. These include particulates, oil products and different chemical elements (copper, cadmium, zinc, mercury, etc.).

Most of the rivers, which the road crosses, are of a low value to the fishing industry and are not used as drinking or industrial water sources.

The approved system of water drainage from the bridges, designed to collect and divert water to the sides of the road and dissipation along the slopes of road, excludes the penetration of water into the streams and other pools of water. In some

areas the system will allow for the collection of surface water and its removal to areas far beyond the boundaries of water protection zones of the rivers and streams.

No service/access roads or parking areas in the vicinity of the streams and rivers are planned.

In order to reduce the amount of contaminants on the road surface and from trucks and cars during the road operation, the contractor will regularly clean all solid waste and snow away from the surface of roads, bridges as well as clear snow off the roads in winter time. The system of surface drainage should be in good working condition. All ditches, gutters will have to be properly cleaned on a regular basis.

3.1.6 Social, economic and cultural issues

An archeological study was carried out during the design stage which showed that, on the whole the reviewed territory can represent a potential interest from an archeological point of view. However, there were no archeological monuments discovered in the area of planned or implemented construction works. There are no state-protected natural parks or other natural objects in the road area.

3.1.7 Settlements and current traffic

The road route by passes settlements in the area. The largest settlements in the vicinity of the Road in the Chita region are: Amazar, Chichitka, and Malye Kovali. In the Amur region they are Erofei Pavlovich, Bolshaya Omutnaya and Ulyatka. They all will have access routes to the road.

The overall road network is not developed in the area. Indeed, at present, there is no uninterrupted through road in this section. Most of the available roads designed are local field and forest roads for local traffic as well as some winter roads along the Transsibirskaya railway. These roads link nearby settlements in the districts.

3.1.8 Noise Impact and Its Assessment

The part of the road runs outside the populated areas and so the noise produced by motor cars is not a problem for the environment.

3.2 ENIRONMENTAL MITIGATION MEASURES

3.2.1 General information

Measures to protect the environment and reduce environmental impact will be carried out during which Project stage: design, construction and the road and engineering structures operation.

During the planning stage the main climatic, landscape and social conditions were considered. The road is planned to avoid residential areas, areas of rare animals habitats and watershed protection areas, as well as territories of potential archaeological, cultural and historical value.

3.2.2 Preservation of land and soils

All the works related to the road and its facilities construction are done strictly within the right of way. During the preparatory stage the topsoil layer will be removed. As it is a valuable resource it will be protected from deterioration until the end of the construction works and used for recultivation purposes. The topsoil layer will be stored in special places to avoid its decomposition.

To avoid soil pollution from oil products contractors will ensure that all machinery functions properly. Refueling and maintenance will take place in specifically designated areas.

Following construction all the temporarily used land areas will be recultivated in line with original conditions.

Soils preserving measures include:

- Removal and use of topsoil for recultivating any land, damaged by construction.
- Strengthening of slopes with grass planting (and steep slopes by geograte s and Renault mattresses). It is necessary not only to fasten the road embankment, but also that erosion from water and wind is avoided.
- Use of noise proof lines of plants, which in addition to their main functional purpose, contribute to combating soil pollution.
- Construction of drainage channels along the road in order to prevent ground water pollution from runoff and storm water.
- Use of modern technologies combat icy roads (wet salt, liquid salt solutions, proactive maintenance of the road bed according to specific weather forecasts), while minimizing chloride soil pollution.
- Minimizing use of temporary roads and access areas in general during the construction period.

The civil works elements of the Amur road will be carried out in conformity with local conditions particularly soil stability, landscape permafrost as well as the hard climatic and subsoil conditions. For the purpose of draining the surface run off water, a surface drainage system will be installed, including ditches, falloffs, drain facilities – culverts, whose design features are specified on a basis of optimal pressure- and speed regime of the water flow. This will allow the preservation of natural contours, neighboring landscape as well as the soil and geological conditions of the territory.

3.2.3 Preservation of surface and ground water

The road crosses a number of permanent waterways and their watershed protection areas. According to the water protection areas regulations, it is forbidden to pollute ground or surface waters through the dumping of waste, parking and car washing, or machinery washing. It is also forbidden to set up construction sites, construct quarries or open cast mines or produce construction materials in these areas.

When building bridges over rivers sufficient fishing value, all construction works will be carried out in the winter period. Works in river-beds during the spawning period will be avoided. To enhance fishing productivity, compensation will be provided aimed at restoring river-beds and reproducing fish stock.

Runoff of polluted surface water is forbidden. Measures will be provided to clean surface drainage water and discharge it outside the boundaries of watershed protection areas.

3.2.4 Waste: storage and disposal

Construction of the roads will inevitably result in generation of waste. However the amount of waste in normal situations is relatively small. The amount of waste created in constructing the road may be greater than usual due to ill-conditioned subsoil materials, which will need to be replaced.

The Contractor will be required to control the construction site; keep it clean and provide appropriate facilities for the temporal storage of all waste until it is disposed. Construction waste will be stored in special waste storage areas. The same concerns waste resulting from earth-moving/excavation. The waste will be stored adequately to avoid it polluting water supplies and sources as well as to avoid dust formation in dry seasons. The construction waste areas will be defined before the construction gets under way. The Contractor will be responsible for the safe transportation and storage of all waste in order to prevent any kind of environmental pollution or harmful effect to people or animals.

Runoff from untreated drainage and waste water into surface water reservoirs or on adjacent land is forbidden.

3.2.5 Noise and Atmospheric Pollution Protection.

Following construction of the road, lines of trees will be planted to reduce noise, dust, exhausts and air-gas emission levels of transport, including lead. In some parts of the road distribution of harmful emission may extend beyond the limits of the right-of-way, but considering the fact that the road by-passes inhabited areas, there is no need for special protective measures, though picking berries, mushrooms and herbs within 50 meters of the right-of-way is not recommended.

During construction emissions from construction machinery may be rather high but they will be short lived. Following the accepted technological regulations will ensure safety during construction.

In order to prevent unacceptable concentration of harmful substances in the work area and neighboring areas, construction machinery will not be operated full time and its positioning on the site will be ensured. The entire stock of machinery will be sound and subject to regular technical inspection. The fuel in use will meet GOST requirements.

Construction equipment produces a certain noise, which in some cases may exceed the permissible limit of 80 dB in the work area. Workers will therefore, be provided with individual noise-protection kits.

Drilling and blasting operations causes a certain amount of atmospheric pollution, noise and vibration. The nature of these operations demands that workers stay beyond the dangerous zone until emissions are completely dispersed. Drilling and blasting operations near water reservoirs of fishing value will be carried out with specific care; the mass of explosives being minimized and special shelters provided.

Planting new trees will compensate any damage caused to the forest in an explosion area.

3.2.6 Protection of the natural and social environment.

As outlined above, no objects of an archeological, historical or cultural value were found in the right of way of the road. Nevertheless, authorities and organizations in charge of cultural heritage protection will be informed if any historical, archaeological or cultural objects are found on or near the construction sites, including bridges, during the construction. The Contractor will take every precaution to prevent the found objects from being damaged in any way until the issue is resolved. It is recommended the works be suspended until the real value of any object is determined.

The same measures are recommended in the case of rare or protected vegetation, animals or their communities.

Extraction of road construction materials will be made according to technological schemes, ensuring minimal environmental impact and within open cast boundaries. During the exploitation and loading of materials safety measures will be observed as well as in other kinds of operations. The extracted materials will be stored beyond water protection areas. Drainage on the site will also be provided. In order to minimize dust formation in dry and warm weather the open casts will be water sprinkled. After the open cast work is completed, they will be properly recultivated.

3.2.7 Recultiviation Measures

In accordance with the Land Code and “General regulations on land revegetation” all temporarily occupied land for construction purposes will be recultivated into the neighboring land in accordance with land users’ terms. The low productive land will be fertilized. As soon as possible after work begins vegetation will be planted on the cleared grounds, especially on slopes. This is recommended to improve the general outlook of the road as well as to lessen soil erosion, extra surface drainage and surface soil layer leaching.

4 ENVIRONMENTAL MONITORING

The monitoring program will follow Environmental Protection norms and rules and drastically reduce environmental risk which might result from the construction and operation of the road.

The tasks of environmental monitoring are defined as follows: controlling the completeness and quality of the project engineering tasks, defining the level of impact on the environment; controlling the project initial parameters’ compliance with the actual situation; working out proposals to provide “ecological safety” where discrepancies occur between the observed results and the predicted impacts.

According to local environmental monitoring data, the Contractor will develop measures aimed at prevention or clean-up related to any polluting activity not foreseen in the project.

During the construction period the Contractor, or organizations recruited by the Contractor, will be responsible for monitoring. If necessary independent experts will be involved.

Monitoring will include:

- Controlling the completeness and accuracy of the design documentation of regulations approved on earlier stages of designing including measures aimed at excluding or minimizing impacts, compensation, environmental protection facilities and activities;
- providing the choice of a contractor, capable of providing good environment services and technologies;
- including measures into the project explaining to the Contractor's workers environmental protection regulations and project solutions together with training of workers if necessary;
- supervision of compensation and their payments, provided in the project;
- supervision of environmental protection measures during construction and operation;
- monitoring of the Contractor's observance of regulations, standard documents, technical conditions and project requirements;
- recultivation works performance control;
- examination of efficiency of the project-foreseen measures during construction and their updating, if necessary;
- post-construction supervision of the functioning of the drainage system, snow protection planting, erosion resistance and other environmental protection facilities

The road operator will be responsible for the post-construction monitoring.

5 PUBLIC CONSULTATION

At the stage of collecting the initial information on this project the local authorities, public and environmental protection organizations were consulted regarding the selection of site of the Chita-Khabarovsk road section 720 km – 863 km. The section was agreed on with the local sanitary and epidemiological services, environmental protection committees, land owners, including forestries, hunting associations, fishing industry i.e. all those specialists who are particularly concerned with the efficient utilization of natural resources. At the same time being residents of the region with a poor road network (with no roads at all in some parts of the region), they have a great faith in this road as a project that can change their lives for the better. The region with vast natural resources can only be developed if permanent

roads are available there. The fact that the local population can also be involved in the road construction will provide a positive social effect.

Mass media, TV and radio have covered the issue of the Chita-Khabarovsk road construction since it was first raised in 1967. The construction of the “Amur” road has been included into the Presidential Program of motorway network development in the Russian Federation. In August 2001 a joint meeting of the Representative of the President of the Russian Federation in the Far East and the Ministry of transport was held in Blagoveschensk. The meeting was attended by Representative of the President of the Russian Federation, Head of Rosavtodor, chairman of the Amur region council of deputies and other representatives of the local authorities.

The construction of the Chita-Khabarovsk road has been continuously covered in mass media: «Roads» magazine No. 8 of 2001, No. 9 of 1999, «Roads of Priangarie» magazine No. 4 of 2001 r., «Tribune» newspaper No. 105 from 16.06.2001, No. 12 from 10.07.2001, No. 171 from 13.09.2000, «Russian Road Worker», No. 6,7,17,14,20 of 2001, «Russian Transport» No. 27 from 08.07.2001, No. 35 from 02.09.2001, No. 37 from 16.09.2001, «Road Newspaper» No. 34 from 26.09.2001. The Information Digest # 1 for 1997 was fully devoted to design and construction of the Chita-Khabarovsk road. There were no negative comments or objections from the population or public organizations of the Amur road area in respect to these publications.

In December 2001 there was a conference held in Irkuts titled “Improving the Chita-Khabarovsk road designing and construction technologies” and attended by the representatives of Rosavtodor, clients, contractors, research institutes, designers.
The relations with public have been maintained for many years (since 1994) through environment protection organizations, including sanitary and epidemiological committee, district committees for the land reform and land resources, which represent the interests and views of the local population.

Public meetings to discuss the environmental impact assessment, described in this summary, will be held along the right of way of the Amur road within 120 days of EBRD’s public consultation period at locations adjacent to the road (exact places and dates to be determined).

6 CONTACTS

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