

Final Research Report for The Takagi Fund for Citizen Science

Date: 30 / 06 / 2007
day month year

Applicant Name	Lisitsyn Dmitry
Organization	“Sakhalin Environment Watch”
Theme of the research	Research of impact from pipelines construction under the Sakhalin II project on a number of modeling spawning rivers. Calculation of pink salmon fry on a number of rivers, research of salmon spawning grounds silting level, monitoring of construction work on the spawning rivers pipelines crossing in 2006.
Decided Grant Amount	<u>JPY 500 000.00</u>

1. Overview of the Research

In the end 2006 – beginning 2007 we have organized an independent research of pipeline construction's impact on the spawning rivers under the direction of professor Efanov, who is also a doctor of biological science.

Research was conducted in the field conditions and has included sampling on about 30 rivers. By results of research Efanov has prepared a report proving the size of damage to fish resources at a rate of 895,42 tons instead of 121,65 tons calculated by Sakhalin Energy. In money terms the size of damage determined by the professor has made 106,48 million US dollars, that almost in 10 times more indemnifications of Sakhalin Energy. The given report was directed to Administration of the Sakhalin Region and Rosprirodnadzor for acceptance of the further decisions and actions on recalculation of damage to fish stocks from the Sakhalin II project and its presentation to Sakhalin Energy for collecting. End of work on recalculation of damage by the state bodies is postponed on an autumn 2007.

Since April 2006 till May 2007 we have conducted **14** public inspections of Sakhalin II pipeline construction sites, **12** joint field checks together with Sakhalin state bodies and more than **ten** 1-2-days trips on the pipeline route in Dolinsk, Makarov, Smirnykh, Tymovsk and Nogliki districts.

By results of repeated checks by regional offices of public Prosecutor it is revealed more than 40 infringements of the nature protection legislation during the construction of the Sakhalin II pipeline in Poronaisk, Smirnykh, Nogliki, Korsakov, Tymovsk and Makarov districts. Sakhalin Energy and its contractors were incurred an administrative penalties **on a total sum of 300 000 roubles (11 550 US dollars)**. Besides now in proceeding of the Sakhalin Nature Protection Office of Public Prosecutor there is a criminal case on the fact of infringement of the nature protection legislation one of contractors.

Sakhalin Energy company has changed project decisions on construction of the pipelines through active seismic faults - through 4 faults the pipe will be laid by an elevated way that many years demanded by the public environment organizations.

2.1 Progression of the Research(in time-series)

April – May:

We have sent the letter to the State Fish Service with the offer to conduct the control investigation of the salmon spawning grounds condition and to calculate salmon fry during migration on a number of the rivers crossed by Sakhalin II project pipeline. However the Fish Service has answered that such investigation is impossible because of insufficiency of experts as well as because it is impossible to calculate salmon fry without conducting of preliminary research of definition of places with spawning nests.

We have continued attempts to organize the research and for this purpose at the end of April we have agreed with Smirnykh Ichthyology Survey Station of the Fish Service about conducting of trial opening of spawning nests on several rivers on the central Sakhalin. However this attempt has terminated in failure because of a plenty of snow and a powerful ice cover on the rivers - several days of work on clearings of the river channels and searches of the nests have not brought any result.

June – October:

Then in June we have conducted the negotiations and made an agreement with independent expert, doctor of biological science, professor Valeriy Efanov regarding conducting of the research of salmon spawning grounds conditions, their silting level (already after thawing of ice on the rivers) and preliminary recalculation of damage to fish stocks from construction of the pipeline. At last this research was carried out on a number of the rivers in the period August - September. The commission of experts surveyed 27 rivers: Travyanaya, Pugachevka, Tikhaya, Manuy, Baklanovka, Aidar, Dudinka, Chernaya, Firsovka, Kirpichnaya, Bolshaya Podlesnaya, Malaya Podlesnaya, Ai, Bolshoi Takoy, Vostochnaya, Lazovaya, Lesnaya, Makarova, Gornaya, Markovka, Turovka, Nitui, Goryanka, Gastelovka, Malakhitovka, Vulkanka, Rudnaya (Dolinskiy, Makarovskiy and Poronaiskiy Districts). All these rivers are large on the Sakhalin scales and have a huge value as the habitat and reproduction places of the Pacific salmon. Students of the Sakhalin State University participated in field works and processing of the collected material as well.

The research has revealed that pollution of the spawning rivers waters by the suspended solids and, as consequence, silting of the spawning grounds, are distributed much further downstream rather than it was accepted in Sakhalin II project EIA and was used for calculation of the damage to the fish stocks. Research also has shown that restoration of an initial condition of the river banks in the line of the pipeline right-of-way occurs much longer than three years accepted in EIA and damage calculation. Accordingly, washout of a ground from the Sakhalin II pipeline route right-of-way will occur much longer than 3 years, that considerably extends term of the impact and increases the damage to fish stocks. Besides Sakhalin Energy at calculation of the damage did not take into account influence from construction of the access roads and numerous temporary bridges through the rivers.

Based on the data collected during the research professor Efanov has executed detailed recalculation of damage for crossing through the spawning River Ai in Dolinskiy District. The size of the actual damage has made 895,42 tons of fish products instead of 121,65 tons calculated by the Sakhalin Energy company. Common size of compensation of fish damage for all rivers professor Efanov has roughly determined in 106,48 million dollars.

Since April 2006 till May 2007 we have conducted **14** public inspections of Sakhalin II pipeline construction sites, **12** joint field checks together with Sakhalin state bodies and more than **ten** 1-2-days trips on the pipeline route in Dolinsk, Makarov, Smirnykh, Tymovsk and Nogliki districts. The results are follows.

April – November:

In April we have conducted a joint field check together with Sakhalin Department of the Federal Service on Technological and Ecological Control. During the check the following infringements were revealed:

- An illegal storehouse of barrels with ethylene glycol, belonging to Svarochno-Montazhnyi Trest. Ethylene Glycol (antifreeze) is a dangerous substance used for hydrotests of the pipeline. Its hit in an environment is fraught with serious consequences for nature and the people. Using of the ethylene glycol was not stipulated by the project documentation of the TEO-C which has received the positive conclusion of the State Ecological Expertise;
- Non-reclamate mud storages located in water-protection zone of the Firsovka River, in the zone of flooding by flood waters. Drill Tec Company, conducting horizontal drilling under the river for a lining of the pipeline, has undertaken to reclamate the mud storages prior to the beginning of a flood season. However thawing of snow already began, and waste in the majority are not removed yet;
- A number of the re-routings of the pipeline not passed through the State Ecological Expertise.

During pipeline field check in May 2006 the following facts were revealed:

- The Firsovka River: during rising of water in the river because of the spring flood, there was a washout of walls of one of the mud storage and the part of the drilling waste has got into the river being a reservoir of the highest fishery category. Though Drill Tec Company was obliged to liquidate the mud storages illegally placed in water-protection zone of the river in proper time (prior to the beginning of flood).
- The Pugachevka River: the contractor – StarStroy Company has exceeded the right-of-way bounds and construction work (in particular, ploughing up the grounds, movement of the heavy vehicle) were carried out within the strip in width about 200 meters instead of the approved 43 meters. Besides of the damage of forest vegetation, influence from over permitted pollution by the suspended solids was rendered on the Pugachevka River.
- Also during the check it was revealed that StarStroy Company has delivered a plenty of barrels with ethylene glycol in Pugachevo village. But StarStroy and its contractor do not have any permissions for storage and use of the ethylene glycol during the hydrotests of the pipelines. The place of warehousing of the barrels with ethylene glycol is not equipped in appropriate way, the part of the barrels are deformed, in some barrels the walls are punched and ethylene glycol are flow out from the holes.

On results of the check we has applied to Nature Protection Prosecutor and Sakhalin Department of Federal Service on Supervision in sphere of Nature Using (Rosprirodnadzor) with appeal about violations of the nature protection legislation during a lining of pipelines. During repeated check of Rosprirodnadzor the facts revealed by us basically were confirmed and StarStroy Company was fined on 33 thousand rubles (970 euros) in total.

In June – November 2006 we have conducted own 7 field inspections of different segments of the pipeline route. We also participated in more than 9 inspections conducted by Rosprirodnadzor. During the checks the following typical violations were revealed:

- An inefficiency of antierosion measures and as consequence the washout of the rivers' banks, intensive pollution of the watercourses by the suspended solids;
- Obstruction of the rivers by washed off bank-protecting material (a plastic net, Reno mattresses). It represents the big problem for fish going on spawning;
- The bridge remains in the rivers constricting the river channel and capable to result in formation of a logjam and in changing of the river channel in the future;
- Huge hollow of the ground on the slope near the Krinka River that can result in formation of the landslips and the subsequent pollution of the river,

- Carelessly equipped warehouse for storage of the barrels with ethylene glycol in Pugachevo;
- A flowing of a dirty from the route beyond of the right-of-way;
- Absence of the bridges through the rivers and driving of vehicle directly on streams channel;
- Logjams on some rivers formed because of the washout of the not removed bridges rests.

Also huge earth deposits outside of the pipeline right-of-way were found out. The deposits were not approved by the appropriate state bodies. On some rivers works are conducted near to a water-current, however silt fences are absent.

December 2006 – May 2007

During the inspections in December the following violations were revealed:

- the soil is stored in water-protection zones of the rivers (rivers: Makarova, Madera, Lesnaya, Pulka, Krinka);
- the heavy vehicles (lorries, bulldozers, refueller) settles down in a water-protection zone of the rivers (Makarove River);
- protective fences have a formal character or are absent completely (rivers: Sosnovka, Solyanka, Pegas, Madera);
- the soil is stored beyond of the borders of right-of-way on the grounds of forest fund without legal permissions (rivers: Lazovaya, Krinka);
- works on construction of oil pipeline carried out on the landslide slope (river Zagrobka);
- the mudslide-admission on Pulka river is not equipped that has resulted in infringement of a hydrological mode of the river and formation of potential mudslide massive;
- antierosion and antilandslides actions are not executed (PK 402-403; 347,9).

By results of check the general contractor of Sakhalin Energy – Starstroy was penalized by court on sum of 10 thousand roubles (385 US dollars).

In January 2007 we have conducted two inspections and one check in Makarov and Smirnykh districts and have revealed some new infringements:

- deformation of already buried pipe - pig started up on a pipe for check on deformation and integrity of welded seams has got stuck in the pipeline and the segment of a pipe was necessary to dig out, extract section where has got stuck the pig and to weld a new piece of a pipe. The reasons of deformation are unknown for us, however that it has taken place the next year after burring a pipe very much worry.
- on the several rivers in Makarov district were found out a big ice mound because of wrong construction of bridges. In result in headwaters of the river all water accumulated as ice mound and lower on current from bridges the channel of the rivers were dry.

In March and April we have conducted additional checks of the rivers where ice mounds were found out in January and have revealed that the water which has been saved up during winter in ice mounds higher than bridges on the pipeline route is actively washes away embankments of bridges and water-carrying pipes pulling down significant weights of a dirty in channels of the rivers lower on the current.

By results of the conducted checks we have prepared several photo - presentations and sent them to the international financial institutions and also the detailed letter to Sakhalin administration was made. Now we are preparing the detailed generalizing report by results of the conducted checks of the pipeline in the first half-year 2007.

2.2 Outcome of the Research

Calculation of damage to the rivers of professor Efanov was directed to Rosprirodnadzor and it will be taken into account during the preparation of actual calculation of ecological damage from the Sakhalin II project. On Rosprirodnadzor' information the work on recalculation of damage will be completed not earlier an autumn of 2007. We closely cooperate with the state bodies on this question and we render the feasible help.

Sakhalin Energy has improved practice of pipeline construction in many respects and has put in order places of crossing with the pipeline on many rivers: antierosion actions are executed, silt fences are established, the rests of bridges are removed, parking of engineering in water-protection zones and driving on channels are not supposed. Places of barrels' storage with ethyleneglycol are equipped according to rules and standarts. In the spring the company began to take out ethyleneglycol from the Island. The company began to apply considerably best bridge transitions than it was earlier. If earlier bridges consist simply of a timbered floor covered by ground then now bridges are building from the metal pipes with the concrete plates stacked above. In result influence on the rivers from construction and uses of such bridges are much lower.

In September Rosprirodnadzor has obliged Sakhalin Energy to suspend all construction work on mudslides and landslides sites in Dolinsk and Makarov districts until development of individual project decisions on pipeline crossings through these sites and conducting of the State Ecological Expertise on them. Sakhalin Energy has stopped works and has conducted work on elimination of the revealed violations.

In December 12 licenses for water-using were suspended for one month that has induced the company more operatively eliminate the infringements revealed by the state bodies during pipeline construction through the rivers.

According to Sakhalin Regional Office of Public Prosecutor during autumn checks by district Offices of Public Prosecutor it is revealed more than 40 violations of the nature protection legislation in Poronaisk, Smirnykh, Nogliki, Dolinsk, Korsakov, Tymovsk, Makarov districts. In connection with the revealed violations of the nature protection legislation by district public prosecutors it is brought 12 decisions about initiation of the cases on administrative unlaws by results of which consideration 11 companies and 1 physical person are involved in the administrative responsibility as penalties **on a total sum of 300 000 roubles (11 550 US dollars)**. Besides now in the proceeding of the Sakhalin nature protection Office of Public Prosecutor there is a criminal case on the fact of infringement of the nature protection legislation by Svarochno-Montazhny Trust Ltd (contractor of Sakhalin Energy).

Sakhalin Energy has changed project decisions on construction of pipeline through the active seismic faults - through 4 faults the pipe will be laid by an elevated way that environmental NGOs demanded many years .

2.3 Release / Presentation / Publication the outcome of the research

The photographs made during the checks and inspections have lain in a basis of the 8 photo-reports directed to the state bodies, international financial institutions, press and to other stakeholders.

Some photo-presentations and some interesting newspaper articles are enclosed to this report.

2.4 Perspective after the research

Despite of the fact that our research is officially completed nevertheless we will continue the work in the given direction. We have used our best efforts - have organized preparation of independent real calculation of damage to the rivers caused during the pipeline construction and have presented the given report to the state bodies. According to the Russian legislation presentation of the damage to the company should be made by the appropriate state body. Unfortunately, Rosprirodnadzor which is authorized to do it works more slowly than we would like. Terms of the damage recalculation, reception of the final report from experts and presentation of the new damage to Sakhalin Energy is postponed already on an autumn 2007. There are fears that this term will be postponed farther in connection with Gazprom entry to the project. Nevertheless we hold this question on the control, constantly cooperate with Rosprirodnadzor and Administration of the Sakhalin Region and advance the fastest decision of a problem on preparation of the damage recalculation.

Concerning to public control over the Sakhalin II pipeline construction then we continue regular checks and operatively try to transfer the information on the revealed infringements to the state bodies.

3. Your comments for the Takagi Fund

We would like to thank Takagi Fund for the support of our project! We are sure that our work with your support will help to make the Sakhalin II project more safe for an environment and the population of our Island.