RusVinyl – Summary of Social Issues
February 2008

Introduction

This Summary of Social Issues is a public document in English and in Russian and is available for viewing at the www.solvinpvc.com web-site, www.sibur.ru and shortly at www.rusvinyl.ru, which is currently under construction. It has been prepared by RusVinyl LLC to present the findings of a review of the social issues relating to the RusVinyl Project for stakeholders.

Project Description

The objective of the Project is the construction of a 330 thousand t/y Integrated Vinyls Plant near Kstovo in the Nizhniy Novgorod region. The Project is supported by the Regional Authorities and will be located within an existing designated Industrial Zone. For the purpose of construction JV “RusVinyl” LLC was created by “SIBUR Holding” JSC and SolVin (JV of Solvay & BASF).

The advanced technology of PVC (polyvinyl chloride) production from the Solvay Company has been selected for the project. A series of plants constructed using the same technologies are successfully operating in Western Europe.

Integrated Vinyls Plant will produce PVC (suspension and emulsion), as well as caustic soda (sodium hydrate).

The ethylene and kitchen salt will be used as main raw material by the Plant. The ethylene will be supplied from the Petrochemical Plant based in Kstovo, and the kitchen salt from the Astrakhan, Donetsk and Solikamsk region.

In accordance with the General Plot Plan, the process buildings and facilities will include VCM (vinyl chloride monomer), EDC (dichloroethane), kitchen salt and caustic soda storages, chlorine compressor, Electrolysis unit, Cracking unit, Oxychlorination unit, EDC polymerization unit, PVC drying, process effluent treatment installation also a part of site is dedicated for parking of freight vehicles and passenger cars, rain water. The office building, mechanical workshop, fire station are planned to be located within utility area.

The total number of personnel staff of the Plant will constitute 675 persons including
190 – managers and specialists,
30 – employees,
455 – workers.
The Project Site is located in industrial area at 5 km distance to South-West direction from Kstovo.

The adjacent surrounding areas of the project site are:
- Waste ground from North-East, further Petrochemical and Tire Repair Plant;
- “Norci” Commodity and raw material base and Novogorkovsky Power Plant from South-East;
- Auto road with ground coating, further waste ground and lawn and garden communities “Berezka” and “Otdykh” from South-West; and
- Access railway servicing Kstovo industrial area from North-West, further tillage, which is actually is not used for growing of vegetable plants of food purpose.

Other activities within the industrial park include Lukoil Oil Refinery and Emergency Response Facilities.
The proposed site for the Project current consists of three parts with different functionality: a site of BVK Plant (44.22 ha surface) that used to manufacture protein-vitamin products and ceased production in 2003, a site of FGUP “Logistika” (16.22 ha surface) and a reserve site of industrial area free of building (39.31 ha surface).

The BVK plant does not operate; there are 1-4 level industrial buildings and facilities on the project site. A number of buildings are used for storage and offices by third party companies which will leave the site by the beginning of construction works. There are railway tracks within the BVK site.

The nearest habitation and other normalized buildings to the plant site are located: at 1000 m distance to South-West direction from Plant process area limit (dacha communities);

Also, a small part of the agricultural lands of the “Mokrinkskoye” agricultural company falls within the limits of normative Sanitary Protective Zone of Integrated Vinyls Plant, at 450 m to West and North-West.

**Kstovo Region**

The Project is located in the Kstovo metropolitan area which is one of the biggest industrial territories of Nizhniy Novgorod Region. It covers 122.5 ha. In 2007 the population of Kstovo region was 112 800 people including sixty six thousand people living in Kstovo city. Kstovo region comprises Kstovo city (the administrative center), the industrial community Leninskaya Sloboda and 13 rural settlements (including 121 localities).

**Geographical position**

Kstovo region is situated in the central part of the Nizhniy Novgorod Region alongside the Volga river 25 km from Nizhniy Novgorod.

**Transport Infrastructure**
The transport infrastructure of the region is quite developed due to growth of industrial capacities of the region, including:
- Federal road M-7 Volga (Nizhniy Novgorod – Ufa) with the distance of 56.4 km;
- Railway spur (railway station Zeletsino) with the distance of railways of 34.44 km;
- Internal navigable waterways (the Volga river, Kstovo port); and
- The proximity (49 km) to the international airport of Nizhniy Novgorod

**Economy**

The economy of the region comprises different industrial processes. About 30% of output is sold in the Nizhniy Novgorod Region market; the rest is sold in other regions of the Russian Federation or exported.

The current production field is defined by oil refining & petrochemical industries. The main products manufactured in the region are POL (Petroleum, Oil & Lubricants) and more than 50 petroleum derivates including consumer goods.

In the region there are 23 large & medium sized enterprises relating to manufacturing activity, distribution of electric power, gas & water.

The enterprises of Kstovo form an industrial group producing more than 24% of products of the Nizhniy Novgorod Region.

**Agriculture**

Nearly 45% of the land in Kstovo region is used for agricultural needs.

The main types of the agricultural activities are centered around cattle breeding, arable crops, vegetables and potatoes and grains production.

About 3.5 thousand people work in the agricultural sector (8% of the local workforce) producing 2.5% of the regional agricultural output.

**Employment**

The rate of unemployment was 0.31 % in the first half of 2007 in Kstovo.

In September 2007 the number of people working at large & medium enterprises was 26,969 persons.

**Wage level**


**Housing and accommodation**

There is a growing demand for housing and accommodation facilities accompanied by a development of the construction sector - about 50,000 m2 of new housing was provided in 2007. Within next 3 years the same construction rates are expected.

**Infrastructure & Public Services**

There is a good level of provision of utilities and infrastructure within the region. Services provided include producing, transferring & distribution of electricity, gas, vapor & hot/cold
The public transport provision, including buses, tramways & trolleys, is well organized in Kstovo.

**Health**

There is a developed network of medical facilities within Kstovo region including 19 hospitals and health facilities.

Health issues in the community are specified by a high rate of general disease. Those relating to the adult population include, specifically oncoma, infectious diseases, hemopathy, and diseases of nervous system, circulation organs, digestion and of urogenital system. Also health concerns and incidence of specific diseases in children include infectious diseases, oncoma, mental aberration, and respiratory diseases, diseases of digestion, urogenital & apparatus systems and congenital anomalies. Comparably with other areas of Nizhniy Novgorod Region, Kstovo disease incidence is even lower than in other areas.

Thus sanitary & health authorities of Kstovo estimate that existing medical facilities lack modern medical equipment usable for the early detection & diagnostic of such diseases to prevent them. The budget of Kstovo region is rather limited and does not provide sufficient financing of the health sector.

The State Social support is provided to one in two people within the metropolitan region (e.g. social benefits include assistance with housing & childcare payment).

**Education**

There are 76 municipal educational facilities including 35 kindergartens, 28 schools, 3 orphanages, 9 out-of-school activity units, 1 educational center, 1 professional college, 1 petrochemical vocational college, several branches of Nizhniy Novgorod universities & institutes located within Kstovo region.

**Recreational facilities**

Eighty seven sport centers are located within the Kstovo area comprising 3 swimming pools, a stadium and 44 gyms as well as the International Sambo Academy, one of the leading schools.

**Social concerns**

Socials concerns include crime level, personal security, drugs & alcohol, unemployment, wages levels and lack of housing (particularly among the young). The Administration is in a process of developing a targeted plan to address youth related issues.

**Management of potential social impacts**

The project has identified the following potential issues that may result in an impact to the community as a result of the project:

- Sanitary Protection Zone and the neighboring Dacha communities;
- Worker management;
- Access and Transport;
- Medical facilities;
Employment & Training; and
Health, Safety & Environment.

One of the Projects task is to appoint EPC Contractor and to develop a Construction Management Plan over the next few months. As the details of the project become finalized the Plan will include the detailed mitigation measures that will be applied by the project which will be available publicly. A plan will also be provided in the future for the operational phase.

Prior to the release of the Construction Management Plan the project has identified the following construction related issues and mitigation measures that will be addressed in the plan (and summarized further mitigation measures in Annex 1 –RusVinyl Social Action Plan).

**Sanitary Protection Zone and Dacha Communities**

*Justification of Sanitary Protective Zone size*

In accordance with p. 4.1.1 of SanPiN 2.2.1/2.1.1.1200-03 “Sanitary Protective Zone (SPZ) and Sanitary Classification of the Plants, Facilities and other Installations”, the considered plant is associated with class 1 plants having normative sanitary protective zone of 1000 m (Electrolytic plants of chlorine production, semi-products and chlorine-based products). This requirement was respected. See the green line on the map.

Ref: OVOS: Sanitary Protection Zone as approved by the Authorities

With regards to the leading factors: chemical pollution of atmosphere air and acoustic impact on the territory the Project defined also an integral SPZ (red line on the map) which constituted from 320 to 850 m in different directions. According to Russian sanitary requirements the normative SPZ should not exceed 1000 m. The integral SPZ is even less than the normative and thus the plant has a safety reserve of 150 to 680 m.

The existing residential buildings, in particular the dacha communities and other facilities with normalized quality of the environment do not fall into the limits of the Sanitary Protective Zone.
There is no residential land affected, but there is a small area of crops directly within the SPZ. RusVinyl will provide compensation for the loss of the use of the land according a compensation procedure. This procedure also addresses any claims that relate to economic losses as a direct result of the project.

**Dacha communities**

Outside the SPZ, but near to the site, two dacha communities “Otdykh” and “Beryozka” are located.

According to the Kstovo Administration the “Otdykh” community covers about 15 ha and contains 220 plots, where 152 plots are cultivated and 68 plots are abandoned. “Beryozka” has an area of 8 ha cultivated for 218 plots, where 158 plots are cultivated and 60 plots are abandoned. The number of owners of the dachas sites is 310 people. No one lives on the site in winter except the caretaker; during the summer some 10 owners live on the dachas permanently, some of them come on week-ends. Thus there are 310 people who could be potentially affected by the Project.

The main potential impacts to the dacha community are: access to the site particularly during the construction works, road safety and general nuisance (dust, noise, vehicle exhaust). As a result the project proposes to adopt the following mitigation measures:

**Noise**

Construction works are to be performed mainly in the day time (7 AM till 11 PM) in order to prevent negative noise effect on dacha communities. If the works are required to be continued in night hours, the community will be notified in advance and noisy machines and mechanisms will not be operated, namely: pile-driving equipment, compressors, truck cranes, dump trucks and special transport. In day time optimally arranged working hours must minimize operation of noisy mechanisms.

**Acoustic Monitoring**

Before commencement of construction background noise measurements shall be taken on site at the limits of the sanitary protective zone and in the residential area (dacha community). This will be used as a baseline and to assess any quality of life impacts on the dacha owners should they arise.

**Dust**

Measures for dust suppression will be taken, e.g. watering of the road shared with dacha owners.

**Access to dachas and road safety**

As a mitigation measure related to road safety, the Company plans to organize the majority of feedstock & cargo transportation on weekdays as well as at night hours.

**Worker Management during Construction Period**

It is currently predicted that there will be a peak construction workforce of 1500 - 2000 people. At the present stage of the project it is proposed that no worker camp will be established on site. Pending the relevant accordance from Nizhniy Novgorod Authorities, the Project plans to house construction workers in existing sanatoriums & resorts of Zeleniy Gorod, near Kstovo.

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As a minimum Russian Federation standards for accommodation will be required for worker housing. Kstovo Administration reports they are experienced in hosting large construction projects (Mega-Mall etc.) and demands for worker accommodation in Kstovo can be met. At present no on-site sleeping accommodation is planned for the operation phase of the project.

To prevent potential conflicts between local residents and Project staff and contractors a strict Code of Conduct will be enforced. It is envisaged that a similar policy will be applied for Operations.

The Code of Conduct will include requirements on
- Alcohol & Drugs Policy
- Smoking Policy
- Public Behavior
- Construction Site Security

The project will also implement a grievance procedure to enable project affected people to report their concerns and complaints (for any aspect of the project, not just worker related). The procedure will be provided in the public domain and will focus on the timely resolution of issues.

Access and Transport

The project plans to use the by pass road M-7, the road K-37 (Kstovo-Dalneye Konstantinovo) and the branch of K-37 road (leading to the power plant, BVK plant and dachas) to access the site. These are asphalted roads.

The branch of K-37 road leads directly to the project site and will be shared with the dacha community. The road is currently in a poor state of repair (as reported the head of “Beryozka” dacha community).

As construction materials will be transported to site via road this will contribute to the increasing traffic levels on these roads. This has the potential impacts of increased road congestion, road safety issues and the possibility of restricted access to the dachas by owners using the branch of K-37 road. The prediction of the additional vehicle movements on the roads as a direct result of the project will be assessed and specific mitigation measures proposed during the finalization of the project design and construction plans. However the following mitigation measures are proposed at this stage:
- Deliver times – avoiding weekends where practical
- Maintenance of the access road
- Upgrade the dacha access road up to the first bus stop
- The project will also assume to improve the bridge of K-37 road which is situated above the railways.
- Construction workers will be transported to the site free of charge, to minimize the use of the public transport system and private vehicles to prevent unnecessary congestion.
- Only a restricted number of parking facilities for private cars will be available on site

Medical facilities

Kstovo has a good provision of medical facilities including accident and emergency service available for use by the project. However, the project will minimize its use of these facilities wherever practical.
- The construction site will be provided with First-Aid facilities for personnel. RusVinyl will specify the medical facilities required but as a minimum they will meet Russian Federation requirements.

- Also medical services will be available to RusVinyl Project Staff via the Kstovo branch of “Zdravniza”, a non-state health care establishment which is not related to medical infrastructure of the local community thus minimizing the possible adverse impact. RusVinyl has already an agreement with “Zdravniza” on medical services. The service includes access to specialist consultants, diagnostic, laboratory and x-ray equipment, out patient’s facilities and emergency response provisions.

- The project plans that Contractors will also use “Zdravniza” services.

- Preventative measures to promote healthy practices will be supported by the project through the medical services provided on site.

**Employment and Training**

A main Engineering Procurement and Construction (EPC) contractor has been appointed for the Project. They will be responsible for the recruitment and management of contractors and subcontractors. The EPC contractor will develop a plan for the hiring of local contractors and staff. The project plans to maximize the recruitment of local people wherever possible. The Project will try to meet Kstovo administration expectations for 50% of workers recruited locally (and not less than 20% according to the Russian Legislation).

Compliance with the Labor Code will be strictly enforced by the Project and the EPC Contractor. A process will be put in place to routinely monitor requirements and address any non-compliance on timely basis. All staff and contractors will be provided with a written employment agreement, which clearly defines their roles and responsibilities and working arrangements. The Project is committed to deal equitably with all employees, avoiding any form of discrimination (such as that based on age, race, sex, nationality, religion and opinions) and forced labor.

The Project will strive to develop employee skills through appropriate training related to their immediate tasks or more generally, to further their professional development and encourage the realization of their potential.

The Project will require specialists to operate the plant. In preparation for this an Apprenticeship Program has been established. The Program selected local young engineers from the region in January 2008, to attend a 2 year vocational course, based in the SolVin Company. The program includes:

- Apprenticeship at 3 European PVC plants (Belgium, France & Germany);
- Theoretical courses on PVC production each 3-4 months; and
- An Estimate of proficiency each 3 months.

The apprenticeship will be finished by 2010, in time for the commissioning & start-up of the plant.

During the apprenticeship period engineers will be provided with accommodation free of charge, medical insurance as well as remuneration.

The Company will provide its employees with working conditions designed to protect employees’ health and safety by applying appropriate Russian standards.

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Health, Safety & Environment

In full compliance with the Russian ecological laws the Company strives to:

- Meet the maximum allowable norms for chemical, physical, biological and mechanical impacts on environment, personnel and population during plant construction and operation;
- Meet the requirements to use of environmental assets;
- Fulfill the requirements to design solutions with regards to mitigation (or prevention) of detrimental impact on environment during construction, including the requirements to production and consumption waste management;
- Observe requirements to environmentally hazard substances composition, conditions of use, storage and transportation;
- Fulfill the requirements for environmental protection measures, treatment equipment and units;
- Comply with standards for labor conditions and sanitary standards;
- Fulfill the requirements for plant environmental control and environment quality monitoring; and
- Observe sanitary norms to equipment, materials, and labor conditions.

Thus the Project is committed to implement a Safety, Security, Environment and Health (SSEH) Procedure during construction activities. For that purpose a SSEH Plan will be developed by EPC Contractor according to which Site Safety Policy, Fire Protection & Fire Fighting Policy, Hazard Policy, Environmental Policy will be implemented & managed on the Project site.

For the potentially affected communities the Company will ensure an emergency response (fire & gas protection) process is in place and provide full information. A specific PVC production components (chlorine, dichloroethane, VCM) monitoring program will be developed and implemented before construction works as well at the operational stage of the plant. This program is supported by the laboratory of the Centre of Hygiene and Epidemiology of Kstovo.

In addition, the emergency response facilities of the industrial park which are tested regularly will be available for use by the Project.

Regular Health and Social monitoring shall include collection and processing of information on the incidence rates among the PVC plant staff and residents of the surrounding areas (dacha communities “Berezka” and “Otdyk”) on the basis of the data obtained from medical institutes and social workers within the boundaries of the law.

Monitoring

Social monitoring requirements will be defined as part of the development of the Construction Management Plan. This will include a process for regular reporting and feedback to key stakeholders. Should monitoring show that mitigation measures are not achieving the desired effect a process will be put in place for change and adaptation.

Effects of the Project realization

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The proposed project provides opportunities to the community of Kstovo and potential employee’s.

The positive effects of the project realization are:
- Employment opportunities for the people;
- Training opportunities;
- Higher income and resulting improving of demography;
- Further development of a priority sector of Nizhniy Novgorod Region economy (chemical industry);
- Tax remittance to the regional budget;
- Stable investment flow; and
- Growth in existing and emerging industries consumers of products produced by the plant in question.

RusVinyl will conduct its business as a good neighbor and intend to closely liaise with the authorities to identify suitable social investment projects. The Project will endeavor to involve the public through meaningful consultation in the process of identifying appropriate Social Investment projects in which the company could be of reasonable help.

The Company shall establish social initiatives which can contribute positively to the community. These initiatives will be identified in cooperation with representatives of the local community.

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