

Communication dated:

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from:

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addressed to:

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**Application by Nord Stream AG for construction and operation of a
high-pressure natural-gas pipeline through the Baltic
*Your letter dated November 24, 2006, Ref. 5121/Nord Stream/2006 Z1105***

Response

The following documents have been received:

1. Project Information Document Offshore Pipeline through the Baltic Sea, German version (November 2006)
2. Scoping documents for the Nord Stream gas pipeline from the boundary of the German EEZ to the landing point at the Lubmin power-generating plant site

These documents contain a description of the project and of the possible environmental effects which may result from the project. These are used as the basis for proposal of the principal points of emphasis for an Environmental Impact Study, which is intended to serve as the basis for an Environmental Impact Assessment.

The route of the gas pipeline enters the German EEZ between the Oderbank and the Adlergrund features and continues in a south-westerly direction at a seabed depth of around 15 meters up to the sill of the Greifswalder Bodden ("Greifswald Lagoon"). The only 1.5 to 3 m deep sill forms a natural boundary between the Greifswalder Bodden and the Pomeranian Bight. After crossing the

sill, the route continues to the harbour of Lubmin, primarily at depths of less than 5 m. The gas pipeline is routed onto dry land at this location.

General fishery and marine biological aspects

The water of the island of Rügen's "boddens" (lagoons) and the Greifswalder Bodden, in particular, are the main spawning territory for the herring of the western Baltic. This stock is the second most important herring stock in the Baltic by yield and biomass. It has, in recent years, produced annual catches of between 80,000 and 190,000 t (for the German and Danish fleets, in particular) and currently exhibits a spawn biomass of around 160,000 t. The herring shoals migrate from February onward from the deeper regions of the western Baltic via the Strelasund and the eastern sill into the Greifswalder Bodden, in order to spawn there. Migration and spawning take place in a number of phases, into the month of May. The herring leave the area after spawning. Potential spawning substrates for the herring of similar extent as in the Greifswalder Bodden can be found at no other location in the western Baltic.

The spawning concentrations of the herring form the basis for significant spring herring fishing in the Greifswalder Bodden and in the outer coastal waters of the island of Rügen. Herring catches from the Greifswalder Bodden made up around 50 % of German herring catches from the Baltic between 1992 and 2001.

Specific locational questions

It is apparent from Figure 4 (2, Page 10) that the pipeline route at two points changes from one side of the corridor to the other within the corridor specified by the MV State Development Plan, as a result of the restricted available ending radius. Problems can therefore even now be foreseen for other cable and pipe installation projects in the route corridor and can probably only be solved by means of a redefinition or an expansion of the corridor.

The temperature of the gas in the pipeline during feed will be around 40° C. Information on possible increase in temperature in the pipeline still remains extremely general. Data on the temperature difference between the pipeline surface, as an artificial solid substrate, and the surrounding ambient temperature, is¹ necessary to permit evaluation of any effects on the demersal zone.

The landing point of Lubmin is also under consideration as a location for obtainment of water necessary for hydraulic pressure testing of the completed pipeline. A large volume of oxygen-depleted water will require disposal upon

¹ Trotz seiner eindeutigen Herkunft als Mehrzahl wird im modernen Englisch das Wort "data" als Kollektiv und daher als Singular behandelt. Dies ist nicht ganz unumstritten; überzeugend ist aber, dass man **immer** "How much data?" und **nie** "How many data?" fragt. s auch z.B. Webster's Medical Dictionary

completion of this pressure test. It must be pointed out as a precaution that the shallow and relatively isolated Greifswalder Bodden is extremely unsuitable for discharge of this water and that serious harm to local flora and fauna must be anticipated if such discharge is permitted. Discharge of this water in the vicinity of the planned service platform near Gotland could be considered as a – probably – rational alternative. It would, at this alternative location, also be possible, under certain circumstances, to utilize naturally oxygen-free deep-sea water without the need for any additives.

Evaluation

The herring of the western Baltic require for successful development of their spawn a suitable spawning substrate, to which the eggs can be attached. Their preferred spawning substrates take the form of giant algae and eel-grass. These substrates must not be covered over by green or blue algae and must be clean and free of sedimented suspended matter. Assurance of the latter, in particular, is an aspect which must under all circumstances be taken into account, since sedimentation of the matter fluidized in the context of mechanical and hydraulic excavation work is capable of having extremely detrimental effects on underwater vegetation and also, directly, on the herring spawn and thus on the successful reproduction of this important herring stock.

Surveys performed in the Greifswalder Bodden in the 1980s indicate that the distribution of underwater vegetation is restricted to depths down to around 5 m. The shallow sill, in particular, and also the other shallower zones located directly along the planned route (the Schuhmachergrund and the Freesendorf Haken) must therefore also be considered suitable spawning grounds.