

A Milestone in Environmental Practices: First Zero Discharge to the Sea

Engineer Zoeger, we acknowledge the good environmental practices that BPZ has been applying in its operations Northern Peru; even that some of them have generated important precedents in the environmental care for future hydrocarbons projects.

Framing the good practices, we know that you have developed Albacora's Project at Z1 Block (offshore) during 2009-2010, in an environmental sensitive ecosystem, near the National Sanctuary "Manglares de Tumbes"...

What were the adopted measures by BPZ during the development of this project to comply with the environmental normative without affecting the protected ecosystem?

Develop the project in this area was a very special challenge to BPZ. As you mentioned, this is a particularly sensitive area that everybody need to protect and in this eagerness, BPZ assumed the commitment of caring this ecosystem through its Environmental Impact Study (EIA); that contemplated in all its structure, the mitigation of the impacts that could happen during the execution of the project.

What was the most significant environmental impact that BPZ identified in this Project's EIA and how it was handled?

From all the possible impacts considered in our EIA, we determined that one of the most significant was the generation of solid and liquid waste from the drilling wells, to be more specific, we are talking about drilling cuttings and fluids.

In this regard, BPZ, in coordination with the General Council for Environmental Energetic Affaires (DGAAE) of the MINEM (Ministry of Energy and Mine), determined to apply a "Zero Discharge" system to the sea, what consisted in recycle the maximum volume of these effluents, and the final remainder to be moved to the coast for its final disposal in the authorized -by the Peruvian government- landfills.

If we talk about the volumes of waste generated in a drilled well, what is the volume we are talking about?

During the drilling of a well like the one in Albacora, the waste volume to be generated is considerable; in this specific case we estimate that it could be generated 5,200 tons per drilled well drilled, that after being recycled through a special treatment were reduced to 1,845 tons that we moved to the coast of for its final disposal.

What was that special treatment that allowed you to significantly reduce the waste generated?

The process developed in the project is known as “Zero Discharge”, and consisted in three phases.

The first phase was the mechanical collection and further washing of the cuttings from the drilling well.

The second one included the application of a specialized technology development for effluents treatment on offshore platforms; a system to process the cuttings taking out most of its liquid content, while making possible the reutilization of these volumes during the drilling process. The technological application that we are referring to was designed and executed in collaboration with QMAX Solutions, a Canadian corporation which is one of our oldest providers in the project. This allowed the optimization of the existing resources and to obtain a cutting or waste mainly solid, that was later packed in sacs of specific manufacturing. Then, incorporating approx. 1 Tn. of effluent in each of these sacs, the handling at the platform was evidently easier, minimizing the risk of accidents normally linked to the manipulation of large volumes.

The third phase consisted in the mobilization of this waste -which was previously classified and labeled at the platform-, to the coast in conventional boats with daily frequency, to be later transported by land to the final disposal area.

The results obtained were very satisfactory, and have motivated the issue and presentation of the technical paper “Zero Discharge Technology in Offshore Wells” at the INGEPET VII Congress, held in Lima on November 2011.

How does BPZ will manage the future projects where it ventures?

BPZ has shown its commitment to the Peruvian environmental patrimony. It is for sure that Albacora is a milestone: It was the first zero discharge done the sea in the Peruvian sea.

Maybe because of the lack of past experiences many of the actors involved in the local industry, even the ones belonging to technical teams, do not dimension what really involves in the execution of this type of operations: The big volumes of effluents to be moved by sea and land on its way to authorized landfills, require a kind of infrastructure in the coast that the Northern part of the country does not have yet. The areas of offshore exploitation such as the Northern Sea in Europe or the coast of the Mexican Gulf in USA has, in comparison to us, very well developed facilities to face these activities. In our country –since the lack of specific infrastructure—more commitment and creativity is still needed... But that is part of what we do in BPZ on daily basis...