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2018-01-31

## ***EffiSludge for LIFE, site visit n.4 at Skogn (NO)***

Attending: Francesco Ometto, SBF, Project Manager for *EffiSludge for LIFE*  
Trude Silja Jensen, Biokraft, Onsite lab technician for *EffiSludge for LIFE*  
Terje Hyldmo, BK, Project Leader for *EffiSludge for LIFE*  
Nina Hole Saetran, NSS, Responsible for WWT at NSS  
Amund Saxrud, Managing Director at NSS.

The site visit was completed at the construction site at Skogn where *EffiSludge for LIFE* is under implementation. During the visit, Terje Hyldmo illustrated on the details the status of the ongoing construction works (cf. pictures below). The plan is now on a final construction phase. The remaining work is focused on piping with a few left adjustments to be made. Testing has been completed in only a minor part of the overall plant (e.g. storage tanks). Therefore, testing and third part inspections are expected during February and March.

The current time schedule aims for start-up of operations by the end of March, a few weeks after expected starting date as reported before Christmas.

A storm hit the site early in January causing some damages. Therefore, some unexpected repairing works has also to be planned.

In the morning meeting with Norske Skog Skogn, we discussed the ongoing monitoring plan. The online monitoring station is working good, but the pH probe has been faulty since a week (replacement expected soon). TOC measurement equipment has been delivered and analysis are expected to start in February.

NSS will start to invoice a few hours to SBF as laboratory support analysis based on previous MoU signed in 2016.

Analysis on air emissions from the aerobic basin have been discussed. Francesco introduced the reason why of such analysis (suggested by the RG members) and explained the cooperation with Linköping University on this. First sampling day will take place by end of Q1/2018. A second and third sampling day will take place during Q3/2018 and in Q3/2019.

Discussion with NSS and BK brought up some concerns on structural condition of the aerobic basin to be further evaluated by ÅF. This is needed for safety reason. Preliminary evaluation completed during design phase was negative.

Amund and Nina reported on the overall NSS's activities and future plan. At present, the mill is at full operation despite the lack of raw material (this is a general situation in the Nordic countries where lack of wood is affecting the all pulp and paper industry. For the future, NSS is expecting to continue production activities.

Francesco showed a draft of the *EffiSludge* animated video clip to BK/NSS. The video received very a positive feedback and it will be distributed to everyone when ready.



Fig 1 – Aerial overview (January 2018) of the construction site with existing wastewater treatment plant (circular basins).

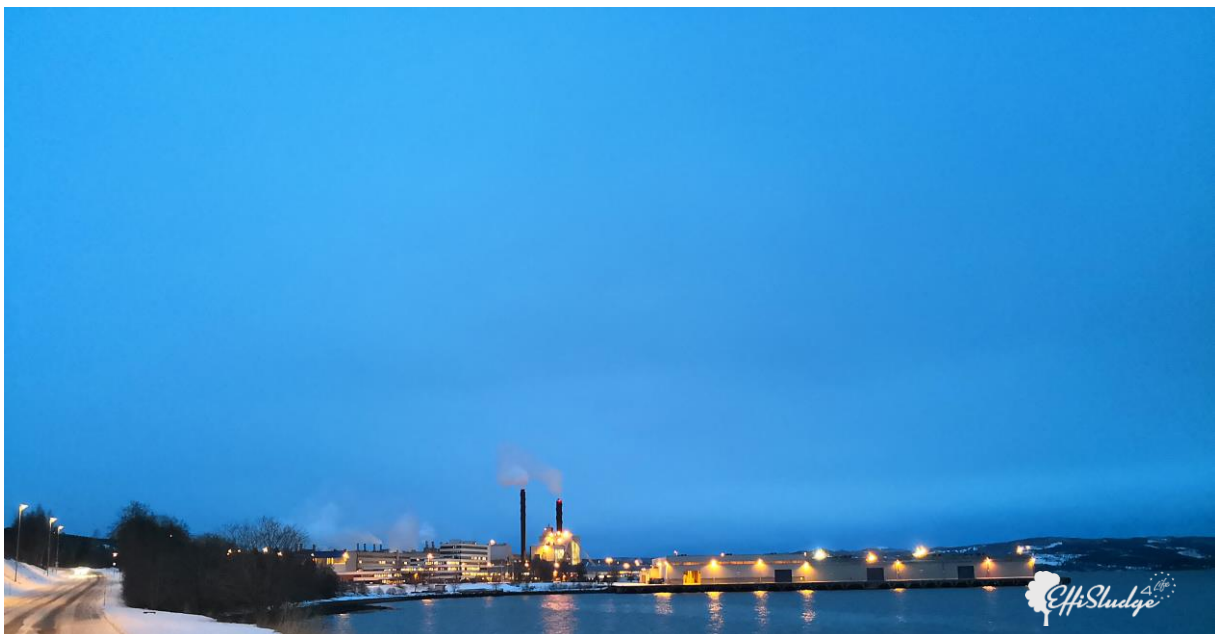


Fig 2 – Early morning overview of NSS site.



Fig 3 – From the left: upgrading units, secondary digester with gas holder, LBG storage tank (white tank with BK logo), machinery house with centrifuges, piping to/from digesters.



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