

MEMO



TO: Gary Tomlinson, MOECC Senior Environmental Officer

FROM: Darin Burr, Dillon Consulting Limited

DATE: October 20, 2014

SUBJECT: Modifications to Surface Ceiling Protocols at Select T-Pole Locations constructing using Vibro Drill

OUR FILE: 13-8287

CC: Erick Matthiesen, Construction Manager, Longyuan Power
David Restivo, Environmental Monitoring Project Manager, Dillon Consulting Limited
Don McKinnon, Project Manager, Dillon Consulting Limited
Chad McAllister, Longyuan Power
Rebecca Crump, Longyuan Power

This memorandum provides our recommendation to modify the surface ceiling requirements at select transmission pole (T-pole) locations that were constructed using the vibration drill method (Vibro Drill). The T-pole locations include: #354, #357, #358, #359, #360, #361, #362, #363, #364, #365, #366 and #367. The reason for the request is that the construction method used at these locations differs from the standard installation methods on which the sealing protocols as outlined in the Dillon July 4, 2014 technical memorandum were developed.

Dufferin Wind Power (DWP) informed Dillon that foundations for these poles were constructed using a Vibro drill unit. The construction process, as described by DWP, is as follows. A crane is used to lift the steel casing (e.g., liner made of steel pipe) over the foundation area, and the steel casing is vibrated into the ground to the required depth (6.4 metres to 9.1 metres below ground surface). Soil has not been removed at this stage of construction. The casing diameter is 1.07 metres (42") or 1.22 metres (48"), depending upon location. Once the casing is installed, soil in the interior of the casing is removed using an auger. The transmission pole is then placed into the steel casing and the interior annular area between the casing and the pole is backfilled with gravel.

The construction process does not produce annular space between the exterior of the steel casing and the adjacent ground, and therefore, a preferential pathway for vertical water migration from ground surface into the bedrock aquifer along the exterior of the pipe is not produced. As a result, we recommend that the application of a surface seal exterior to the casings for these pole foundations not be required. Sealing of the interior of the casing (between the interior casing walls and the wooden pole) will still be performed following sealing protocols outlined in the Dillon July 4, 2014 technical memorandum.

Technical Memorandum
Dufferin Wind Farm Project - Transmission Pole Sealing

We trust that this memorandum meets your needs at this time. If you have any questions about the recommended alterations to the surface sealing protocols for the identified transmission polls, please contact the undersigned.

Respectfully submitted,

DILLON CONSULTING LIMITED



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