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Qulliq Energy Corporation
Société d'énergie Qulliq
Qulliq Alruyaktugtunik Ikumatjutiit

P.O. Box 580, Iqaluit, Nunavut, X0A 0H0

Keith Morrison
Technical Advisor II
Nunavut Impact Review Board

RE: Kugluktuk Power Plant and Solar Proposal (19XN011) – Bulk Fuel Storage Addendum

Qulliq Energy Corporation (QEC) submitted a screening application to the Nunavut Impact Review Board on (February 21, 2019) to replace the Kugluktuk power plant. The existing Kugluktuk facility has been in operation for nearly 50 years and requires replacement to address aging equipment, safety concerns, and to maintain compliance with current regulations. Following submission of the original application it was determined that QEC would require a reliable bulk fuel system for the new plant in Kugluktuk which maintains the storage capacity required by QEC operations. The following provides a description of the proposed bulk fuel system as well as the design features and mitigation that will be implemented to minimize or avoid potential effects to the environment during design, construction, and operations.

The final design for the bulk fuel storage facility will be provided by the design build contractor awarded the scope of work for the construction of the Kugluktuk power plant; however, QEC has outlined the following specifications. The bulk fuel storage facility will consist of two above ground fuel tanks.

The bulk fuel storage tanks will be single walled, welded fixed roof vertical storage tanks with a capacity of 1,200,000 litres (1.2 M litres). The outdoor tanks will operate 24 hours a day, 365 days per year and will have a minimum design life of 40 years. The tanks will be erected in accordance with API 650 requirements and will comply with Canadian Council of Ministers of the Environment (CCME) and National Fire Code of Canada (NFCC) and applicable federal and territorial acts and regulations.

The bulk fuel storage tanks will be located near the Petroleum Products Division (PPD) tank farm within power plant plot #462. Secondary containment for the tanks consisting of a dyke wall (berm) with HPDE liner and geotextile will be constructed. An under tank leak detection monitoring system will be installed and the tanks will be equipped with volatile organic compounds (VOC) emissions controls, and automatic overfill prevention mechanisms.

A truck refueling station will be constructed outside the secondary containment berm with applicable safety measures (e.g., bollards) and spill prevention. The tanks will also connect with the PPD fuel pipeline system having metering device to measure and record fuel delivery.



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The Kugluktuk Site Specific Spill Contingency Plan will be updated for the new plant and will include the bulk fuel storage facility. During operations, the bulk fuel storage facility will be inspected for spills, and equipment degradation or maintenance issues in accordance with QEC Environmental Standard Operating Procedure for Storage of Diesel Fuel. Any issues identified that have potential to result in an unintentional release will be communicated to the Plant Superintendent, and Health, Safety and Environment Department and corrective actions will be implemented as soon as feasible.

Preliminary drawings of bulk fuel storage facility are attached for reference; however, these are subject to modification by the design build contractor and any feedback provided during regulatory review.

Should you have any questions or require any additional information to facilitate review please contact the undersigned.

Sincerely;

HSE Advisor, Megan Larose

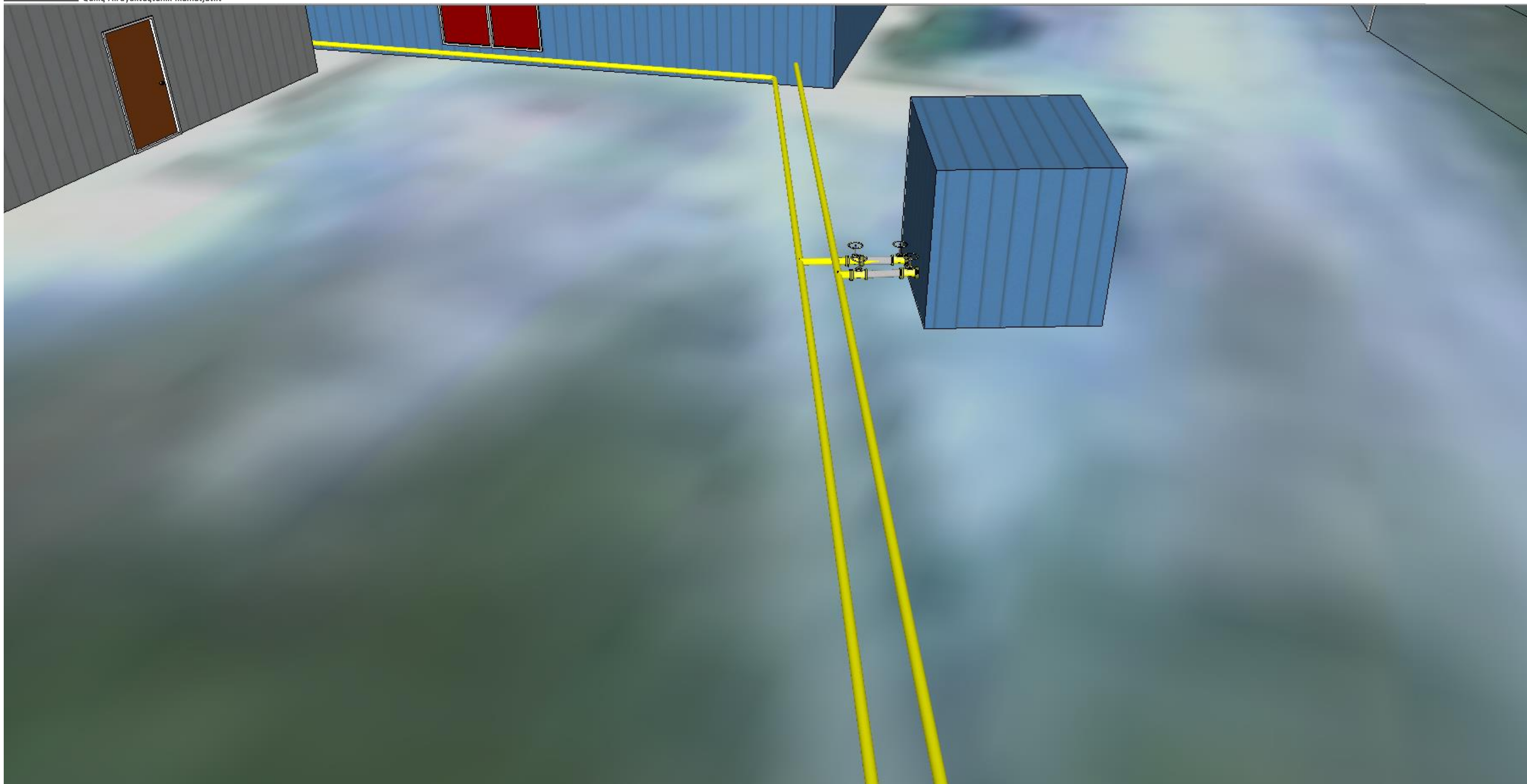




The tanks and berm



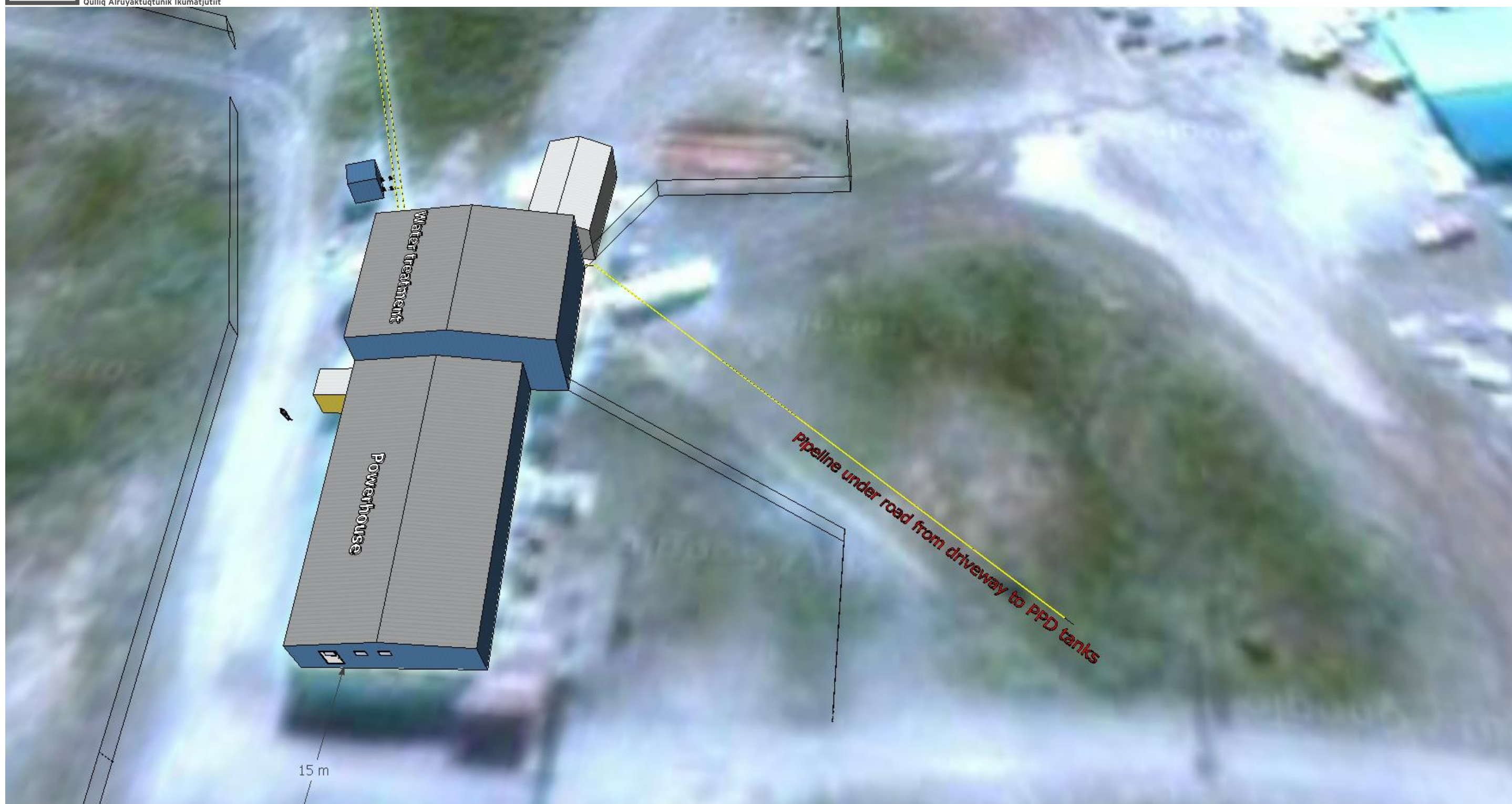
The valve system at the tanks



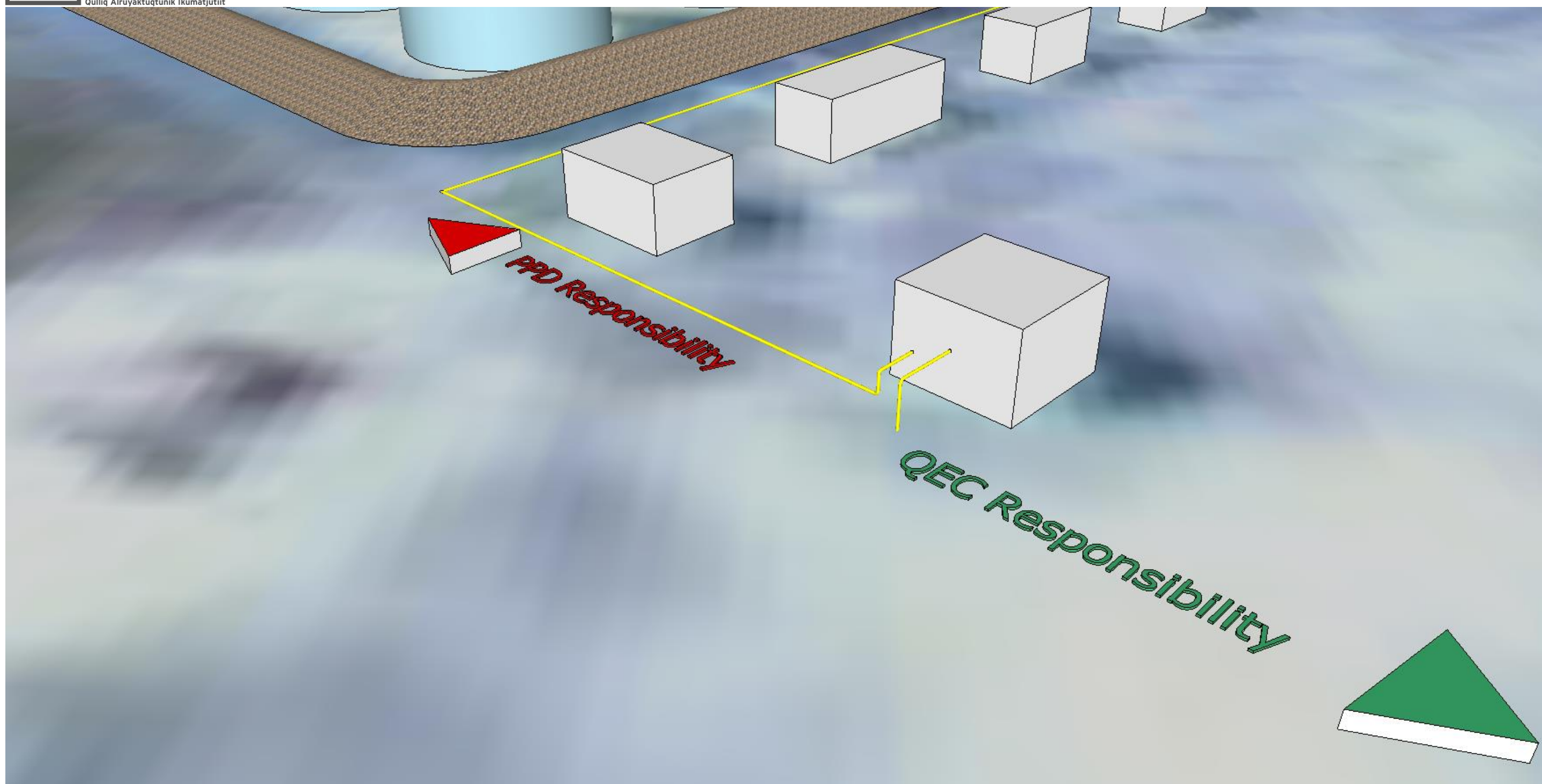
The pump house at the plant looking from the tanks towards the plant



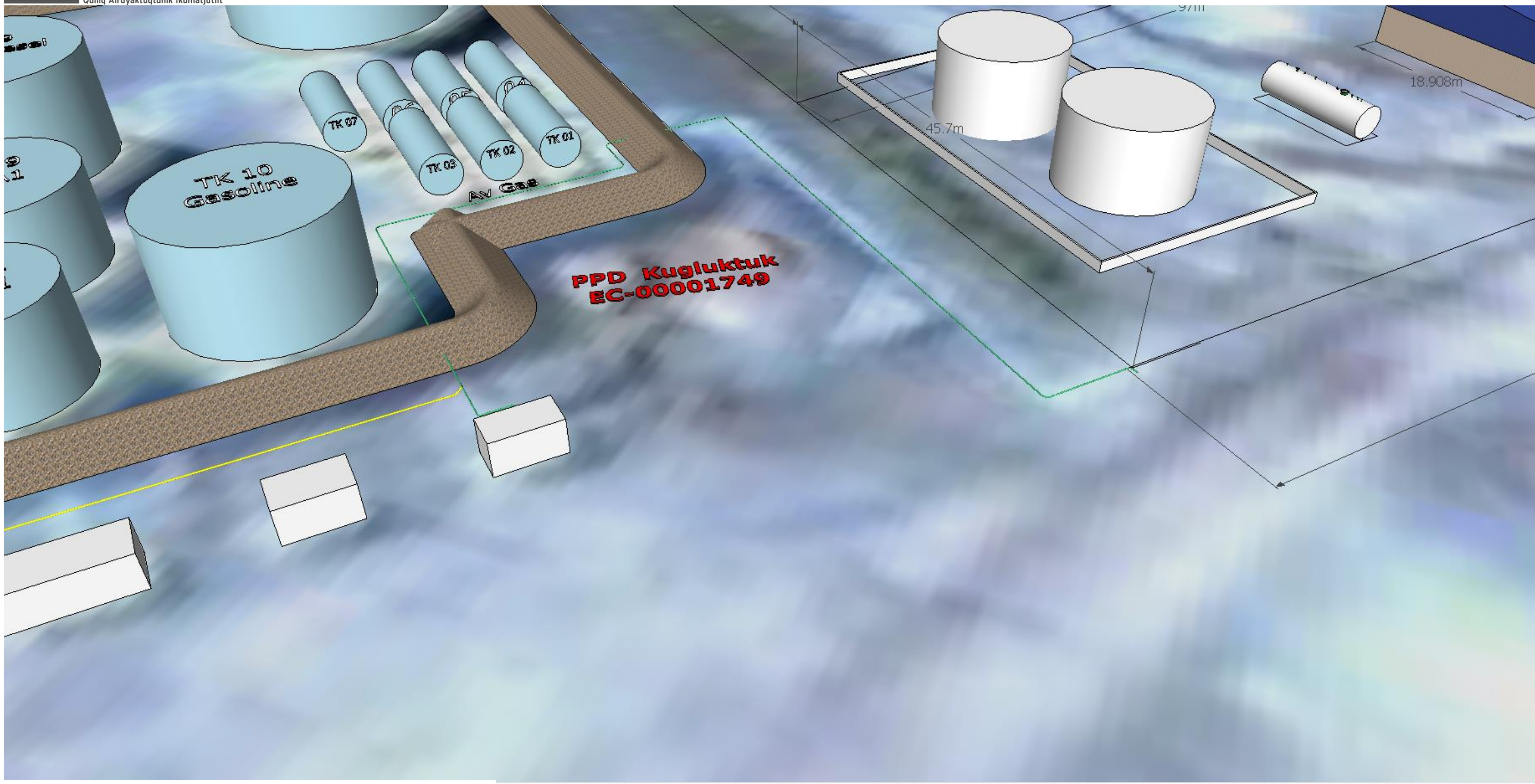
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Overview of the plant where the pipeline ducks underground and heads to PPD



The pipeline where it comes back aboveground into pump house #2. This also houses the cathodic corrosion protection system



PPD piping where it enters from the marine manifold