

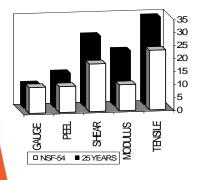
SOLUTIONS

ENVIRONMENTAL PROTECTION, INC.

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10 Mil PVC Performs After 25 Years On The Job

In the Spring of 1993 EPI provided a PVC liner for the enlargement of an irrigation pond at the Lakes of the North Golf Course in Northern Lower Michigan. During the excavation of the pond it was discovered that the original pond was lined with 10 Mil PVC Geomembrane.

In the process of excavating the pond the PVC Geomembrane was removed and a large number of material samples were recovered. These samples included both factory and field seams which were produced using a chemical fusion weld.

EPI contacted the office of Mr. Jerry Matthews, the golf course architect who originally designed the project, and learned that the original 10 Mil PVC liner was installed in the Summer of 1968. The liner was originally covered with twelve inches of sand, and approximately six to eight inches of silt had accumulated over the years on top of the sand cover.

EPI conducted physical property testing on the material and on the field and factory seams. Material samples were also forwarded to Occidental Chemical Corporation's Lab for analytical testing of the material. The PVC was still extremely flexible and extraction tests confirmed that placticizer still comprised 27% of the 25 year old PVC liner.

Elongation at break of the material was 267% which exceeds the original specifications of 250%. Peel testing of both factory and field seams resulted in a film tearing bond and all peel results were above the minimum requirement of 10 lbs. per inch width.

A comparison of other test results with the old NSF 54 minimum requirements for 10 Mil PVC is shown on the graph. 25 years of leak free, trouble free, maintenance free service, through freezing winters and scorching summers. Durable PVC liners provide decades of security for your containment needs.

Preserving water resources for future generations