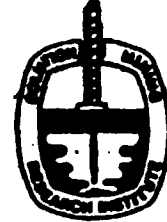


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**MEETING
PAPER**



**HIGH DENSITY
POLYETHYLENE LINERS
A USERS
EXPERIENCE**

BY

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ABSTRACT

HIGH DENSITY POLYETHYLENE LINERS A USERS EXPERIENCE

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The use of high density polyethylene (HDPE) as liners material for solid and liquid waste containment has come about over the last ten years to meet the requirements of the Environmental Protection Agency and other regulatory groups. In many cases, the owner of these sites are unfamiliar with HDPE geomembrane materials, and must rely upon the design consultant, material manufacturer, and liner installer to give him a quality product. Since the federal law makes the owner responsible for the installation, now and forever, it behooves him to become at least somewhat cognizant of the do's and don'ts of HDPE liner technology, to be able to know when he is getting a quality installation.

Like many other materials, experience is the best teacher when working with HDPE. For the first time user, the only source of this information is from experienced owners. The purpose of this paper is to set out our experiences for the benefit of others. Beginning in the early 1960's, we have run the gamut of various liner materials, until the early 1980's, when we made our first HDPE installation. In the past ten years, we have encountered almost every conceivable problem that HDPE liners can propagate. Generally speaking, most of the problems relate directly to inferior workmanship and installation methods, rather than the material itself.

Poor weld seam strength, weld bead pinholes, material overheating, liner fastener system, insufficient liner slack, liner penetrations and mechanical damage are the main contributors to liner seepage failures. Research and experience in liner technology have substantially reduced those problems associated with HDPE as a material and installation equipment. The human factor remains the major contributor to liner problems. This can only be resolved by strict adherence to a construction quality assurance (CQA) plan which can be monitored by the owner or a third party consultant. This involves continuous visual inspection, field and laboratory testing during construction, and final water test filling.

When all is said and done, the owner is still the legally, environmentally, responsible person and he must assure himself that he has a secure facility and that he has sufficient knowledge to operate and maintain it in an acceptable manner.