



Featured Technical Topic Summary **FGI Monthly Members Meeting** **Friday, August 8, 2025**



TOPIC: Asking the Right Questions before Selecting your Geomembrane

Each month Tim Stark introduces a new technical topic for discussion and possible action. This month's topic is: **"Asking the Right Questions before Selecting your Geomembrane"**. This topic generated significant discussion with the main "take-aways" listed below:

Top 10 Questions to Answer before Selecting your Geomembrane if No Details Available or They are Wrong

- Can the geomembrane handle what is being contained?
- How long do you want to contain this liquid?
- What is the application and size of the geomembrane containment area? Is it a bottom liner or cover system?
- Will the geomembrane be exposed or unexposed to UV light?
- What is the location, i.e., temperature and site access?
- What are the applicable regulations for your containment system?
- Will there concrete or mechanical attachments required, such as pipe penetrations or inflow/outflow structures?
- Is site subgrade ready for geomembrane/geosynthetics installation?
- What are current conditions at the site? What are the pre-existing conditions?
- What is the timeframe for installation (Fall, Winter, Spring, or Summer)? What are the safety conditions for installation?

Asking the Right Questions before Selecting your Geomembrane if No Details Available or They are Wrong

- What is the application size of the geomembrane containment area?
- Is the project funded or is this a planning phase?
- Is it a bottom liner system or a cover system?
- Is it primary or secondary containment? In other words, is it critical or non-critical containment application?
- What are the applicable regulations? Are they federal and/or state regulations?
- Is it exposed or unexposed to UV light?
- What is the geomembrane containing?
- Can you provide a fluid analysis of the contained liquid/material? What is the pH level? What is the fluid temperature?
- What is the location, i.e., temperature, high UV exposure, and site access?
- Is there a Google Earth image of the pond?
- Is there a material specification for the geomembrane?
- What is the service life of the geomembrane?
- What is proposed time of year for installation?

- What seaming processes are necessary?
- What seam testing requirements are specified?
- What are the subgrade conditions? Is subgrade ready for geomembrane placement or is tensile reinforcement needed before installation?
- Will pond be constantly filled or have fluctuating liquid levels?
- Are you concerned about wind uplift?
- Who is installing the geomembrane?
- What are the anticipated slope inclinations?
- If GM will be covered, what is the cover material?
- Are there drawings showing inflow and outflow pipes/structures?
- How will the liquid be added and removed from the pond?
- How many penetrations and types of penetrations will be installed?
- What project specifications need to be followed?
- Is selected geomembrane type suitable for tight spaces, mechanical attachments, pipe boots, and structures where water-tightness cannot be fully tested, nor guaranteed long term due to operational applied stresses?
- Is there an ingress and egress plan for the pond?
- Are the project details constructable?
- What are the performance requirements of the geomembrane? Durability, tensile strength, dimensional stability, puncture, etc.?
- What is the site access for equipment and construction?
- What are the long-term site access needs for maintenance and repairs?
- Is a warranty required? If so, how long of a warranty is needed?
- Will CQA procedures be required? This is related to the Allowable Leakage Rate.
- Is wrinkling allowed? If so, how large can the wrinkles be?
- For secondary containment applications, what is the required cleanup procedure?
- What are the safety requirements for the cover system?
- Is a fence system required to protect the bottom liner and/or cover system?
- Are you trying to connect to an existing geomembrane? If so, what type of geomembrane?
- Do you plan to connect this geomembrane to a future geomembrane? Will there be future expansion?

Action Items

- FGI to create a selection flow chart