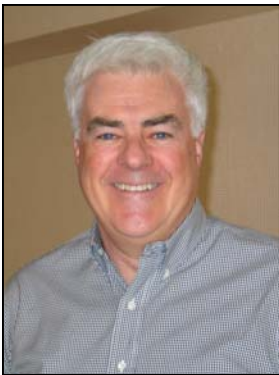


International Association of Geosynthetic Installers

# IAGI Newsletter



Dennis W. O'Brien, IAGI  
President

## A Note from IAGI's President - Dennis W. O'Brien

As IAGI enters its 10<sup>th</sup> year, our organization is making great strides to advance installation and construction techniques and to strengthen the knowledge, image and communications within the industry.

The current buzz around IAGI headquarters is the new Approved Installation Contractor (AIC) program. For many months, the AIC program has been the focus of dialog with member installers, member suppliers, outside experts in the containment field, and government officials involved in the

geomembrane business and who want to establish a benchmark for installation contractors.

All of this input has led to the development of the AIC program, a program created to recognize geosynthetic installation companies that meet a minimum level of professionalism and business practices.

The AIC program is ready to roll. This issue of the IAGI Newsletter will clarify the AIC program – define what it is and what it isn't. Turn to the article on Page 2 to learn more about

the working final version of the program and the steps necessary for your company to participate.

This issue also contains articles about the May conference in Lake George, an update on NYCRR Part 360, Morris Jett's insight on bonds, and much more.

So, take a quick break, sit back, and read about what's going on during IAGI's 10<sup>th</sup> anniversary year.

*Dennis W. O'Brien*



## Welcome new IAGI members

### Beijing Gaoneng Lining Engineering Co. Ltd

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# Approved Installation Contractor Program: what it is, what it isn't



Many of you have heard about IAGI's Approved Installation Contractor (AIC) program. There have been several versions of the proposed program and much dialog to refine it. This article will help outline what the program is and, equally important, what the program is not.

IAGI developed this program based upon dialogs with member installers, member suppliers, outside experts in the containment field, and government officials involved in the geomembrane business and who want to establish a benchmark for installation contractors.

The AIC program recognizes geosynthetic installation companies that meet a minimum level of

professionalism and business practices. The term "Approved" should be interpreted to mean that evidence is available to show that the information provided is verified as best as possible by a third party organization.

### What is the AIC Program?

The application and guidelines for completing the program requirements will be posted on IAGI's website by the end of May 2006. The following is a brief overview of the program.

The AIC program was developed based on the principles and business practices that an industry advisory board determined were important to geomembrane installation companies who consistently perform quality installations. As with any good system, this set of requirements is subject to improvements and revisions. As experience is gained with this program, the Board of Directors of IAGI fully expects to change and improve the program to meet both the needs of the customer of the installation company as well as the installation company itself.

This program outlines a basic level of business practices a company must meet in order to fulfill the AIC requirements. The companies that achieve AIC status must show that they have the ability to be bonded. The Board of Directors of IAGI is cognizant that geomembrane installers come in many sizes and many of the very small specialty operators do excellent work. It was not the intent of IAGI to prevent these small specialty contractors from competing for work within the industry. The Board also felt that it is important that a company have some financial backing in order to meet the various challenges that come from running a specialty trade company. Hence, there is not a minimum level of bonding capability that a company must achieve, just that they are capable of purchasing a bond. The company does not have to actually own a bond at the time of AIC process – but they have to have a current letter from a bonding company stating they can purchase a bond.

The key elements that must be submitted for AIC third party review and verification include:

- ◆ Health and safety orientation program
  - ◆ Drug free work program
  - ◆ Resumes of key personnel – professional competence/experience
  - ◆ Fifteen percent of crews must be Certified Welding Technicians
  - ◆ Two letters of reference from engineers that are dated within the past year
  - ◆ Two letters of reference from contractors/owners that are dated within the past year
  - ◆ Two letters of reference from geosynthetic manufacturers that are dated within the past year
- The application must be signed by a company officer and notarized. All of this information is submitted to a third party accountant for review and verification of information. The entire process must be completed annually. The cost for the AIC application is \$1500 (USD).
- There are many performance expectations that geomembrane installation contractors must meet on any jobsite. Safety management is important criteria of this program. The safety requirements stated within the program are not a substitute for local, federal, and/or state/provincial requirements. Safety provisions and plans are generally provided by the jurisdiction in which the work is being performed.
- What isn't the AIC Program?**  
AIC is not a substitute for engineers/owners doing their own background check on the
- ◆ Company history and information
  - ◆ Minimum 500,000 square feet installed annually
  - ◆ Ability to be bonded
  - ◆ Proof of general liability insurance
  - ◆ Proof of worker's compensation insurance
  - ◆ Proof of automobile liability insurance
  - ◆ Safety training program

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AIC, continued pg. 3.

**AIC, continued from pg. 2.**

installers they are planning to use on the job site. If the owner and/or engineering firm has more requirements than are covered by the AIC program, it is the obligation of that party to state those requirements and conduct further investigation of the company to ensure they meet those requirements. For example, the industry could not come to consensus on the subject of Employer Modifier Ratings (EMR). Many on the panel wanted to require an EMR of less than 1.0 to receive the AIC designation. Others were concerned that a small company that may have had one injury, but an otherwise excellent track

record would be prevented from getting the AIC designation. Requiring an EMR of less than one may have discriminated against the small installer. When working with many of the larger owners, they often require that a company meet the EMR threshold of less than one. In this case the owner/engineer could ask for an AIC company with an EMR of less than 1.0 in their specification.

The same type of requirement can be called out in a specification where an owner/engineer wants a company with more experience than 500,000 square feet of geomembrane installation.

The AIC designation will give the engineer/owner a starting point – knowledge that the companies that have completed this program have a minimum level of professionalism and business practices implemented in their companies. IAGI fully expects those hiring an installation company to have other requirements outside the AIC designation based upon the installation company's field of expertise.

**Current AIC Program Status**

The final draft of the program is completed and two companies have entered the pilot testing phase of this program. The accounting firm

doing the third party audit has already extensively reviewed what they need to do and has asked IAGI to clarify things within the program. IAGI expects the accounting firm to complete their review of the two pilot company's submittals by the end of May 2006. At that time IAGI will accept submittals from other companies in the industry.

For further information visit the IAGI [www.iagi.org](http://www.iagi.org) or contact Laurie Honnigford at +1-651-554-1895 or [iagi@iagi.org](mailto:iagi@iagi.org).

## New York State 6 NYCRR Part 360 update

For the past three years, the New York State Department of Environmental Conservation has been revising the 6 NYCRR Part 360, the authority by which the State sets standards and criteria for all solid waste management facilities.

The Department has completed its internal review and currently the legal and Department of Executive Review and Approval is nearly complete. The Department hopes to have the preliminary draft of the revision available to the general public on the Department's website this spring. A 30-day public comment period will follow this preliminary posting that is intended to solicit input just prior to the Department entering into the formal rule-making process. The Part 360 regulation will be broken up into a separate Parts, 6 NYCRR Parts 360-369 (a series format) so future

revisions are easier to make. Landfills will be covered under Part 363. The permit will be issued under Part 360. The original landfill section was a little more than 90 pages in length; now it is more than 160 pages with all the applicable landfill regulations consolidated into one Part. This consolidation effort will now address all the requirements for Long Island landfills, construction and demolition debris landfills, ash and papermill sludge monofills and municipal solid waste landfills into this one Part.

According to Bob Phaneuf, P.E., NYS DEC, with the majority of current landfill construction projects in the State now specifying electrical resistivity testing leak location into CQA plans that fewer defects are being found – indicating that improved construction quality is achievable when contractors know in advance

that a liner integrity survey will be done as part of the final certification of construction. In addition to requiring electrical resistivity leak location testing, the Department's revised landfill regulations will allow design engineers to waive the need to perform destructive seam testing in those areas (slopes < 10%) where electrical resistivity leak location was performed, basically only requiring destructs to be taken on lined slopes steeper than 10%.

Another change IAGI members will find in this specification is that GCLs will be required on caps. No longer will New York State accept a compacted clay barrier layers in final cover systems. This change is based on U.S. EPA information collected on the performance of final cover systems where it was found that compacted clay barriers in final cover systems exhib-



**Bob Phaneuf addresses the 6 NYCRR Part 360 revision.**

ited increased permeability after only a few years of being in service.

A preliminary draft of the revised 6 NYCRR Part 360 will be available for public review on the following website this spring: <http://www.dec.state.ny.us/website/dshm/sldwaste/360rev.htm>. Comments may be submitted to [swreq@gw.dec.state.ny.us](mailto:swreq@gw.dec.state.ny.us).

## Understanding Bonds—the second of two articles on tools available to minimize collection risk

by **Morris E. Jett, President Poly-Flex, Inc.**

A surety bond is simply one form of a guarantee. In the typical surety bond scenario, three parties are involved: the principal or obligor (who owes some duty); the obligee (the party to whom the duty is owed); and the surety (who guarantees in whole or in part the performance by the principal of his duty to the obligee). Since the surety is only guaranteeing the performance of the principal, the surety normally will not owe more to the obligee than the principal.

Translating these terms into the context of an owner/contractor relationship, one has the following parties: a bonding company (the surety) provides a bond that contains its guarantee of the obligations of a contractor (the principal) in order to induce the obligee (the owner) to enter into a contractual relationship with the contractor. When one looks at the universe of sureties, one finds that there is a large number of companies willing to issue bonds. Some are strong low risk firms and some are high risk firms. The strength of the bonding company becomes important because a bond is only as good as the strength and reputation of the company issuing it. Publications are available that

rate bonding companies and should be reviewed whenever a bond is presented.

### Types of Bonds

The Bid Bond. Historically, almost all public and most private invitations for bid require each contractor to furnish with its bid an acceptable Bid Bond or other security to assure that the contractor, if selected by the owner for award, will enter into the contract or has the capacity to compensate the owner for damages resulting from the contractor's failure to enter into the contract. (It should be noted that even though specified as a part of the bidding procedure, there are a few public bodies [where there is no law to the contrary] and many private entities which, if requested, will waive the requirement for a Bid Bond or other security.) Traditionally, the amount of the Bid Bond or bid security is set at 5 percent of the contractor's total bid amount. The contractor can then fulfill its obligation through the use of a cash deposit, certified check or Bid Bond.

The Performance Bond. The Performance Bond is, as its name suggests, a bond that is intended to ensure that the contractor performs all of its contractual obligations. Or, put in the negative, it is designed

to protect the owner against the contractor's default in its performance of its contractual obligations.

The Payment Bond. The Payment Bond ensures payment to all those who furnished labor or materials used or consumed on the construction project. While the bond ensures the payment of subcontractors and materialmen, it is not directly for their benefit. Rather, its purpose is to ensure that the owner (the obligee) will not be held liable for any amounts that the contractor (the principal) may fail to pay. Thus, if the contractor fails to pay its subcontractors and materialmen, the bonding company (the surety) then will step in and complete the payments. In general, under a Payment Bond (and also under mechanic's lien laws), anyone in privity of contract with a "contractor or subcontractor" will be within the class of persons protected by the bond.

In the case of a Payment Bond, the class of covered items generally includes any direct expenditure incurred in connection with the performance of the bonded contract (generally excluded are items like the cost of capital). Specific items of that fall within the scope of a Payment Bond include:

- ◆ Labor –coverage usually is afforded for all labor performed at the construction site. In many jurisdictions, coverage is also afforded for laborers of subcontractors or materialmen who work offsite fabricating materials being furnished pursuant to contract specifications.
- ◆ Freight and Transportation.
- ◆ Equipment Rental.

### Default

For a Bid Bond, the event triggering the payment by the surety (the bonding company) is a failure by the contractor (the obligee) to enter into the contract. Similarly, for a Payment Bond, the event triggering performance by the surety is ultimately a failure to pay the subcontractors and materialmen. What constitutes a "default" for the purposes of triggering the performance by the surety of a Performance Bond? In other words, what constitutes a failure to perform by the contractor such that performance by the surety is required under the terms of the bond?

Anyone who has been involved in the construction industry knows well that in the course of the performance of a construction contract the number of things that can go wrong is virtually beyond what can be imagined. Indeed, history and personal experience teach that some things happen that simply defy one's wildest fantasy. However, just because things may go wrong, does not necessarily mean that there is a "default" by the contractor of the type necessary to require the surety to step in and perform under the obligations of the bond. For

- ◆ Materials – coverage usually is afforded to materials that are (i) incorporated into the project, (ii) delivered in good faith to the jobsite, (iii) furnished pursuant to contract specifications even if not delivered to jobsite, and/or (iv) used or consumed in performance of the contract



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**Bonds, continued from pg. 4.**

example, there is no "default" when the event that causes the failure to perform by the contractor (the alleged "default") is caused by the owner. Also, events that typically fall within a force majeure clause, such as a strike, generally will not constitute a "default" of the sort that would trigger a requirement for the surety to perform.

Under the terms of a Performance Bond, a "default" by the contractor is usually defined as the contractor's unexcused failure to perform a fundamental contractual duty or obligation. These failures typically are the same type as would be considered to be material breaches of the contract between the owner and the contractor. Typical examples of this type of default by the contractor include: (i) falling seriously behind schedule; (ii) performing seriously defective work; (iii) failing to make payments, when due, to subcontractors and/or suppliers; and (iv) abandoning the work. Remember, however, that the failures must be "unexcused." While there are many possible causes of a contractor's "failure to perform a fundamental duty or obligation," only if the failure is the contractor's "fault" (i.e. is "unexcused") should the contractor be found to be in "default" thereby requiring the surety to act. For example, there should be no grounds for declaring this kind of "default" where the contractor falls behind schedule because of the delays in shop drawing approvals by the architect (assuming that the architect was not under the direction and control of the contractor). In the real world, there are often a number of reasons as to why, for example, the contractor has fallen behind

schedule; some of which may be the contractor's fault, others of which may not. The difficulties and uncertainties involved in unraveling this kind of complicated factual situation is why such cases often end up in litigation.

**Bond Claim**

Subcontractors want assurances that they will be paid, and they want to be able to perform their work without delay, interference or hindrance. Every subcontractor prefers to have the combined protection of a contractor's Payment Bond and mechanic's lien right. Where a Payment Bond is furnished, the subcontractor generally depends upon some payment protection being afforded, provided it understands and abides by the basic rules of the game and recognizes the importance of its role in the event of the contractor's default. It is important to remember, however, that the subcontractor is not the intended beneficiary of the Payment Bond, the owner is. This complicates the dealings between the bonding company (the surety) and the subcontractor.

Because the bonding company may not immediately tender payment upon being presented with a claim for payment by a subcontractor, subcontractors often find it necessary to file a lawsuit against the bonding company. The initiation of litigation, in fact, can be mandatory, if, for example, the subcontractor has not been paid within the amount of time allotted by the statute of the state in which the work or material was supplied.

In the event of a claim (or of ensuing litigation), the bonding company will have available to it all of the defenses that the

contractor would have against the subcontractor. If, for example, the contractor is entitled to backcharges or if the contractor can make a claim that the subcontractor in any way failed to provide services in accordance with the contract between the contractor and the subcontractor, the bonding company will have those same defenses and can be expected to assert them against the subcontractor as a basis for denying the subcontractor's claim. Some bonding companies seem in the initial stages of their involvement to be more focused on finding reasons for denying claims than on paying claims. As a result, subcontractors in many cases are forced to file suit, thereby incurring legal fees and other additional costs, in order to obtain the payments due.

It is essential that an unpaid subcontractor take all necessary steps to preserve and protect its rights and that it observe certain elementary rules. For example, when a subcontractor's applications for payment are not paid or are not promptly paid, it should: (1) determine the status of the subcontractor's accounts; (2) find out whether the owner is paying the contractor; and (3) learn what-

ever it can regarding the contractor's financial condition. If it appears that the contractor may be in trouble, prompt action will generally be required to fully preserve available remedies.

The following are three sets of suggested action items for a subcontractor in dealing with the contractor, the bonding company and the owner:

**In dealing with the Contractor when the payments are slow or have stopped**

Remind the contractor, in writing, of the amounts owing and their due date. (Be a squeaky wheel, but document all contracts.)

Remind the contractor of your lien and bond rights.

Make liberal use of the telephone to remind the contractor, as well as his bonding agent and surety of the overdue account.

If the contractor's response to your nonpayment complaints is a list of the contractor's own complaints about your poor progress, defective materials and deficient work, you must respond promptly and factually refute his contentions, ideally on an item by item basis. Remember that the con-

**Bonds, continued pg. 6.**

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**Bonds, continued from pg. 5.**

tractor's defenses to paying you will also be the surety's defenses. Thus, if any of the contractor's complaints are valid, improve your progress, correct the work, replace the defective materials, or offer appropriate credits.

Determine whether, in accordance with the Uniform Commercial Code, you are able to repossess any materials you have delivered, and decide whether you want to exercise repossession rights. In this regard, consider retaining an attorney experienced in handling construction disputes to assist you in dealing with the contractor.

Consider terminating or rescinding your agreement with the contractor. A subcontractor who has not been paid according to his subcontract may be able to terminate his performance and sue for the reasonable value of the work he performed. Getting competent counsel from an attorney is critical at this point.

**In dealing with the Bonding Company (the Surety), if the dealings with the contractor fail to produce any money**

Determine the time period within which you must file your bond claim, and find out if there are any statutory requirements in regard to the giving of notice and the making of claims.

Put the bonding company on notice of the overdue account both in writing and by telephone in advance of filing a formal claim.

File your bond claim in strict accordance with the requirements of the bond. Be sure your claims are fully documented and corroborated – neither overstate nor understate your claim.

Check local laws to see if you are entitled to recover either interest or attorney's fees or both. If the surety, in bad faith, dishonors or ignores your claim, determine whether enhanced or punitive damages

are recoverable. As in dealing with the contractor, at some point consider getting competent counsel from an attorney.

Determine what time restraints (statute of limitations) exist on the filing of a lawsuit against the bonding company.

**In dealing with the Owner (at the same time you are pursuing your remedies against the contractor and the surety)**

Notify the owner, in writing, of the amount owing and when it was payable.

Demand that the owner pay you directly out of any amounts which become due and owing to the contractor, and demand that no further payments be made to the contractor until your account is fully paid. Note that state laws authorizing the owner's direct payment to subcontractors are common.

Make sure you understand the prerequisites specified by

such statutes. Note also that if the contractor has been paid by the owner, but has not used the money to pay subcontractors, such nonpayment may constitute a crime, which renders the debt nondischargeable in bankruptcy. Finally, investigate the state's lien laws, since some state's lien laws require the owner to withhold funds from the contractor when a claim is filed.

Make sure that you fully protect your mechanic's lien rights and that you provide all notices, etc., required by state law. Generally, you are entitled to file a mechanic's lien on any private project for the value of the completed work. Determine whether local law requires that a notice of intent to file a lien be served on the owner and/or the Contractor prior to the filing of the lien.

**Industry News**

**CLI forms ClearWater Construction International**

Colorado Lining International (CLI) has purchased golf course water feature builder

Alliance Golf Corporation of Evansville, Ind. and formed ClearWater Construction International, LLC. ClearWater will combine the re-

sources of CLI's liner fabrication and related geosynthetic business with Alliance's water feature and dirt moving abilities.

According to CLI President John Heap, "The Alliance acquisition furthers CLI'S long time philosophy of providing the best combination of products and services to our clients. With the formation of ClearWater, we now provide total vertical integration of lake and stream construction."

**Apicella becomes president of AEG**



On May 1, 2006, Carl Apicella became president of American Environmental Group, Ltd.

(AEG), a specialty construction contractor providing services to the solid waste industry. Apicella is responsible for building the company's geosynthetic installation division which employs approximately 100 people. He has more than 18 years experience in the environmental industry.

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## IAGI participates in Lake George conference

The Seventh Annual Federation of New York Solid Waste Associations Solid Waste/ Recycling Conference and Trade Show was held at the beautiful Sagamore hotel in Lake George, New York, May 7-10. Completely organized by volunteers, this event featured networking opportunities for the more than 680 attendees, a trade show with 98 exhibitors, technical sessions and a bit of fun.

Some event highlights that may be of interest to IAGI members included an update on New York State's Solid Waste Management Regulations, Part 360 (see Page 4 for more information on this update).

IAGI participated on a panel discussion entitled "Emerging Concepts for Landfill Construction Quality." This panel was moderated by Scott Menrath, NYS DEC. Approximately 65 people attended this session. Speakers included Bob Phaneuf, NYS DEC; Carl Apicella, American Environmental Group, on behalf of IAGI; Robert Koerner, Ph.D., P.E., GSI.

During Bob Phaneuf's presentation, entitled "The Need for Improved Landfill Construction Quality: A Regulatory Perspective," Phaneuf stated that

"the need for improved landfill construction quality is founded on the basis that there is a direct correlation between construction quality and operational performance. Because of this the regulations require that landfills be built to the best available construction standards." Phaneuf also talked about New York State's experience with electrical resistivity testing. When the contractor and his or her sub-contractors know that electrical resistivity testing will take place on a landfill, substantially fewer leaks are found in the landfill cells than when the electrical resistivity testing is done without prior notification.

During Carl Apicella's presentation, "IAGI's Approved Installation Contractor (AIC) Program," Apicella introduced the new AIC program. The audience posed positive inquiries about this program. Apicella also talked about the Certified Welding Technicians program and why these programs are useful to the end user.

Dr. Robert Koerner focused on the Geosynthetics Institute's New Certification Program for Landfill CQA Inspectors. Dr. Koerner discussed GSI's new program for inspectors and why it is important to the industry. Already approxi-



Panel participants encourage questions from the audience as they discuss landfill construction quality.

mately 70 people have taken the exam. More information about this program is available on the GSI website, [www.geosynthetic-institute.org](http://www.geosynthetic-institute.org). The Federation of New York Solid Waste Associations Solid Waste/Recycling Conference and Trade Show is made up of three organizations that

work together: NYS Association for Solid Waste Management, NYS Association for Reduction, Reuse and Recycling, and SWANA Solid Waste Association of North America. This group brings a great mix of industry specialties and cross fertilization of ideas among different branches of this discipline.

## Welder Obtains IAGI Certification



Congratulations to **Engineered Textile Products** who sponsored Certified Welding Technician testing of their employed welding technicians.

IAGI developed a welder's certification program so installers could define standards of proficiency, recognize the knowledge, experience and skills of installers, and reward those who qualify with industry recognition.



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## Geomembrane CQA—Let's poke some holes

by Glenn T. Darilek, P.E.

No, this commentary is not about poking holes in geomembranes. It is about a rational examination of some common geomembrane engineering and construction quality assurance (CQA) practices. I offer the following statements to stimulate critical thinking and to open a dialogue about CQA and engineering practices. I invite you to "poke holes" in the statements. This is the first installment of a series. I will summarize responses in subsequent issues.

So here are the "pincushions" to poke holes in:

**Pincushion 1** – Engineering is not the quest for perfection, rather it is the practice of using science and reason to obtain that which is efficient, economical, and perfect for the intended purpose.

**Pincushion 2** – The only function of a geomembrane is to prevent leakage. Engineering and CQA measures associated with geomembrane installations should be judged solely on how well they meet that objective.

**Pincushion 3** – Geomembrane seams in a properly-designed installation do not provide structural strength and they will not be subject to significant stress. Destructive testing of seams to

near-ultimate tensile and peel stress is irrelevant to the function and performance of the geomembrane.

**Pincushion 4** – The purposes for specifying thicker geomembranes are puncture resistance and ease of seaming, not to provide increased seam strength. Requiring geomembranes to have seam strengths in proportion to their thickness unnecessarily penalizes the use of thicker geomembranes for increased puncture resistance.

Respond to [glenn@ltsi.com](mailto:glenn@ltsi.com). Responses will remain anonymous if requested.



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