

# IRMCA News

Spring 2013

Volume 32, Number 1

A publication of the Illinois Ready Mixed Concrete Association

## Upcoming Events

September 4, Board Meeting  
September 5, Golf Outing

## New Members

LCI Concrete, Inc.  
Jack Laverdiere, Owner  
4055 West Jackson Street  
Macomb, IL 61455  
Phone: 309.837.1258  
Fax: 309.833.4993

S.T.A.T.E. Testing, LLC  
[Jay Behnke](#), Pres./Owner  
570 Rock Road Drive, Unit K  
East Dundee, IL 60118  
Phone: 847.836.6002  
Fax: 847.836.6342

## Pervious

### Re-certification

The National Ready Mixed Concrete Association's (NRMCA) Pervious Concrete Technicians and Installers certification remains in force for 5 years. Many of the persons tested and certified by IRMCA are now or soon will be coming up to the end of their certification. IRMCA would be glad to organize and offer re-certification sessions. If interested, please contact [Bruce Grohne](#). We'll plan to offer a convenient class.

## Technical Committee

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## A new format and delivery system for our association newsletter

Beginning with this issue, IRMCA will be disseminating its traditional newsletter in a new format: by e-mail. We hope that this new format will prove to be not only cost-effective, but also a marketable tool for wider distribution and use.

This first e-issue is being e-mailed to those currently in our database; however, we are happy to add other contacts to the distribution list. You can send us e-mail addresses for any (all) of your employees, customers, IDOT contacts, your personal/home account, etc. Adding more names and e-mail addresses does not increase our costs. Or, you can forward the e-mail to anyone you like.

You have several options for reading this e-issue. You can click on the "web version" link at top right to read the issue on our website. If you are reading the issue on a mobile device you can click on the "mobile version" at top right. You can look at the list of feature articles at the top, decide which article you want to read first, and click on the title to be taken directly to the article. Or, you can simply scroll down and read/peruse the entire newsletter.

We need your feedback! This is our first attempt at using e-mail to

## Technical Committee

Over 20 IRMCA producers and associates met in Bloomington on February 20 for a regularly scheduled Technical Committee Meeting. Items discussed included IDOT personnel changes, IDOT mix design changes, the problem of “concrete balls,” relationships with testing laboratories, contractor vs. producer responsibilities when testing, aggregate gradation issues, bridge issues, and some ideas about where IRMCA might develop contributions (e.g., complaint forms, problem checklists, etc). The Technical Committee will continue to meet at least twice a year. If you or your company would like to participate in future committee meetings, simply let the IRMCA office know and you will be added to the contact list.

## Terry Murphy



Family, friends, and co-workers gathered in Elgin on Thursday, April 25, to celebrate the retirement of Terry Murphy, long time employee of IRMCA member Meyer Material. After a reception and dinner, Terry’s wife Kathy, his daughters, and his good friend John Albinger talked about his career and paid many personal and work-related tributes to him. Terry, who served for many years as Chairman of the IRMCA Technical Committee, was presented a plaque thanking him for his service to IRMCA and to the concrete industry.

article. Or, you can simply scroll down and read/peruse the entire newsletter. We need your feedback! This is our first attempt at using e-mail to distribute our newsletter and we are doing it all “in house.” PLEASE send us comments, suggestions, or advice. Now, enjoy the rest of this initial e-newsletter.

## At the click of a mouse

**By Randell Riley**

Starting with a new format for a newsletter creates both an interesting challenge and an opportunity. But it might also put me out of a job! Why do I say that? Much of what your association staff does in supporting you in your role as producers or contractors is ferret out small gems of information for promotion or troubleshooting. When you call us for help, what do I do? I do many of the same things I have been doing for more than thirty years, but I’m going to let you in on a little secret. In the past I used to spend more time in technical libraries, but now much of the time I find information faster and more efficiently by searching the deep resources available on the web.

Of course searching the web is about the tools you use and knowing how to ask the question to find that critical tidbit. Google is good, as is Microsoft’s Bing, for doing general searches, and I use one or the other all the time. Google is the more powerful to me because you can use qualifiers such as “+” and “-,” or enclose an exact phrase in quotes if you are looking for a specific phrase. The instructions for how to do this can be found [here](#). Use some of these tricks and you will find you can help yourself quite a bit after hours when association staff are unavailable.

It is also possible to create specialized search engines and some very powerful ones exist. Say you want to know about how the different Departments of Transportation might handle fly ash in their mixtures in comparison with Illinois. A good place to start is [here](#). Get to the search engine and type, for example, “fly ash” “texas” in the input box and up will pop several thousand references, most from DOT websites, from which you can further drill down in your search for that nugget.

This is one step better than searching the broad web where you are going to get far more hits than you can likely scan. Google is pretty good but cannot read your mind - yet! It can do a respectable job of pointing you in the right direction. As search intelligence gets better this will likely improve.

One of the downsides of search engines is, of course, the game of cat and mouse that is constantly being played as search engines strive to provide you with the best, most relevant results while advertisers blatantly attempt to get your business with their equivalent to junk mail and email.

If you want to avoid broad results there are other ways to successfully search, and you may already have access to many of these resources, including ones that are in a very real sense prequalified for your business.

As a service to the industry National Ready Mixed Concrete Association has resources [here](#) for both members and nonmembers.

Want to get the latest on concrete overlays? The National Concrete Pavement Technology Center has many excellent resources [here](#).

The latest *Guide for Concrete Overlays of Asphalt Parking Lots* may be exactly what you need to convince an architect or engineer that it is entirely feasible to overlay an asphalt parking lot with concrete. It can be downloaded at the CP Tech Center website and through the Ready Mixed Concrete Education & Research Foundation [here](#).

One of the revolutionary changes not just on the web but within the industry is the movement towards the use of apps. These small programs are run on a centralized server or on your phone or perhaps on both depending on the system.

Want to know if your dry, windy day is going to be one which is prone to producing plastic shrinkage cracking? You can find out by checking the evaporation rate [here](#). This, combined with knowledge from American

him for his service to IRMCA and to the concrete industry. Best wishes to Terry and Kathy as they enjoy a hard-worked-for and well-deserved retirement.

## Finding Your Officials

The Illinois State Board of Elections website has been slightly revised but remains a great resource for anything regarding the election process in Illinois. Perhaps the most useful page on the site is the [map page](#) where you can enter your address and find YOUR particular elected federal, state, and county officials. Try it.....use it.....save it!

## Short Course



The 2013 IRMCA Short Course was held on January 7 & 8 at the Paradise Hotel and Casino in East Peoria. The well-attended meeting opened on with exhibits and a reception followed by a dinner for all attendees. The featured speaker was Doug Whitley, president and CEO of the Illinois Chamber of Commerce, who talked about the recent elections and the political/financial realities facing the state of Illinois.

The next day, the slate of presenters included Bob Garbini, president of the National Ready Mixed Concrete Association; Mitch Mariotti, environmental manager, Prairie Materials; John Geyston, formerly of Snyder Insurance; John Albinger, concrete technical consultant; Matt Mueller and Doug Dirks from IDOT; John Meladner, executive director

of plastic shrinkage cracking? You can find out by checking the evaporation rate [here](#). This, combined with knowledge from American Concrete Institute publication 305R-10, *Guide to Hot Weather Concreting*, found [here](#), can provide you and your contractors with what they need to know to help avoid problems later this construction season when the winds are blowing, the temperature is hot, and the humidity is low.

The American Concrete Pavement Association website has a fairly extensive list of apps and full program downloads, so go check it out [here](#). There are five or six that may be of use to you as a producer or small contractor. Most of them are of use to me a pavement engineer in one way or another.

Finally, don't forget your own association's [website](#), where Illinois Ready Mixed Concrete Association has downloadable resources to use in your promotion efforts or to help solve some of your technical problems. The best thing about IRMCA's website is the fact that the articles and promotion pieces listed on the site are largely based on Illinois projects. One of the biggest hurdles one faces in promoting a project is convincing someone that they are not the first to have done something they have never heard of. "Whitetopping? Never heard of it. Can't be done." IRMCA's website has plenty of examples of completed projects of all types, including concrete overlays, pervious concrete pavements and the newcomer to Illinois, Roller Compacted Concrete.

All of these bits and bytes of market information represent market opportunities to you as a producer. And the price is right for many of them – free! All of these are available at the click of a mouse.

Knowing what you know now, I just hope that mouse doesn't put me out of work!

*Randell Riley is the Executive Director/Engineer for Illinois Chapter – ACPA and a consultant to Illinois Ready Mixed Concrete Association. He is actively and enthusiastically involved in the day-to-day building of partnerships and promotion of long-life quality concrete pavements. He can be reached at 217-793-4933 or at [pccman@ilacpa.com](mailto:pccman@ilacpa.com).*

## BALLS: the dreaded "cement balls"

**By John Albinger**

These balls, typically made up of cementitious materials, water, and sometimes sand, are most prevalent in transit, or truck, mixed concrete and higher slump mixes. The most common cause cited for these balls is when water or wet sand is allowed to come into direct contact with the cementitious materials, cement, flyash, slag (for the sake of simplicity I'll refer these materials as cements). Therefore the first solution suggested is adjusting the batching sequence, making sure cements and water are not being discharged at the same time. Although the batching sequence is a common cause for balls, it may not be the only reason balls are formed. There are, in fact, several contributing factors, many of which are never considered.

**Central and transit mix plants.** Balling is most prevalent in transit, or truck, mixed plants. A ready mix truck is designed to be loaded with material, the material is mixed, and the resulting concrete mixture is hauled to the job. The sole function of a central, or wet, batch plant is to make concrete, and it does so in a much more energy intense manner than a truck mixer, thus not allowing balls to form. A lack of maintenance and the condition of the plant and truck are major factors affecting the quality of the concrete being produced.

### **Batching sequence (suggested, not absolute).**

1. Start by discharging approximately 80% of the total added water (sometimes called the head water).
2. While the water is discharging begin discharging the aggregates.
3. The timing must be such that the cement must not begin discharging until the headwater is finished and there is enough aggregate left to go in

Doug Dirks from IDOT; John Meladner, executive director of the Slag Cement Association; and Brian Borowski, technical service, Lafarge NA.

## Winter Meeting



Members of the Illinois Ready Mixed Concrete Association, the Northern Illinois Ready Mix & Materials Association, and the Wisconsin Ready Mixed Concrete Association gathered at the TradeWinds Island Resort in St. Pete Beach, Florida, on March 10-13 for this year's Winter Meeting. The hotel offered a great array of activities, restaurants and "watering holes," a beautiful beach, and our very own everyday meeting room. There were several excellent restaurants near the hotel, and attendees were unanimous in praising the resort staff for friendliness and attention to detail.

Members attended sessions featuring talks on the state of the industry, concrete batch plant innovations, trucks fueled by compressed natural gas, internal curing, and a roundtable discussing legislative and labor issues in Illinois and Wisconsin. On the last day many participated in a golf outing, and the meeting adjourned following a reception/dinner that night.

5. The timing must be such that the cement must not begin discharging until the headwater is finished and there is enough aggregate left to go in with all of the cement.
4. After all of the aggregate is discharged the remaining 20%, or so, of the water (sometimes called tail water) can be discharged.
5. Admixtures should be added to the water or on to the aggregates as recommended by your supplier.

**High amount of water – high slumps.** The more head water used, the less effect aggregates have in preventing the formation of balls when the cement begins to be discharged into the truck. If a high water content is required, then an adjustment in the ratio of head to tail water may be beneficial (e.g., 60:40).

**Flow characteristics of the cement.** Different cements have different flow characteristics. These differences are most obvious when the cement is being pumped into the plant and where the time can range from 20 to 30 minutes. Similarly the time it takes to discharge the cement into the scale can vary, and ultimately the time it takes to empty the scale varies to the extent that the last of the cement may or may not be discharged simultaneously with the aggregate.

**Wet aggregate.** Excessive surface moisture on the fine or coarse aggregate can contribute to balling when it comes in contact with cement. The use of moisture probes and microwave technology can significantly help control aggregate moisture.

**Aggregate scale filling and emptying.** Commonly coarse and fine aggregates are accumulatively weighed in the same scale, the sand on top of the coarse aggregate. The positions of the bin gates above the scale will dictate how the material stacks in the scale and subsequently in what proportions the combined aggregates fall on to the belt. A consistent blend is best. As for aggregate gates, are there multiple gates? And if so, are they linked together or do they act independently? Are the throat openings wide enough so as to prevent bridging? And is the angle on the sloping side of the bin steep enough not to affect discharge? All of these can ultimately contribute to balling.

**Rate of feed.** Obviously loading time impacts efficiency, but not synchronizing the speed of the aggregate feed belt with the discharge of the cement can cause the cement to be fed into the truck by itself which, again, can cause balling.

**Location of the cement feed inside the loading boot.** Bigger is not always better. Too big of a cement discharge pipe, or boot, can restrict the aggregate flow and cause the cement to discharge too fast. Reducing the size of the discharge pipe too much can, however, reverse the problem. The location of the pipe should be placed where it provides the least amount of restriction and maximum amount of comingling with the coarse aggregate.

**Size of load.** The smaller the load, the less confined the aggregate is, and once again, the less effective the coarse aggregate is in breaking up balls. Controlling the cement scale discharge and making sure the cement doesn't fall in one "clump" can help.

**Condition of the fins inside the truck mixer.** If the fins inside the truck mixer are worn or build up is allowed to accumulate, the materials are not dispersed uniformly throughout the load, the opportunity for raw cement to meet water is greater, and the inconsistency of the mix is less effective in preventing or breaking up balls.

**Conclusion.** As stated earlier, balling is generally related to truck mixed concrete and concrete with higher amounts of water, yet each of the

## Event Reception

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Lehigh Cement  
McNeilus  
St. Marys Cement  
Vulcan  
WR Grace & Co

## Internal Curing

Attendees at the IRMCA 2013 Winter Meeting listened to a presentation on internal curing given by Steven Rowe of Big Rivers Industries. During his presentation he advised that further information can be gained from the website of the Expanded Shale, Clay and Slate Institute (ESCSI). If interested, go [here](#) to look for articles on internal curing. This is an advancing concept (soon to be specified) and learning about it now may make future changes easier.

## Did you know?

When construction began on Alcatraz in 1909 it was the largest reinforced concrete structure in the world. Today concrete industry management students from California State University are helping preserve some of the concrete features.

## IRMCA member shows support for U.S. Troops



Conclusion: As stated earlier, balling is generally related to truck mixed concrete and concrete with higher amounts of water, yet each of the aforementioned factors should be considered when balling occurs. Some of the computerized or automated plants may not have the memory capacity to individualize batching for each mix, so altering the sequence or timing of the discharge may have to be done manually. Talk to your plant manufacturer and batching system provider. They can undoubtedly provide suggestions to help eliminate the problem.

## Inside the Head of a National Client

By Jon Hansen



The advice given to me was straight forward: “Just tell them how long lasting, sustainable, and *good* concrete is and how it reflects light better so it is safer, and how they will spend less on maintenance.” I thanked the giver for the advice, and then asked only one question: “Tell me who in that company makes this decision, and I will focus only on that person.”

Understanding the decision-making process and advocating for major change is a challenging endeavor. You might be talking to the company architect, only to find the decision is going to be made in the real estate division. Or you may read that a CEO has made a public announcement in favor of being “green and sustainable” only to find out the focus is on recycling waste paper and car pooling. Most of NRMCA’s national clients see buildings as a necessary component for conducting business, and *building* buildings only as a means to do more of what they really do. As one client explained, “We are in the business of selling pills. We only build stores so we can sell more pills.”

It’s true! Our clients are generally not in the business of building buildings. And when a national client is on track to build more than 300 stores a year, it is not always about doing it right or good or for the long term, but about satisfying upper management and investors and realizing the quickest return on investment in the business of selling pills.

When the orders come down to build 300 more stores this year no one wants to change a known into an unknown. Put yourself in that position. Would you change a tried and true method without knowing its effect on your budget and timeframe? So the question becomes, how do you make change seamless and profitable?

We need to make the transition from asphalt to concrete worthwhile. The fact is, most of our potential clients would *like* to have concrete paving, but fear of the unknown keeps them from pursuing it. Only a couple of times have I been told someone is “not interested” in concrete under any circumstance. And when these naysayers are pushed further as to “why”, their objections are obsolete, uninformed or misconceived.

The old adage says that we were given two ears and one mouth, and we should use them in that proportion. That’s extremely important in dealing with decision-makers. Too many times we set ourselves on selling what we *think* the client wants, not what he or she *really* wants. Recently a national client about to make a decision in favor of concrete or asphalt informed everyone in the room that he “wanted facts only”. No hype, no sales pitch, no personal opinions. This gave the concrete guys a huge advantage. Here are some facts: ACI 330 is the only industry standard for parking lot design. *Engineering News Record* (ENR Online) tracks the cost of construction material in cities across the United States. Including a concrete specification



*Engineering News-Record (ENR Online)* tracks the cost of construction material in cities across the United States. Including a concrete specification for parking lots in bid documents increases competition and lowers all paving bids no matter which material is successful. And now, for the first time in as long as anyone can remember, concrete can bring a lower first cost with equal design. Let the facts roll!

Speaking of facts, here's one that might surprise you. At national clients, new construction is the responsibility of one team while another handles maintenance repair. And seldom do the teams talk to each other! A designer doesn't want to hear your well-thought-out arguments about long-term durability. Both teams are charged with staying on budget, but if new construction views one material as cheaper and also *acceptable*, it can remain on budget for first cost, sending the extra long-term cost burden to maintenance and repair. Fortunately for us, and as a result of a slower economy, companies are mandating cost-cutting across the board and that is forcing the teams to get together to find ways to reduce overall cost. With that, the facts again fall in our favor.

*Jon Hansen is a senior national resource director for the National Ready Mixed Concrete Association. Contact him at 515-266-1058 or [jhansen@nrmca.org](mailto:jhansen@nrmca.org).*

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## NRMCA to certify environmental product declarations

**By Lionel Lemay, Senior Vice President, Sustainability, NRMCA**

The National Ready Mixed Concrete Association is now an Environmental Product Declaration (EPD) Program Operator, a designation that enables the Association to help its members meet new requirements in LEED v4, International Green Construction Code (IgCC) and the Architecture 2030 Challenge for Products. EPDs are third-party verified reports published by product manufacturers that provide information regarding the environmental performance of their products.

### **What is an Environmental Product Declaration (EPD)?**

EPDs are reports, usually several pages in length, intended to assist specifiers, purchasers and users of products to compare the environmental performance of products in the same category. Cars, computers, carpeting are all examples of product categories. EPDs have been used in the consumer products sector for some time and the concept is rapidly migrating into the building products sector. EPDs are developed in accordance with strict international standards that include a transparent verification process for adopting Product Category Rules (PCR) by which EPDs are developed and verified.

To produce an EPD, a company must perform a comprehensive Life Cycle Assessment (LCA) on a product and summarize the results in the EPD. The PCR defines, among other things, the functional unit (product to be analyzed), scope and boundaries of the LCA and the environmental impacts to be reported in the EPD. Before the EPD can be published, it must be third-party reviewed and verified (certified).

Generally, industry trade groups help develop a PCR that provides instructions on how to conduct the LCA in order to produce EPDs that are consistent across a product category. Ready mixed concrete is considered one product category. Generally, plant or site specific data are more desirable for conducting an LCA for the product, however, industry average data are sometimes used if site specific data are not available.

Think of an EPD as a nutrition label for a product; but instead of providing information such as calories, fat content and carbohydrates, an EPD provides information about environmental impacts such as global warming potential, smog formation and water use. Figure 1 is a schematic

EPD provides information about environmental impacts such as global warming potential, smog formation and water use. Figure 1 is a schematic representation of the EPD development process.

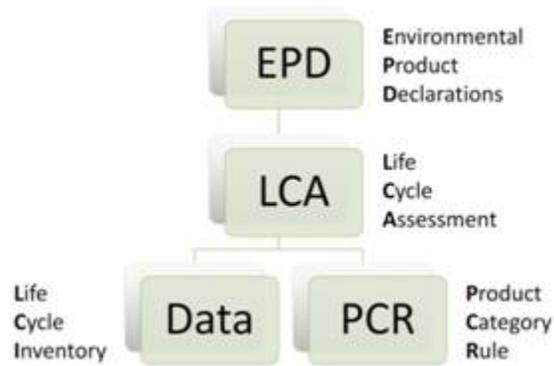


Figure 1. EPDs are developed by conducting a LCA on a product using a PCR and LCI data.

There are three types of EPDs defined by International Standards Organization (ISO) standards: Type I, II and III as shown in Table 1. The type depends on the degree of third-party verification and endorsement. The concept of developing EPDs for products is relatively new in the building products industry. Not many industries have developed the requisite PCRs or published reliable LCI data. Perhaps a reason for this is that until recently not many project specifications or standards have required EPDs.

Table 1. Types of Environmental Product Declarations

Type	Standard	3 <sup>rd</sup> party reviewed	3 <sup>rd</sup> party endorsement	Description
I	ISO 14024	Yes	Yes	Eco-label
II	ISO 14021	No	Yes	Self-declaration
III	ISO 14025	Yes	No	“Nutrition” label

However, new standards such as LEED v4, IgCC and Architecture 2030 Challenge for Products will require a combination of EPDs for products and LCAs for whole buildings as a way to demonstrate transparency and ultimately superior environmental performance. These standards will generally require Type III EPDs. These new standards also require that product manufacturers demonstrate that their products perform better than the industry average or baseline which is typically established by an industry group. NRMCA is currently working on establishing industry averages and baselines for concrete in order to help the concrete industry compete effectively in projects designed and built using the new standards.

### Product Category Rules (PCR) for Concrete

Over the past year, researchers from the University of Washington’s Carbon Leadership Forum (CLF) have worked with a diverse group of stakeholders, including architects, engineers, academic researchers, LCA professionals, concrete producers and representatives from NRMCA, to develop a PCR for Concrete. As required by the international standards, the PCR was reviewed and verified by an independent panel of experts before being registered with CLF. At the same time, the World Business Council for Sustainable Development Cement Sustainability Initiative (WBCSD CSI) developed a PCR for Concrete that will be registered by the International EPD System.

The CLF PCR is more appropriate for use in North America and the International EPD System. PCR is more appropriate for European and other international locations based on differences in LCA rules. NRMCA will adopt both PCRs for its EPD Program.

adopt both PCRs for its EPD Program.

**Life Cycle Assessment (LCA)**

Life cycle assessment, or LCA, is the investigation and evaluation of the environmental impacts of a product, process or service. LCA evaluates all stages of a product’s life and considers each stage interdependently. Figure 2 provides a schematic of a typical product manufacturing process. Inputs include raw materials and energy. Life cycle stages include raw material acquisition, manufacturing, product use and, finally, recycling or waste management. The outputs, many of which negatively impact the environment, include atmospheric emissions, waterborne wastes, solid wastes, co products and other releases.

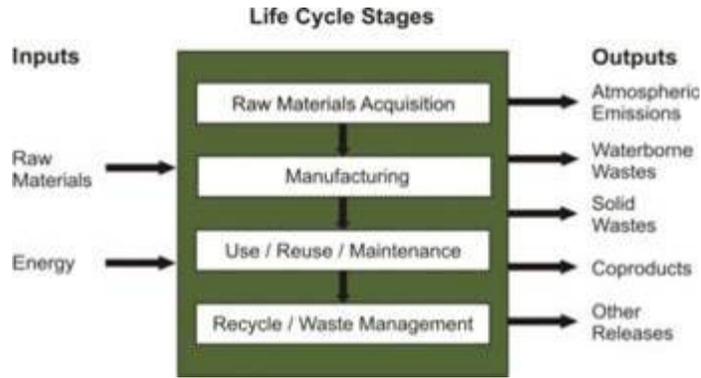


Figure 2: Life cycle stages, inputs and outputs for life cycle assessment (adapted from the U.S. Environmental Protection Agency (EPA)).

LCA is the most comprehensive approach to determining the environmental life cycle impacts of a product and can be used as a tool to make decisions that could result in lower environmental impacts. Table 2 provides a list of potential environmental impacts measured using LCA methodology and which impacts are to be reported in an EPD for each standard.

**Table 2: List of potential environmental impacts measured using LCA methodology and required EPD reporting by standard.**

IMPACT	LEED v4*	IgCC	Architecture 2030
Acidification	X	X	
Climate change	X	X	X
Ecotoxicity			
Energy Use (non-renewable)	X		
Energy Use (total)		X	
Eutrophication	X	X	
Habitat Alteration			
Human Health			
Ozone Depletion	X	X	
Smog Formation	X	X	
Water Use			

\*LEED v4 is currently under development and therefore impact reporting requirements could change.

**How Will the NRMCA EPD Program Work?**

The objective of the NRMCA EPD Program is to facilitate the development, verification and publishing of certified EPDs for ready mixed

The objective of the NRMCA EPD Program is to facilitate the development, verification and publishing of certified EPDs for ready mixed concrete products and concrete ingredients. To maintain third-party objectivity, NRMCA ensures that an independent verifier will review and verify each EPD developed under the program. Verifiers may be an individual or verification body with knowledge of the concrete products industry and related environmental aspects, with process and product knowledge of the product category, and have expertise in LCA methodology. NRMCA will strive to keep up to date on the general rules of other related EPD Programs and PCR development.

NRMCA has developed EPD Program Operator rules by which it conducts the NRMCA EPD Program. These rules lay out how NRMCA will adopt and develop PCRs, conduct LCAs, and develop and verify (certify) EPDs. These rules were developed by a committee of NRMCA and meet the requirements of international standards for developing EPDs.

There are five basic steps to getting an EPD Certified by NRMCA:

**Step 1: Select the PCR you would like to use to develop your EPD.** NRMCA will maintain a list of PCRs for concrete and concrete ingredients.

**Step 2: Conduct an LCA on your product and produce a draft EPD.** Concrete producers can conduct LCAs with in-house staff if they have the expertise or they can engage a consultant do this. This step is most critical to the process and is the most time consuming and costly. All LCAs must be critically reviewed by a third-party reviewer. NRMCA will provide contacts of qualified LCA practitioners and third-party reviewers. The result of an LCA study is usually a comprehensive report, often over 100 pages long, detailing the LCA methodology used and the environmental impacts of the product studied.

**Step 3: Submit your EPD to NRMCA for verification (certification).** This step will require a fee to be submitted along with the LCA and draft EPD. NRMCA will briefly review the LCA and EPD for conformance with the PCR, EPD Program Rules and international standards before sending them to an independent verifier for review.

**Step 4: NRMCA will send your LCA report and draft EPD to an independent verifier for review.** If the report meets all the requirements of the international standards, the PCR and the NRMCA EPD Program Operator Rules, NRMCA will issue the EPD with the NRMCA Certified EPD logo and publish the EPD on its Web site.

**Step 5: Use the NRMCA Certified EPD for project submittals and product marketing.** Once the EPD is certified it can be used for project submittals on projects requiring EPDs. Over the next several years, specifiers on green building products will require EPDs be submitted by product suppliers. NRMCA certified EPDs will meet those requirements. In addition, certified EPDs can be used a marketing tool to demonstrate your company's transparency with regard to environmental performance.



Figure 3: NRMCA Certified EPD Logo

NRMCA will strive to keep up to date on the general rules of other related EPD Programs and PCR development. The goal is to make EPDs verified by NRMCA as consistent as possible with those in other EPD Programs in order to support the use of that information in LEED v4, IgCC and Architecture 2030 and other green building programs. For more information on the NRMCA EPD Program [go here](#).

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## TELL IT LIKE IT IS: WHAT?????

**By John Albinger**

I recently attended a seminar titled “Environmental Product Declarations, What Does It All Mean for the Concrete Industry?”, a subject that most of you have never heard of but that will eventually affect all of you. If you’ll bear with me, take a moment to read the program description:

“With the proliferation of eco-labels and green certifications worldwide, determining a product’s environmental attributes can be a confusing process. While well established in other parts of the world, Environmental Product Declarations [EPDs] are starting to appear in the US as the common means for assessing the potential environmental performance of a product or process. The US Green Building Council’s LEED v4 Rating System and Architecture 2030 for Products are initiating the demand for EPDs.

Given concrete’s significant role in the construction and maintenance of our buildings, bridges, and pavements, it by definition has an impact on the built environment. Specifying Environmental Product Declarations for concrete, and other building products, can help architects, engineers and suppliers better manage the environmental impact of a project.

This seminar will present a detailed explanation of EPDs, the Life Cycle Assessment [LCA] that supports it and Product Category Rules [PCRs] that set the ground rules for it. An example of an approved EPD will be discussed. The seminar will also address NRMCA’s and ASTM’s EPD Programs, which enable concrete producers to meet the new requirements for EPDs.”

To further confuse you we have republished an article written by Lionel Lemay, NRMCA Sr. VP, Sustainable Development, titled “NRMCA to Certify Environmental Product Declarations” and I suggest you read it, even after you read my comments. Be forewarned: the article is only two pages long, has 20 paragraphs, four charts, and there are 10 acronyms used 128 times. Yes, I counted them.

For those of you who won’t end up reading the article I can help simplify the gist of it. EPDs are designed to meet new LEED v4, IgCC, and the Architecture 2030 Challenge for Products. (Didn’t know you were being challenged, did you?) We as “manufacturers” will be required to provide information regarding the environmental performance of our product, sort of like nutritional labels on food products, and naturally this information has to be developed by a third party. Oh, it’s not just us, not just concrete, it’s all products: cars, computers, carpet and on and on and on. The intent is to determine the impact of all products and manufacturing on global warming, smog, and water use. It’s definitely time for a “HOLY KAPLOOKERS”. It’s not a bad idea, but to say the least, it’s a monumental task.

So what’s the probability of this happening and what’s our industry doing about it? Well, the wheels are in motion and the probability of some version of these kinds of disclosures, or declarations, is very high. I think this endeavor is strongly supported by our current administration, so future

version of these kinds of assurances, or declarations, is very high. I think this endeavor is strongly supported by our current administration, so future politics will no doubt strongly influence the final version, one way or another.

As for our industry's involvement, Mr. Lemay said that the movement was under foot before we knew anything about it, and that at this point we will keep abreast of what's happening and have a voice in how it will affect us.

I intentionally waited to tell you the good(?) news. Immediately these declarations will only be required on projects seeking LEED certification.

Whew!! ----- Nope!!

Once again I think it's the foot in the door and what we need to do is stay involved as an industry and as individual producers get involved politically, if and when necessary. I've written this column and IRMCA has included NRMCA's article to help keep you informed about issues that do or will affect you. Whether you read the article or get involved in the future is, as always, up to you. I know one thing, it's getting harder and harder to be an innocent bystander and let everyone else determine our future. Please try to read the article.

P.S. Retirement is wonderful.



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