



Lead Lines



Eastern Pennsylvania Chapter
International Society of Explosives Engineers
www.easternpaisee.com

Volume 33 Number 4

Fall 2026

The Eastern PA ISEE welcomes requests for topics, and invites readers' letters and other contributions that relate to drilling, blasting, seismology and explosives engineering.

Executive Committee

Ron Eichler, President

865-469-7315

Dave Harrison, Vice President

724-449-6250

Scott Mueller, Treasurer

215-518-9833

Kristin Klemish, Secretary

570-455-5861

Board of Directors

Ron Eichler 865-469-7315

Dave Harrison 724-449-6250

Michael Hoover 570-966-7312

Ethan Huff 570-455-5861

Danny Ray Leach 717-574-4024

Justin Smith 610-926-7070

Doug Rudenko 570-455-5861

Matt Tomlin 610-965-2444

Kirk Whitaker 814-571-2484

Kristin Klemish 570-455-5861

Regulatory Committee

Program Committee

Danny Ray Leach

Training Committee

Dave Harrison

Membership Committee

Doug Rudenko

Newsletter Editor/Webmaster

Kristin Klemish



Register Today!

2026 Clay Shoot & BBQ

Friday, November 13, 2026

11:30am - 5:00pm

Lehigh Valley Sporting Clays

2750 Limestone St., Coplay, PA

The event is FREE for Members or \$35 for Non-Members

Prizes will be awarded!



Our Chapter Mission Statement

Maintain and promote the highest competency standards, safety, and education for drilling, blasting, seismology and explosives engineer professionals.

Letter from The President

Dear Members,

Our Chapter held a very successful Blasters Training in July at our new location at the Wyndham Garden State College. We had an excellent line up of industry speakers. Those speakers also shared some important resources for the explosives industry. You can check them out on page 8.

The cooler temperatures are here which means our Clay Shoot & BBQ is quickly approaching. This year's event is our tenth annual Clay Shoot & BBQ. We know many members look forward to this event each year. Registration is open and station sponsorship opportunities are available.

As we move into 2027, keep an eye out for the Winter newsletter where we will be announcing the new lineup of events for the coming year. We have the PA Drilling and Blasting Conference planned – a big event for our region.

Best regards,

Ron Eichler

James M. Miller
J.M. Miller, Inc.
www.jmmillerinc.com

301 Airport Road
Indiana, PA 15701

(724) 349-8850 phone
(724) 349-8852 fax
(724) 388-7505 cell

jmiller@jmmillerinc.com

Tom Shaver
Vice President

540-839-9147
Brrs@tds.net



Eastern Pennsylvania Chapter Clay Shoot & BBQ

On Friday, November 13th the Eastern Pennsylvania Chapter will host it's tenth annual Clay Shoot and BBQ. Join us for a BBQ lunch followed by a 1pm start at the Lehigh Valley Sporting Clays course in Coplay, PA.

The event is FREE for members. Non-members will be charged \$35 for a Chapter Membership. Registration includes a BBQ lunch, 8 station course with 50 rounds, and friendly competition. Prizes will be awarded for the top three shooters and other competitions. We will also be raffling off a CZ Redhead Premier 12-gauge shotgun.

To register please complete the form at <https://www.easternpaisee.com/clay-shoot-bbq-registration/> or on page 4. We also have station sponsorship opportunities available.

Thank you to Our Sponsors!

BBQ Sponsor:

Austin Powder Co.

Ammo Sponsors:

Buffalo Creek Explosives

Gun Raffle Sponsor:

Rocky Rift Consulting

Station Sponsors & Raffle Prize Donations:

American Rock Mechanics LLC

Blasters Tool & Supply Co * BlueStone, Inc.

Dimension Supply Inc. * Dyno Nobel

East West Drilling, Inc. * EPIROC

Furukawa Rock Drill * Independent Explosives, Inc.

Gill Rock Drill Co., Inc. * Keystone Drill Services, Inc.

Maurer & Scott Sales * Mincon, Inc.

Nobel Insurance Services * MTI Group

Reichdrill LLC * Vibra-Tech Engineers, Inc.

Wampum Hardware Co.



**MAURER & SCOTT
SALES, INC.**

122 E. Thomas Street
Coopersburg, PA 18036-2100

Office 610-282-8900
Fax 610-282-9800
Email: info@maurer-scott.com

Rocky Rift Consulting, Inc.

- Pre-Post Conditional Inspections
- Seismic Monitoring
- Damage Claim Investigation
- MSHA Training
- Blasting/Utility Inspector



DON HANEY
966 Calkins Road
Milanville, PA 18443

(570) 729-0405
Cell (570) 656-2273
dlhaney@ptd.net

Eastern Pennsylvania Chapter Clay Shoot & BBQ



Friday, November 13, 2026

FREE for Members

\$35 for Non-Members

11:30am - 5:30pm

Lehigh Valley Sporting Clays

2750 Limestone St., Coplay, PA

Name_____

Company_____

Address_____

Phone_____ Fax_____

Email_____

Deadline to register is Friday, November 6, 2026

Your registration includes a BBQ lunch, 8 station course with 50 rounds and a golf cart per team of 4. Ear protection is provided. You are encouraged to bring eye protection or purchase glasses for \$10.00.

You can bring your own gun and ammo (7.5-9 lead shot only).

Prizes will be awarded!

The event is FREE for Members.

Non-Members will be charged \$35 for a Chapter Membership.

Non-members - please complete the membership form on page 20 and this registration form to sign-up.

Send to:

Eastern PA Chapter I.S.E.E.

Attn: Scott Mueller

PO Box 94, Souderton, PA 18964

smueller@bluestonedrilling.com

Eastern Pennsylvania Chapter Clay Shoot & BBQ



Sponsorship Commitment Form

☐

Clay Shoot Station Sponsor for \$250

Your company logo will appear on station sign

Contact Person _____

Company _____

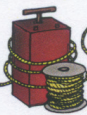
Address _____

Phone _____ Email _____

Please complete this form and email/fax it to Scott Mueller

Email address: smueller@bluestonedrilling.com

Dimension Supply



Energetics for Industry

DIMENSION SUPPLY, Inc.

1034 Oak Grove Road, Morrisdale, PA 16858

814/571-2484 C 814/343-4700 O 814/343-4800 F

jkwhtaker@verizon.net

Kirk Whitaker, President



Michael J. Pruss Consulting, LLC

Michael J. Pruss
33 Oak Lane

Shippensburg, PA 17257

Email: prussmike924@gmail.com

Phone: (717) 753-5850

GRD
Gill Rock Drill Company Inc.

Eric S. Crosson
Vice President
717-507-3798

eric.crosson@gillrockdrill.com

903-905 Cornwall Road
Lebanon, PA 17042

717-272-3861

800-334-3117

Fax: 717-272-4140



2026 Blasters Training Held July 30th

On July 30, 2026, the Eastern Pennsylvania and Mid-Atlantic Chapters of the International Society of Explosives Engineers (ISEE) brought together 37 attendees for an eight-hour Blasters Training program at the Wyndham Garden State College in Boalsburg, Pennsylvania. Hosted at a new location near Penn State University, the event delivered a dynamic day of learning, networking, and industry-leading instruction.

Attendees were treated to a diverse and highly relevant lineup of presenters who shared their expertise on critical topics affecting the blasting industry.

Trooper Brooks and Trooper Burns of the Pennsylvania State Police kicked off the program with, “Roadside Enforcement of the HMR (Hazmat Regulations)” followed by Corporal Nathaniel J. Drayer of the Pennsylvania Bureau of Emergency & Special Operations, who presented, “Explosives Identification and Awareness for ISEE Blasters Training”. Karin L. Blevins of the Bureau of Alcohol, Tobacco, Firearms and Explosives provided an insightful “ATF Regulatory Overview” while Evan Thibaud of PNEU Wave Consulting explored “Stemgel, Is it the future?” Justin Elkin of Sauls Seismic shared practical guidance on “Pre-Blast Inspections, Seismograph Placement & Dealing with Blasting Complaints” and Eric Crosson of Gill Rock Drill Co., Inc. presented, “Safe and Productive Drilling Practices”. Kyle Scribe of Alpha Safety USA delivered “Accident Prevention” while Tom Hairhoger of Austin Powder Company discussed “Flyrock and Lightening” and Christopher D. Catalano of

Thank You to Our Sponsors

Austin Powder Company
Buffalo Creek Explosives
Dimension Supply, Inc.
East West Drilling, Inc.
International Society of Explosives Engineers
Maurer & Scott
Orica USA
Vibra-Tech Engineers, Inc.
Wampum Hardware Co.





Training Continued

the Department of Environmental Protection led a timely session on “Current Compliance Issues,” followed by a lively Q&A with Mike Duke and Michael Donahue from the Department. Benny Staudt, P.G. of Vibra-Tech Engineers, Inc. wrapped up the program with the engaging presentation, “AI Can’t Do a Pre-Blast Survey.”

Continued on page 8



NOBEL INSURANCE SERVICES

Dwaine E. Arnold
Underwriting Manager

14241 DALLAS PARKWAY, SUITE 950, DALLAS, TX 75254-2964
TEL. (800) 766-6235 • (972) 644-0434
darnold@lancerinsurance.com • www.nobelinsurance.com
A Division of Lancer Insurance Company

Robert McClure
President



O (740) 363-6976
M (614) 296-7116

r.mcclure@ramets.com

R.A. McClure Inc.
2116 Hardin Lane
Powell, OH 43065 USA

www.ramets.com



See how we accelerate
the transformation

Most people say that three things are
transforming our industry. I say it's four.

ACCELERATE THE TRANSFORMATION

Electrification, digitalization and automation are fundamentally transforming the mining and construction industry. But what many forget is the fourth aspect: the people behind the innovations. Because only new ideas can speed up the shift toward a more sustainable mining and construction industry. We at Epiroc accelerate this transformation.



844-437-4762 epiroc.us

Additionally, Corporal Nathaniel J. Drayer of the Pennsylvania Bureau of Emergency & Special Operations and Karin L. Blevins of the Bureau of Alcohol, Tobacco, Firearms and Explosives provided helpful resources for everyone in attendance. A link to those resources can be found online at <https://www.easternpaisee.com/helpful-resources-available/>

[illegible]

Three photographs showing drilling and blasting operations: a large drilling rig on a construction site, a close-up of a drilling rig with dust, and a close-up of a drilling rig with a worker.

Drilling

Explosives

WAMPUM HARDWARE CO.

Jay Elkin

Bus. 724.336.4501
Fax. 724.336.3818
Cell. 412.289.0174

636 Paden Road
New Galilee, PA 16141

Email: jelkin@wampumhardware.com

EXPLOSIVES & SAFETY SECTION ANNOUNCEMENT

*Written by Christopher D Catalano / Chief, Explosives and Safety Section
Department of Environmental Protection / Bureau of Mining Programs*

Greetings! As you may have heard, on August 18, 2026 Governor Joshua Shapiro issued an executive order regarding data center projects to give local communities more power over development of these projects.¹ The Executive Order directs the Department of Environmental Protection (DEP) to evaluate any permit applications at proposed data centers sites only if developers have made a legally binding commitment to meet the Governor's GRID Requirements and have received local approval.¹

Continued on page 10

FRD **FURUKAWA**
FURUKAWA **ROCK DRILL USA**
ROCK DRILL DIVISION

Meeting the equipment needs
of the mining and construction
industries in Pennsylvania.

◀ HCR1100-ED

◀ HCR1100-ER

◀ HCRL90

◀ HCRL110

◀ DCRL130
DOWN-THE-HOLE

HCR1100-ED ▶ HCR1100-ER ▶ HCRL90 ▶ HCRL110 ▶ DCRL130 DTH

Furukawa Rock Drills provide the ultimate combination of performance and economy. Built tough, our Top Hammer, DTH and Pneumatic Drills are equipped with features that maximize efficiency to assure high-performance at a low operating cost. To learn more, visit us online at www.FRDUUSA.com or call **800.527.2282**.



Contact EAST WEST Drilling for information on FRD drills:

Tony Morell
Eastern PA Sales Rep
570.780.9325

Michael Hoover CEO
570.452.1984

Robert Blankenship
Western PA, OH, MD,
Northern VA and D.C.
Sales Rep
570.217.6550





Data Centers Continued

This order affects blasting activities related to development of a data center. Please be aware of the following when considering blasting at these proposed sites:

- Blasting Activity Permits (BAPs) applications, in Greenport and on paper, will now have a question asking the applicant to identify whether the activity is related to a data center. Please be honest when answering this question, and if necessary, ask your general contractor if you don't know. We understand there may be times where you do not know how to answer that question or the work may be only tangentially related to a data center project or serve multiple purposes. In those cases, reach out to me or your inspector and ask and we will do our best to provide some answers.
- The permit-by-rule application will now state that permits-by-rule will not be accepted for any data center project.
- BAPs that are flagged as being related to data center development may not be evaluated or approved in accordance with the typical timeframes. If local approvals for the data center site have not been obtained and the requirements of the Order have not been met, including compliance with the Governor's Responsible Infrastructure Development (GRID) Requirements, we will not be able to evaluate a BAP application at that site until those things have been done.

Continued on page 11



reichdrill
EUROFORGROUP

QUALITY
DRILLING
EQUIPMENT

Michael Rossi
General Manager

U.S. Corporate Office:
99 Troy Hawk Run Hwy.
Philipsburg, PA 16866
www.reichdrill.com

Cell: 814-699-1100
Email: mrossi@reichdrill.com



RTDrill
QUALITY DRILLING EQUIPMENT

Benny Mitchell
Territory Manager
Reichdrill LLC
bmitchell@reichdrill.com
Cell Phone: +1 (814) 505-3763
Office Phone: +1 (814) 342-5500
www.rtdrill.com

Follow us on  



RTDrill
QUALITY DRILLING EQUIPMENT

Mani Pessiani
Sales & Marketing Director
Reichdrill LLC
mpessiani@reichdrill.com
Cell Phone: +33 6 08 40 88 12
Cell Phone: +1 (814) 895-0688
Office Phone: +1 (814) 342-5500
www.rtdrill.com

Follow us on  



Data Centers Continued

- DEP's regional offices will be coordinating overall data center site clearances. The Blasting & Explosives Inspectors may be able to answer some of your questions and may discuss the project with you as a pre-application inquiry but will not be allowed to act on these BAP applications until told by the regional office that all requirements have been fulfilled and the permits may be issued. Please understand the inspector's role and limitations in this and be patient with them throughout the process.
- Please be especially attentive to the details on these permit applications. DEP's expectations remain the same as for any other BAP: your permit application must clearly explain what you intend to do and how you intend to do it to the extent that the inspector recommending it for approval can have a reasonable expectation that what you propose can be done both safely and legally. Avoid unanswered questions, poorly prepared blast plans, unclear maps, and generalizations.

I know this is a big change, especially for those of you who have not previously been involved in projects requiring interagency coordination. Please be assured that DEP explosives program staff will aim to assist through the process. I suggest taking a few minutes to read through DEP's webpage announcing the Governor's order, as well as the read the order itself and the Governor's Responsible Infrastructure Development (GRID) Requirements. Those resources should help answer some questions you may have.

REFERENCES

1. PADEP. (2026). Governor Shapiro Signs Executive Order Demanding Data Center Developers Comply with Strict Requirements and Blocking Speculative, Irresponsible Data Center Projects. Pennsylvania Department of Environmental Protection: <https://www.pa.gov/governor/newsroom/2026-press-releases/governor-shapiro-signs-executive-order-on-data-center-developmen>



Samuel Long
Area Business Manager- US North

Orica USA, Inc.
7000 Stitzells Road
Greencastle Pennsylvania 17225
E-mail: samuel.long@orica.com
Cell +1-717-494-9934



Ed Ciocco
Account Manager
eciocco@iexpSCO.com
484.614.9313

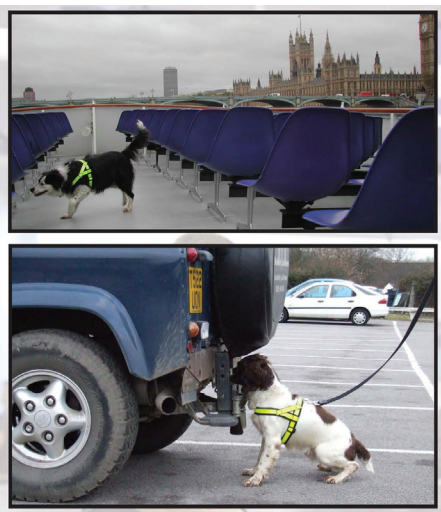
Mark Proctor
Account Manager
mproctor@iexpSCO.com
315.430.4683

2700 W. Center Street • Tremont, PA 17981

Environmental Context Shift in K9 Searches

Written by David Bates

Originally printed in the July/August 2026 issue of "The Detonator"



When a detection dog is initially trained to respond to the target substance, it is a learned behavior that occurs within the context of that foundational training environment.

When a second training environment is introduced to the dog, it presents a different context from that which the dog has previously learned. Consequently, there is normally a reduction in the dog's previously learned response to the target substance. This is referred to as a context shift effect.

Continued on page 14

Now offering
direct service to
the Northeast US

MinconTM

NORTHEAST SERVICE CENTER - HARRISBURG, PA
717-287-4910

HERE TO SUPPORT ALL OF YOUR DRILLING NEEDS

The Driller's Choice



JIM CRAWFORD

NORTHEAST US ACCOUNT MANAGER
717-975-7195

INNOVATING LOCALLY, LEADING GLOBALLY

Mincon.com

An aerial photograph of a city, likely San Francisco, with a large, deep crater in the foreground. The crater is filled with debris and dust, and a car is visible on the right side of the crater. The city is visible in the background, with hills and buildings.

**YOU CAN'T MANAGE
WHAT YOU DON'T MEASURE.**

GeoSonics  Vibra-Tech

VIBRATION

GEOTECHNICAL

NOISE

DUST

ENVIRONMENTAL

GeoSonics/Vibra-Tech provides expert monitoring and consulting services to help mitigate risk. Our Re:mote Monitoring Technology continuously collects and posts to a customized website, while keeping personnel notified through email and text alerts, so your data is always at your fingertips.

geosonicsvibratech.com

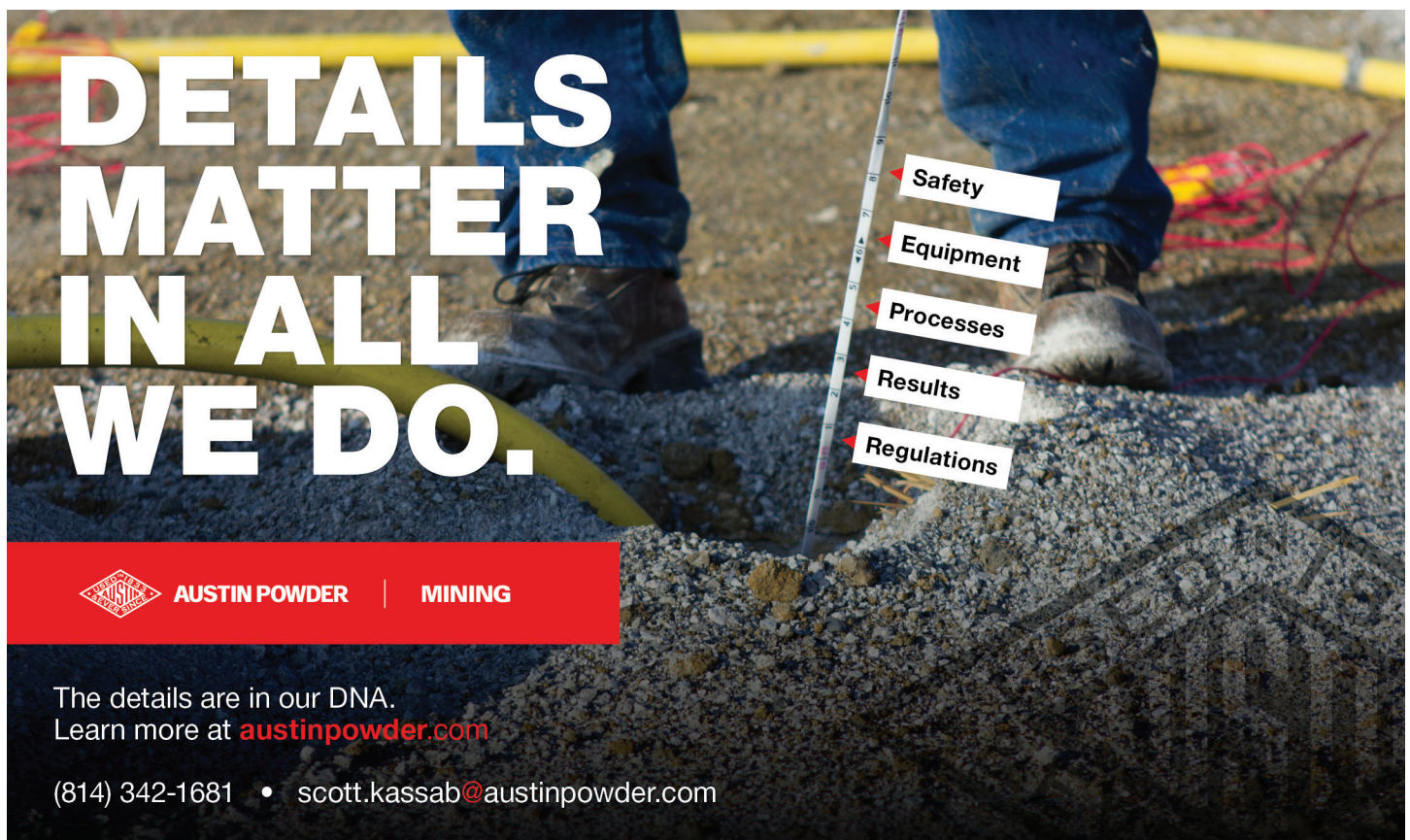
K9 Continued

Detection dog handlers and trainers are generally aware of this effect. Subsequently, once the dog has initially learned to respond to the target substance in a familiar area, the training is gradually transferred to as many new environments as possible. The types of environments and searches employed may also be influenced by the specific requirements of the organization that deploys the dogs.

At some point during training, the dog can reliably detect the target substance in any new area in which it is deployed, and it is no longer directly influenced by the environmental context.

If, after sufficient training, the context of a search environment is inconsequential and the dog is reliably detecting and safely indicating on the target substance, it is reasonable to state that the detection dog is fully trained and can be officially certified as an operational detection dog.

Continued on page 15



**DETAILS
MATTER
IN ALL
WE DO.**

Safety
Equipment
Processes
Results
Regulations

 **AUSTIN POWDER** | **MINING**

The details are in our DNA.
Learn more at austinpowder.com

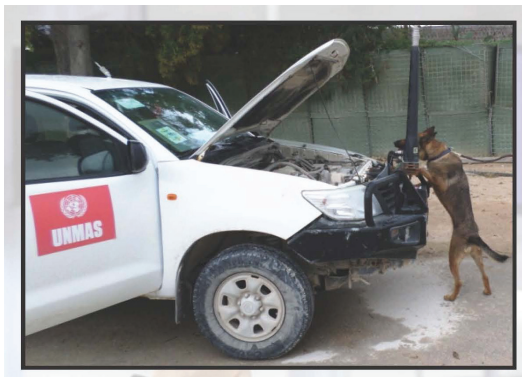
(814) 342-1681 • scott.kassab@austinpowder.com

K9 Continued

However, it is still possible that a context shift effect can affect the detection ability of an operational dog. For example, a dog may be regularly used in an operational setting where no target substances are present or detected. An example of this could be a large number of vehicle searches passing through a checkpoint in a low-risk environment, for instance, a private commercial company. In some instances, it is not practical or permitted to contaminate these vehicles with the target substance for the purpose of a training hide.

It would not, therefore, be unreasonable for the dog to gradually associate these negative searches with a specific context,

resulting in a context shift effect. The actual cues that the dog is using to discriminate between these negative vehicle searches and searches carried out in other areas could be environment-specific, including the handler's actions and/or other visual or possibly olfactory cues.



Continued on page 17



Hayduk
Enterprises

Drilling & Blasting

800-542-5352
haydukusa.com



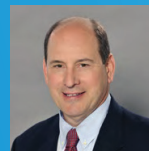
Explosives Insurance

**Unmatched service and support.
No extra charge.**

For more than 25 years, we have developed unparalleled expertise in managing catastrophic financial loss and meeting the insurance needs of the explosives industry. We offer a comprehensive suite of services and the very best insurance products available.

- General Liability
- Automobile Liability
- Umbrella Liability
- Property
- Contractor's Equipment
- Pollution Liability
- Professional Liability
- Surety Bonds, Fiduciary & Crime
- Cyber Liability
- Aviation

AGA, a Marsh & McLennan Agency LLC Company



Fred Bangs
Group Leader



Colt Fields
Advisor



Jana Kostantewicz
Advisor



Billy Bangs
Advisor

Debbie Terry, Account Executive
Natasha Davis, Account Executive
Melinda Trevino, Account Executive
Kathy Dixon, Account Executive

Gail Spray, Account Executive
Jackie Slan, Account Executive
Fred Achala, Claims Advocate
Michael Crusco, Env. Specialist

Your future is limitless.™

MarshMMA.com

BREAKING GROUND, BUILDING THE FUTURE.

YOUR EXPERT PARTNER IN DRILLING AND BLASTING



WE'RE HIRING!

Laborers, CDL Drivers,
and Blasters

LOCATIONS:

**Somerset, PA &
Clearfield, PA**

Full service drilling & blasting
company specializing in:

- Quarries
- Site Development
- Road Construction
- Coal
- Seismic
- Bulk AN Sales and Delivery

For more information, contact:

Jerry Brumbaugh
President



814-381-5302



gsboperations@outlook.com

K9 Continued

Positive reinforcement training with the target substance in other environments is unlikely to overcome this context shift effect. This is because the dog has learned to directly associate negative searches within a specific area. The dog's ability to detect the target substance(s) in that specific context/area will gradually reduce to the point of extinction, and it will no longer be an effective detection dog in that context, which in this example is the aforementioned vehicle checkpoint.

However, there are two important factors to consider. Firstly, once extinction has occurred in a specific context, retraining the dog to detect the target substance within that context may be difficult. Secondly, the key factor is that the dog's extinction behavior is context-specific. Therefore, if the dog was tasked with searching vehicles at another similar checkpoint, it is unlikely that the dog would initially display a reduction in its search and detection abilities. This is probably because the dog is able to discriminate using all the available cues within the context of each search area. Therefore, if the dog has a history of reinforcement through detecting a target substance whenever it searches within a specific context/area, the searching and detection behavior is unlikely to become extinguished. However, the dog may associate specific cues that enable the dog to discriminate between a training search and an operational search.

Understanding the context shift effect can help to explain why detection dogs can display differing levels of motivation when deployed to search. Continuing with the vehicle checkpoint example, it is easy to understand why dogs can sometimes lack the motivation to search and require considerable handler encouragement when they are deployed at a checkpoint/area where they only carry out negative searches.

Continued on page 18



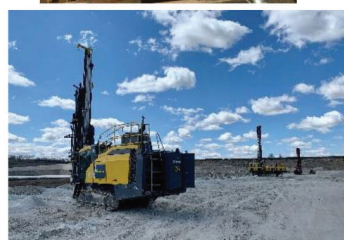
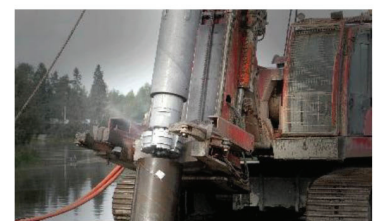
Matthew Walker
Sales Representative

T. 705.897.4971
F. 705.897.4565
M. 705.665.4379
E. mattwalker@bmemc.ca

2736 Belisle Drive,
Val Caron, ON P3N 1B3



- Oil & Gas
- Mining & Aggregate
- Construction & Foundation
- Waterwell & Exploration



Somerset, PA • Punxsutawney, PA • Norwich, OH
keystonedrill.com • sales@keystonedrill.com



K9 Continued

In some instances, training searches can be carried out within the operational search environment, in this example, a low-risk vehicle checkpoint. The target substance training aid is placed during a training search on a vehicle with the resultant 'find' for the dog. The problem that can occur here is whether the situation is context-specific from the dog's perspective.

What the dog may learn is that there are specific cues associated with the routine operational searching of vehicles and specific cues associated with a training aid being used. For instance, a specific vehicle or vehicles may always be used, and/or a specific person or persons, such as a trainer or trainers, may be present. Subsequently, these 'triggers' become associated as cues for a 'find'. Another cue could be the actions/behavior of the handler, which, like the other cues used by the dog, may be subtle and/or overt.

If the dog has learned that a routine search is continually negative, it will subsequently lack the motivation to search in that specific context. In contrast, a training search in the same environment enables the dog to use cues that alter the context and are associated with a positive outcome.

If the dog cannot differentiate between an operational search and a training search, it will maintain a degree of searching efficacy. However, this requires a more eclectic approach to training search scenarios and this should always be part of the training program.

Continued on page 20



Avery Martin
Sales Manager East USA Surface Drills



Mobile+1 404 307 2349
avery.martin@sandvik.com

Sandvik Mining and Rock Solutions
3200 Highlands Parkway, Suite 200, Smyrna, Georgia 30082



rocktechnology.sandvik



TRINITY
DRILLING & BLASTING

Adam DiPaul
Drilling & Blasting Manager

815 Reading Road
PO Box 615
Bowmansville, PA 17507

717-445-8448 P
717-445-7789 F
717-327-1838 M

adipaul@trinitydrillingandblasting.com
www.trinitydrillingandblasting.com

PILE DRIVING CONSTRUCTION BLASTING
DEMOLITION PIPELINE DRILLING

**RECOGNIZED WORLDWIDE AS A LEADING
MANUFACTURER OF SEISMOGRAPH EQUIPMENT**



Our equipment allows you to monitor ground vibrations and air over-pressure with ease and accuracy. They can be used for most vibration and sound monitoring activities. This includes blasting operations, pile driving operations, construction equipment activity, environmental activity, ambient levels, and any other operation where a permanent record is needed. Our complete line of seismographs meets or exceeds ISEE standards

CONTACT US TODAY FOR YOUR SEISMOGRAPH NEEDS



K9 Continued

Discriminatory & Negative Training Searches

At the outset of detection training, a fixed reinforcement schedule is generally applied in order to accelerate learning. It helps to reduce the potential for stress and enables the dog to remain motivated during the initial training period due to a positive association with the target substance. As part of the context shift training, both discriminatory cue training and negative searches should be gradually introduced into the training schedule along with other relevant variables.

The key factor when training dogs to detect a target substance (or perform any other task) is to gradually train the dog to search on a variable random reinforcement schedule, which should include the jackpot principle.

When a dog is generally tasked to search an environment, it cannot know whether it will result in a positive or negative outcome unless there are context-specific cues that it has learned to identify. If the dog locates the target substance on a genuinely random basis, regardless of context, it should maintain a high degree of search efficacy. As previously stated, problems are more likely to occur when operational requirements dictate that the dog is used in an environment where 'finds' are unlikely to occur, and only negative searches are carried out. Equally, problems can occur when training searches have become predictive to the dog within that environment and the dog has learned to differentiate between a training and operational search.

Theoretically, if the dog was randomly reinforced at varying points during a search and not only for the context-specific action of locating the target substance, negative searches could become directly linked to a random reinforcement schedule. This training principle runs counter to the fixed reinforcement schedule where the dog is only ever rewarded for locating the target substance. However, two factors should be considered. Firstly, a dog's searching behavior could reasonably be considered to be motivated by an innate drive and should be a self-reinforcing behavior in itself. Secondly, a degree of random reinforcement is already present because negative searches are, or should be, routinely included within the dog's training and operational search schedules.

In a controlled training environment, both false-negative and false-positive indications can be ascertained with a reasonable degree of certainty. Unfortunately, these factors cannot always be clearly identified in an operational environment. This factor could undermine the use of a random reinforcement schedule for negative searches because the handler cannot always know whether an operational negative search was definitively negative.



Monitoring you can trust.
Data you can rely on.

Randy Adams
Field Representative

14501 Acorn Way
Williamsport, Maryland 21795

Toll-free: 1-833-IGS-CORP
Mobile: 240-930-1089

randy.adams@igs-inc.com
www.igs-inc.com

TRUSTED TECHNOLOGY. UNMATCHED EXPERTISE. EXPLOSIVE RESULTS.

Our expertise goes *beyond the bench* with a mindset focused on outcome-based fragmentation. Together, we can help you maximize your return on investment through solutions that reduce your total cost of operations while increasing your productivity.



Scan to connect with your
local Account Representative

dynonobel.com

DYNO[®]
Dyno Nobel



2026 NEW MEMBERSHIP APPLICATION OR MEMBER RENEWAL FORM

Name (Please Print) _____ Date _____

Company Name _____

Mailing Address _____

City _____ State _____ Zip _____

Home Phone _____ Work Phone _____

Email Address _____

List Blaster Licenses Held _____ Are you a member of the I.S.E.E.? _____

Please select your membership type:

- ☐ **Individual** - Chapter dues are \$35.00 per year.
- ☐ **Deluxe Corporate Membership** - Dues are \$255.00 for up to 10 members plus a 1/2 page ad in the quarterly newsletter (\$180 value). Please list name, email address and ISEE status for all members.
- ☐ **Corporate Membership** - Dues are \$155.00 for up to 5 members plus a business card ad in the quarterly newsletter (\$60 value). Please list name, email address and ISEE status for all members.

I agree to comply with the Constitution, By-Laws and Regulations of the Chapter.

Signature of Applicant

Payment can be made by credit card or check. Please select your payment option.

- ☐ Credit Card - Visit the Chapter website to pay online (<http://www.easternpaisee.com/membership/>) or contact Scott Mueller to pay over the phone.
- ☐ Check - Please make checks payable to **Eastern PA Chapter I.S.E.E.**

Send to: **Scott Mueller**

PO Box 94, Souderton, PA 18964
smueller@bluestonedrilling.com

Lead Lines



Advertising 2026

Place your Ad!

Full Page (1 Issue)	\$100.00		
1/2 Page (1 Issue)	\$70.00	Full Page (4 Issues)	\$300.00
1/4 Page (1 Issue)	\$40.00	1/2 Page (4 Issues)	\$180.00
Business Card (1 Issue)	\$20.00	1/4 Page (4 Issues)	\$110.00

Name _____ Date _____

Company _____

Address _____

Day Phone _____ Fax _____

Ad Size _____ No. Of Issues _____

Check enclosed in the amount of \$ _____

Payment can be made by credit card or check. Please select your payment option.

- ☐ Credit Card - Visit the Chapter website to pay online (<http://www.easternpaisee.com/advertise-with-us/>) or contact Scott Mueller to pay over the phone.
- ☐ Check - Please make checks payable to **Eastern PA Chapter I.S.E.E.**

Send to: **Scott Mueller**
PO Box 94, Souderton, PA 18964
smueller@bluestonedrilling.com