safety Results Newsletter

May 2026

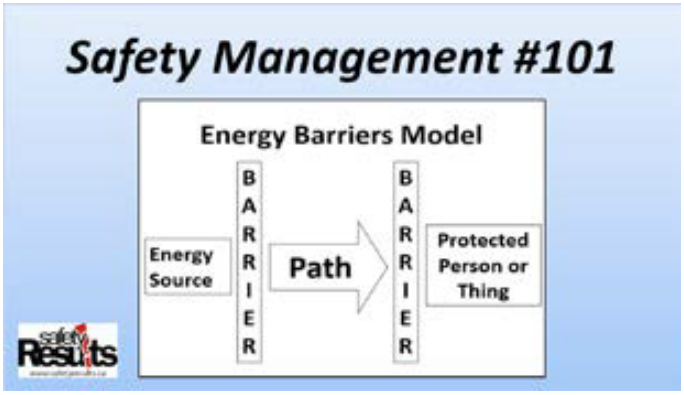
In this issue:

- **Making Safety Personal #101- by Alan D Quilley CRSP**
- **Online BCRSP - CPD Mandatory Ethics - May 1/26**
- **Kudos for our CRSP and CRST Virtual Coaching & Study Material**
- **CRSP/CRST Exam Study Material and Virtual Coaching Packages**

Making Safety Personal #101 - "Don't Touch The Spinny Thing"

The Energy Barriers Model

Article by Alan Quilley CRSP



Energy - Pathway - Barriers

When thinking about causation and how people get hurt, one has to realize that it's all about energy release and/or not having enough of our essential energy needs met. People get hurt when the amount of energy they need to sustain their lives (oxygen, water, food) isn't available. We also get killed or injured when an energy that is larger/stronger than our body's capacity to withstand, hits us.

Energy Needs

Let's focus on the unmet energy needs for a minute. It's said in the "Rule of Threes" that humans can live 3 minutes without oxygen, 3 days without water and 3 weeks without food. As a generalization, it solidifies the idea that we need these three things to survive. If our work puts us into a situation of no oxygen (confined space entry) or no water or food (stranded in the desert or on the ocean in a life raft), we will predictably and surely die. So if we're to be safe and manage our risks we need to at very least ensure our essentials of life are provided for. There are people on our planet entirely focused on finding water for themselves and their family today…and every day. It's essential for their existence. My guess is that if you are reading this, you are one of the very lucky ones who isn't doing this.

Contact!
Marie Quilley
587-969-0276
mquilley@safetyresults.ca

safetyresults.ca

Enough Energy to Hurt Us

The second part of the energy theory is that people are injured when an energy that is large enough to go "past our body's capacity to withstand it" hits us. This contact of BIG energy is what causes our injury. The list of energies we are exposed to is pretty universal.

1. Mechanical Energy
2. Electrical Energy
3. Chemical Energy
4. Kinetic Energy
5. Potential (Stored) Energy
6. Thermal Energy
7. Acoustic Energy
8. Radiant Energy
9. Atmospheric/ Geological/ Oceanographic/ Energy
10. Biological Hazards

Not all energy is large enough to cause us a problem. Our bodies are built to withstand a certain level of exposure to most things in our lives. A bit of thermal energy is ok…a lot is not. A bit of sunshine doesn't create a sunburn but a lot does. A small electrical charge won't hurt us. That's why you can put your tongue on the two poles of a 9-volt battery and not die…but don't try this with the white and black wires of your 110-volt electrical house wiring.

In this model, energy needs to be large enough to be a problem otherwise it's not a threat to your health or safety.

Finding Its Way to You or Your Things

Energy needs to come in contact with you or the thing that will be damaged to be any concern to us at all. We call that process finding a pathway. Electricity in the wall behind a properly designed wall cover (it is called a barrier…we'll get to that) is only a problem if there is a pathway created from the source to you. Many of us have experienced creating that pathway unintentionally, or intentionally. In North America, many children have stuck a thing (fork, knife, safety pin) into the 110-volt socket just to see what would happen. Fortunately, most of us live through it and live to NOT do it again.

Sometimes we walk right into the energy; sometimes the barrier breaks exposing us to the harmful energy. Sometimes the energy is released by someone else's actions or inactions. The pathway can be managed in some ways. The best way is not to create a possibility.

Don't Touch the Spinny Thing

Finally, we get to the subtitle. My wife and I live on an acreage. It's a small "executive size" just less than three acres. One of those acres is landscaped with trees, bushes, rock gardens and LAWN. This requires me to mow the lawn, and in the winter, plow/snow blow the snow from the driveway. The only real solution to these challenges was for us to buy a tractor capable of doing these tasks with the various attachments available. My 23-horsepower diesel Massey Ferguson tractor was purchased with a snow blower, a 5 foot three blade mower and a blade for plowing. I bought this tractor from a friend who is in the business and that friend also knows that I am a musician and has many times seen me play in my band (this will all make sense eventually). Now, I have up to this point in my life operated a variety of powered mobile equipment (forklifts, cranes, track mobiles, trucks etc.) so operating equipment wasn't going to be a new experience. I however have never owned a piece of equipment anything like this tractor as I was "city born and raised."

The day my tractor arrived, my friend came to the delivery and personally handed me the keys to my new tractor and said "Congratulations Al on your tractor…be careful of the PTO." Some of you reading this will know that a PTO is a Power Take-off. The term basically refers to the mechanical design which "takes power off" a power device. In the case of my tractor, the power device is the diesel engine, and the gears and shafts on the attachments are the way in which the power is "taken off."

So, with my friend's warning to me about the PTO, I couldn't resist making a bit of a joke of it by saying, "I know what BTO is (referring to the rock band Bachman Turner Overdrive)." Then I asked, "What is a PTO?" My friend quickly responded, "It is the spinny thing, don't touch it."

A study of farm safety tells us that far too many farmers are guilty of, and have been injured by, their equipment's PTOs. After this memorable exchange, the Energy/Barrier model's pathway became crystal clear to me. Human behaviour often puts us in a place where we actually create the pathway.

Eliminate to Manage Risk

In the hierarchy of controls used to manage hazards (energies), elimination is always the most effective treatment. When we encounter a hazard, eliminating it entirely means that the associated risk is also eliminated. The hierarchy of hazard controls, in order of decreasing effectiveness, are usually described as:

1. Elimination
2. Substitution
3. Engineering
4. Administration
5. Personal Protective Equipment

In our energy barrier model, if we can eliminate the energy or substitute it for less powerful energy, we are indeed reducing the risk our workers face.

Remove or Move the Target

In the Energy/Barrier Model, the target of the energy travelling the pathway is usually the person or thing we are trying to protect from the harmful energy. Strategies that manage risk by moving the person away from the energy, or the energy away from the person, are classic in our risk management processes. Simply moving the human away from the energy source can eliminate or minimize the risk. Similarly, placing the energy far from humans achieves the same effect. This management of proximity between humans and energy sources is a very effective way of managing risk and making our work safer.

When All Else Fails, Add Barriers

There are times when our work or play puts us in very close proximity to harmful energy. In the model on the first page of this newsletter, there are two opportunities. First, place barriers to minimize and/or deflect the harmful energies from hitting the target. Some of the most effective barriers we can put in place are those places closest to the energy source. These have the effect of containing the energy. Typical examples of these barriers include guards, ergonomic designs, and warning signs. These need not be only physical things; they can indeed be knowledge base. In the previous example above, “don’t touch the spinny thing” was a warning from my friend in increasing my knowledge of the dangers present. This is a very valuable barrier and works as long as I’m compliant with the warning. In examples of the use of barriers, usually “more is better.” Obviously, we can take this to an extreme and barriers in place that make getting our jobs done impractical. In the case of things we do in the name of recreation and play, putting too many barriers in place would take the fun of our activity.

According to Erik Hollnagel - Barriers and Accident Prevention, the following type of barriers are available to us:

- Material barriers - physically prevents an action from being carried out, or prevents the consequences from spreading
- Functional (active or dynamic) barriers - hinders the action via preconditions (logical, physical, temporal) and interlocks (passwords, synchronization, locks)
- Symbolic barriers (perceptual, conceptual barriers) - requires an act of interpretation to work, i.e. an intelligent and perceiving agent (signs, signals alarms, warnings)
- Immaterial barriers (non-material barriers) - not physically present in the situation, rely on internalized knowledge (rules, restrictions, laws)

Personal Protective Equipment

The second opportunity to put barriers in place is close to the person or thing we are protecting. Classic examples of personal protective equipment fall into this category. In this case, the reason it is the least effective is because we have let the energy come very close to the protected person or thing. In actual fact, all we’re really doing is reducing the impact of the energy and having that energy strike the personal protective equipment rather than the human. In the case of our vehicles, the 5 mile an hour bumpers on our cars that we’ve engineered to absorb energy is a perfect example. The energy actually has to hit our bumper to make the design work. If the energy is not too large, then the bumper will protect the rest of our vehicle.

Safety Is All About Not Letting Energy Hit Us
If you look at the many classes of personal protective equipment you'll find all they're really doing is hardening the target or filtering out/deflecting the energy that is already there. This is why personal protective equipment is the least effective of all hazard management strategies.

So there you have it. The energy barrier model recognizes that we are hurt when energy hits us or we don't have the energies available to us that sustain our health and life. When we're managing safety through the physical or the behavioural, it is important to always analyze what we've done to reduce the chances of the energy barrier model ruining our data.

Alan D. Quilley (1954-2021) was a distinguished leader in occupational health and safety, with a career spanning over forty years. As a CRSP, published author, and skilled consultant and trainer, he made significant contributions to the OH&S community. His impactful writings and educational initiatives continue to resonate today. In honour of his legacy, I will feature some of Alan's published works in this newsletter, as they offer timeless insights and guidance that remain beneficial to us all. Although he is no longer with us, Alan's commitment to safety lives on through his enduring words and teachings.

BCRSP - CPD Online Mandatory Ethics Course - May 1/26

Our next Ethics course, approved by the BCRSP and in conjunction with Lambton College, commences May 1/26. Registration is open until May 7/26. The course concludes May 30/26.

To register for the course, please click here.

Kudos for our CRSP and CRST Virtual Coaching & Study Material

The study materials helped me immensely to prepare for the exam. It drew attention to the areas which I needed to focus on, allowing me to utilize my study time in the most effective manner. I am proud to say that I just received confirmation that I passed the exam.

Hope this message finds you well. Just wanted to share that I got my CRSP results today and I passed. I was a little surprised by the number of folks who did not pass and the low passing mark. But I made it! Thank you!

I just took a look at my results yesterday and I passed! I got 125 correct and I needed 115 to pass. I want to thank you for all your help and time spent with me to succeed with this.

I received notification today that I have successfully obtained my CRSP designation. The CRSP Virtual Coaching package helped prepare me for success. Thanks.

What are you waiting for?

Testimonials from our valued clients serve to reinforce that along with their own hard work, our study material/coaching packages and process, prove without a doubt that WE have the right formula. Visit the website or contact Marie for more details!

CRSP AND CRST VIRTUAL COACHING EXAMINATION PREPARATION

As it has always been our commitment to help candidates with their studies for both the CRSPEX and the CRSTEX, we offer Virtual Coaching Packages. These packages are available to those that are writing the 2025 Blueprint CRSPEX or the 2024 Blueprint CRSTEX. We will provide all of the material (shipped at our cost within Canada only). We are delighted to extend discounts to active members in good standing of WOHSS or the HSPC (not combinable and proof of current membership is required). For more information, please contact Marie.

This virtual package includes 6 hours of personal coaching with Cherlyn Hudson CRSP. The hours are broken down however you wish. Calls are individualized and held via phone or Zoom Video Conference, your choice. Virtual Coaching packages must be used within 6 months of purchase.

"It's really important to know who is trying to teach you something". - Alan D Quilley CRSP

Who is your Coach?

Cherlyn Hudson CRSP is a seasoned Health, Safety, and Environment (HSE) professional with nearly 30 years of experience spanning construction, utilities, oil and gas, and defense sectors. After obtaining her HSE Certificate from NAIT, she progressed through HSE positions with companies such as TransAlta Corporation and Raytheon Canada, ultimately establishing her own firm, SkyView Safety Consulting Corp., in 2016.

In 2021, Cherlyn participated in one of our Virtual Coaching packages. She earned her CRSP designation, which acknowledges her extensive technical knowledge and dedication to excellence in workplace safety. She currently leads a team that provides practical and compliant safety solutions to over a dozen clients, leveraging her comprehensive understanding of OHS legislation, strong leadership skills, mentorship, and a collaborative approach to foster enduring safety cultures.

Cherlyn's extensive experience and her previous engagement with our Virtual Coaching Package make her an ideal candidate for this role. Her expertise in sharing Safety Results' techniques will effectively guide your studies. Choosing a mentor is a significant decision, and it is crucial to assess their qualifications carefully.

When comparing different providers, focus on their experience, teaching methodologies, and alignment with your learning goals to ensure a well-informed decision. We are confident that no other provider can match our quality, experience, and instructional approach. As our founder, Alan D. Quilley CRSP, aptly stated: "There are no hard questions if you know the answers!"

"

CRSP Virtual Coaching Package

Inclusions:

- Study material (material shipped at our cost within Canada only) based on the 2025 (current) CRSP Examination Blueprint
- 6 hours personal coaching
- CRSP Exam Prep Study Manual
- CRSP Exam Prep Knowledge Gap Analysis Questions & Answers Workbook
- Handbook, includes more practice questions & offered only with the Virtual Coaching Package

CRST Virtual Coaching Package

Inclusions:

- Study material (material shipped at our cost within Canada only) based on the 2024 (current) CRST Examination Blueprint
- 6 hours personal coaching
- CRST Exam Prep Study Manual
- CRST Exam Prep Knowledge Gap Analysis Questions & Answers Workbook
- Handbook, includes more practice questions & offered only with the Virtual Coaching Package

If you wish to purchase only study material

please visit our website:

CRSP Study Material or **CRST Study Material**