New Las Vegas Lab Director Talks TAMS and the EPA-Tribal Relationship

Ron Fraass, who recently assumed the directorship of U.S. EPA’s Radiation and Indoor Environments National Laboratory in Las Vegas, Nevada, has oversight responsibilities not only for the Lab’s Emergency Response and radiation-testing facilities but ITEP’s Tribal Air Monitoring Support (TAMS) Center. A retired career Air Force officer, Fraass flew C-130 rescue aircraft in Hawaii, taught physics at the Air Force Academy, and worked as Technical Director on underground nuclear weapons effects testing in Nevada. He comes to the Lab after serving as Director of EPA’s National Air and Radiation Environmental Laboratory in Montgomery, Alabama. Fraass was also the executive director of the nonprofit Conference of Radiation Control Program Directors (CRCPD) and spent ten years with the Kansas Radiation Control Program. He has two daughters who are active and former Air Force personnel.

The following are excerpts from a conversation in late November with Dennis Wall, ITEP’s editor.

Please describe the Lab’s mission.

We have an emergency-response role and a laboratory role. If there’s a contaminated or a potentially contaminated site anywhere in the U.S. or sometimes outside the U.S., we’re part of the response team. We conduct exercises at the national level every year or so—we just did a simulation in Phoenix of a detonated nuclear device. We also have a laboratory role—if there’s contamination or potential contamination anywhere in the U.S., we want samples done not only by commercial firms but by the agency; we do that for the Regions. And of course we have another large role that is the TAMS Center.

Why did you choose to make what began as a temporary assignment permanent?

There’s an important national mission here. I was very concerned when 9/11 happened—I was with the state [of KS] and spent the night at the Emergency Command Center trying to figure out what was happening. A year later I was with the CRCPD…and we needed a feel for what the national capacity was. If there’s an emergency-response incident—radiation somewhere in the U.S. or potentially overseas—we’re part of the response team. Also, the work we’re doing with the TAMS Center, because it’s so unique within the agency, is another reason I agreed to accept the job.

Where does the TAMS Center fit into the overall mix here at the Lab?

It’s a unique role within the agency. It’s a fabulous operation—one of the best things we’re doing. I think it’s the piece that’s most effective here at the Lab, because we have consistent customers we’re dealing with and interacting with routinely. A given Region may only need us every couple of years to do some analyses; others might need us a couple of times a year. But with the tribal nations we’re on a routinely interactive basis.

Since you arrived here in late May, one of your main activities has been revamping the Lab’s Quality Management Plans, Quality Assurance Project Plans, Standard Operating Procedures, and QA manuals. Why did you feel that was important?

See FRAASS on page 5
Greetings. I hope you had a wonderful holiday.

In much of this issue of Native Voices we focus on indoor air quality (IAQ), from macro-level issues of federal support for tribal IAQ training and assistance to classroom level work on weatherization and its relationship to the quality of air within structures. I would like to offer a personal perspective on the impact of IAQ in my own life.

Last fall, my three siblings and I teamed up to switch our mother’s home heating from wood/coal to a cleaner, more-efficient pellet stove. My mother, a retired nurse of 33 years, reluctantly agreed to make the change, because she found the searing radiated heat that wood and coal projects more comforting than the pellet stove heat. We discussed all the benefits of wood/coal vs. pellet, but at first she was not convinced. We finally promised that if she didn’t like it at the end of a trial period, we would change it back.

Thankfully, she has grown to appreciate her pellet stove. The heat it generates is less dramatic but much cleaner. Also, she does not have to carry in all the heavy wood and coal from the cold and risk a fall, and cleaning the stove is much easier and less messy. However, the main benefit is the reduction in respiratory illnesses she has experienced, which is what allows all of my siblings and me to sleep better at night.

We may all want to have a cleaner fuel source for our families, but oftentimes it is cost prohibitive or simply unwanted. Wood/coal is relatively free in my home—town—if you can find a truck and some people to help load. Switching to a cleaner source may not always be a viable option, but becoming educated on the issues may be a way to address some of the major indoor air quality issues facing our communities.

As in many rural Native communities, where the winds blow hard and the natural world is just outside the door, it is easy to track the elements indoors. For school children as well as home dwellers, carpet can be an efficient pollutant trap. We have a huge problem with asthma in Indian country, and one reason for the poor air quality in schools and homes could be the amount and quality of carpeting within these structures. This issue is especially true for small children who spend much of their time crawling around on the floor. Becoming aware of how carpeting may impact your indoor air quality may help you decide whether it is right for your home or school.

Another big issue related to indoor air quality is chlorine bleach. I know I am striking some nerves here, so I will tread lightly. Like I said, my mom was a nurse. Bleach was in everything, probably including my DNA now. Bleach is a staple for many who use it to clean surfaces. Although it is efficient and kills germs, many of us did not realize that it is also a highly toxic compound. In our Indoor Air Quality courses, we explore the air impacts of cleaning products and discuss effective, safe cleaning alternatives. Good old vinegar and water can make a great substitute for many toxic cleaning compounds, but old habits die hard, and bleach is a “traditional”
Former Lab Director Works to Create New EPA Strategies for Tribal IAQ, Radon

Jed Harrison, who recently stepped down as director of U.S. EPA’s Radiation and Indoor Environments National Laboratory (R&IE) in Las Vegas, Nevada—home to ITEP’s Tribal Air Monitoring and Support (TAMS) Center—has a new mission at EPA. That mission reflects some of his long-developing ideas on how to address environmental concerns more holistically, an outlook he says has come directly from his work with tribes.

“My new role,” he says, “combines several things I’m passionate about: tribes, sustainability, and indoor air quality (IAQ). I’ll be helping the Office of Radiation and Indoor Air (ORIA) to be more strategic, more efficient and responsive to tribes. Radiation will continue to be a concern for many tribes, especially legacy mining issues, but IAQ is something that all tribes need to pay attention to.”

His current project centers on two major tasks: helping to create a more effective tribal support strategy for ORIA, and enhancing the agency’s radon-reduction programs for tribal communities. “We don’t have enough people or dollars to do everything,” he says. “So how can we do the most good, given the limited resources we have? This is not just for EPA Headquarters and Lab staff but also for our program folks out in the Regions.”

**Enhancing EPA’s Tribal IAQ Strategy**

During his tenure as R&IE director, Harrison had ample opportunity to observe tribal environmental approaches to solving environmental problems, which often involve not only addressing air or water quality issues but also their social, traditional and economic impacts. He believes the relationship that has developed between tribes and EPA’s Office of Air Quality Planning and Standards (OAQPS) supports that approach. Rather than a “prescriptive” style, those interactions emphasize a listening approach: OAQPS relies heavily on input from tribes. The arrangement is designed to build a more effective relationship with tribes through participation, listening, and seeking mutual understanding. It works well, and Harrison says his approach will reflect essentially that same approach.

He says his starting point for the project takes into account a few basic facts. “We know there are problems with the state of housing in Indian country, and that sometimes a large family will share a small home. There are severe climate issues in places like Alaska and elsewhere. In some tribal communities up to 80% of homes have radon problems. We know about high asthma rates among tribal members. And we know there’s a lack of air-program infrastructure at many tribes. So those are places to start. The idea is, let’s talk with tribal folks, help them to understand how we’re trying to support healthy homes and buildings, and find out what’s most important to them. At the same time, we recognize that tribes have a zillion other things on their plates. So a big challenge we’ll have is to find effective ways to solicit the input that’s needed across Indian country.”

That information gathering will begin with outreach, as EPA staff work to inform tribes about EPA’s existing program products and activities. “Tribes need to be aware of available resources. From there, we can start looking at ways to alter or add to those resources to make them more applicable and available to tribes.”

For example, ITEP presently offers an IAQ support program that focuses on three areas: radon, asthma, and IAQ in schools. OAR provides webinars and an information-based web portal ([www.epa.gov/iaqtribal/](http://www.epa.gov/iaqtribal/)) that provides information and facilitates networking. “EPA has done some great things,” he says. “But not everything we do translates well to Indian country.”

After conducting outreach, Harrison plans to assemble a workgroup of tribal IAQ advisors who, together with ORIA staff, will develop a “straw proposal” for an ORIA Tribal Strategy and Plan. He says the group will ideally include professionals from both established and newer tribal IAQ programs, bringing their own observations and needs to the process. The straw proposal will form the basis for formal consultation among all interested tribes. From that input, ORIA will create a more-refined version of the document. “This won’t be a case of having a strategy to hang on the wall,” he points out, “but rather a template for what we’ll do this year, next year—but with flexibility if new needs arise.”

**A Unified Approach to Radon in Indian Country**

Harrison’s second task is to find ways to improve federal radon-reduction efforts in tribal communities. One mode he’s exploring is the creation of radon-related training curricula for staff from a range of tribal agencies, including environmental, housing, and health. “Ideally,” he says, “this would be a month-long curriculum. But of course, the reality is we may only have them for two days. So how
清洁剂为许多人学习清洁技艺提供了机会，跨越了过去的几代人。

我还想谈谈香烟烟雾。在我大学毕业后，我去了一个赌场工作，像许多赌场一样，尽管设计者们努力将吸烟区与非吸烟区分开，但我所在的地方仍然存在空气问题。我经常在那个时期经历眼泪刺痛和咳嗽，我发现我随着时间的推移对香烟烟雾的敏感度实际上增加了。然而，在我当前的旅行中，我高兴地看到许多赌场正在改善室内空气质量。我们都知道，任何形式的烟雾——无论是来自木炉还是赌场——都可能有害，尤其是当吸入肺部的是它们早期、脆弱发育阶段时。寻找改善室内空气质量的方法，以减少环境中的烟雾是至关重要的。

这些只是我亲自经历的室内空气问题的几个例子。当然，许多其他IAQ问题存在于部落社区——大型、延续的家庭可以创造出湿润和其他空气问题；烹饪习惯，如大锅煮水，与通风不良一起促进霉菌的生长；当然，有普遍的建筑问题——使空气进入的缺陷，以及从附近的地球中流出的氡气，通过坏的密封和开裂的基础。

正如你在这期故事中看到的那样，美国环保署和ITEP认识到解决IAQ问题的严重性，并正在采取更有效的策略来解决部落社区的不良室内空气问题。我对美国环保署，主要由前辐射与室内环境国家实验室主任Jed Harrison领导的，以及我们自己的团队，由Mansel Nelson领导的战略感到满意。IAQ是一个关键问题，值得最好的解决方案。

最后，我要感谢我的母亲，Marie，让我分享这些故事。她是我的英雄，我努力让她感到骄傲、快乐和舒适。❤️
I didn’t have the impression our gravimetric or radon [testing and analysis] answers were incorrect. But as an agency over the past decade, we have tightened our standards literally to the point where we were making everyone else do it. If we wanted to hire a commercial lab we required certain standards, and our old attitude appeared to be, “We’re EPA, we always do it right, so we don’t need anyone looking over our shoulder.” I’m glad that attitude has changed; I always want someone looking over my shoulder.

Much of that documentation is completed or getting close. In the meantime the gravimetric lab, which serves some 18 tribes for filter weighing, has been offline. Where does the ‘grav lab’ stand at this point?

A new QAPP has been approved for the gravimetric work and will probably be finalized [by the time this newsletter goes to print]. We put in a commercial lab option to serve those needs in the interim. We’re retraining staff so they’re following the new SOP. I’m hoping we’ll have the grav lab back in operation by February. The commercial option will be available through February or March, so as we transition back, no tribe will get left out.

We were never meant to be a long-term source [for filter weighing]. We’re to be a process for training and education, to help get tribes started, and to see if they even need to continue monitoring. As a federal agency we’re not allowed to replace commercial lab functions. So once a tribe moves into permanent operation and has their system up and going, they really need to transfer to a commercial option. That’s going to be a little bit of a transition for some tribes—some have been with our lab for up to five years.

What do you see as a reasonable length of time for a tribe to use the gravimetric lab here?

We’ll work with the tribal nations and ITEP to figure what’s a good number. For sure, we won’t arbitrarily just pick a number. Two years might be reasonable, but again, we haven’t set a precise length of time.

You’ve curtailed radon testing as well. Will that service be back?

Yes, we currently plan to resume radon measurements, including sending out test canisters. We’re tightening the quality control and the way we do it.

The TAMS Center recently lost the services of Henry Gerard, who was responsible for maintaining monitors and equipment used by tribes. Will that position be re-staffed?

Right now we’re looking at a couple of things for the interim until I can get that position staffed again. There’s a program called the National Older Worker [Career Center] from which you can bring in workers for less than a full FTE salary. These are folks over 55 who want to come back and do something they’ve done before and make a little money. We have six or seven of those folks working here. We may bring one of those people in to do some equipment maintenance. I also have a staff member from one of the other centers who will do cross training. The key is, where do we get another person who can actually go out and work with tribes? That’s where I need another body, and right now the agency is reducing bodies, not adding them. I’ll be sending up a list of my most critical needs, and that position is on the list. Keep in mind that Henry is right next door [with the Lab's Environmental Response Team West], so if there’s something critical we need, I still have access to him.

As a former Air Force officer, how do you feel about working with the TAMS model, which is based on tailoring services to meet the expressed needs of tribal air program staff?

It’s easy to tell people what you want them to do and how to do it. It’s more difficult to listen. The system we have works, that’s the key. You talk and we listen.

Where do you see the TAMS Center in five or ten years?

Funding is always a limitation, and that will probably remain the case for a while. One thing we need is to be better known within our agency. How do we get the message out to the Regions, to other administrators and assistant administrators, that there’s an entity called the TAMS Center? One way, I think, is to make sure your stories are heard. If we can tell the story, the impact we’re having, then we keep our funding and keep the emphasis of management on what we’re doing.

I recently heard stories about how the feds and others are helping to rebuild homes on Navajo Nation lands—homes that were literally sitting in radium and uranium-filled rock—having that cleaned out, proper soil brought in, new homes built, and a family moved in. One of the family members was speaking to the person representing them [Navajo Nation member Vivian Craig] and told her, “You spoke for my family.” I thought that was a very poignant comment.

As far as getting your story out—by the funding meeting, it’s too late. You have to tell the story before that meeting, so people who come to it have heard about you before you show up and know the importance of what you do.

How does it feel to be in the unique situation of heading a federal lab that provides services to sovereign nations?

I prefer to think in terms of “government-to-government relationships.” The federal government does have a trust responsibility. But I prefer that we just interact based on what our abilities and expertise might be—to simply help each other.
Upcoming Course Explores Links between Weatherization and Indoor Air Quality

In recent years home weatherization has taken on increasing importance across Indian country. Prompted by rising energy costs and climate change concerns—and buoyed by support from the U.S. Department of Energy, U.S. EPA, and limited economic-stimulus funding—more and more tribal staff are conducting weatherization upgrades, weatherstripping doors and windows and insulating utility conduits and other spaces from which air can enter and exit. Weatherization is generally associated with increasing the tightness of homes to keep cool or heated air in and the elements out. However, as ITEP’s Mansel Nelson points out, “In the context of weatherization, although ventilation is sometimes seen as a bad thing, it’s actually necessary for good health.” He notes that while sealing a home can improve energy efficiency, it can also trap moisture, radon, and toxic emissions from cigarette smoke, cleaning products and other pollutants.

In early April ITEP will offer our first Weatherization and Indoor Air Quality course, to be held at the Oneida Nation near Green Bay, Wisconsin. The course will be presented in conjunction with a Repair, Renovation and Painting course the Oneida tribe is conducting for neighboring tribes through a Regional cooperative agreement (focusing on lead paint in homes). The ITEP Level II course will address IAQ and its sometimes complex relationship with weatherization, expanding on information provided in our Level I Indoor Air Quality in Tribal Communities course. Those encouraged to attend include tribal air quality and housing staff, health professionals, maintenance staff, and other relevant tribal employees. Class size will be capped at about 20 participants.

ITEP’s Mansel Nelson and John Mead, along with EPA’s Jed Harrison, are still shaping the course material, but they’ve developed a general approach and list of topics for the 3.5-day course. They’re now recruiting instructors, including experts in air quality, health, and home construction and maintenance. Course work will feature a mix of classroom instruction and field work. The agenda will include the following topics:

- IAQ health concerns—A broad range of conditions and behaviors can impact the quality of indoor air, including moisture buildup and mold; radon infiltration; toxins such as asbestos and lead; smoking in the home; and toxic substances in cleaning supplies and other products. Organizers hope that presenting the material to air quality, health, and maintenance staff will help create a shared understanding that can lend itself to a more coordinated approach to addressing these problems.

- Causes of indoor air problems—IAQ issues stem from a variety of causes, including poor home construction, the use of toxic building materials, lack of proper ventilation, homeowner behaviors such as the use of toxic cleaning materials and inadequate carpet cleaning, and other factors. Reduction of the sources of indoor air pollution will be a primary focus.
  - Diagnostic/inspection techniques—The course will include at least two afternoons in the field, when participants will work inside a home conducting air quality analysis and assessments, with an emphasis on the relationship between air quality and weatherization. The course is designed to follow aspects of EPA’s recently released “Healthy Indoor Environmental Protocols for Home Energy Upgrades.”
  - Data-gathering—Including before-and-after measurements of radon levels in a newly weatherized home.
  - Links between weatherization and IAQ—Air quality can be both enhanced or degraded by weatherization (e.g., sealing out dust but sealing in moisture). This portion of the course will explore ways to prevent such problems.
  - Outreach/education—Homeowner education is crucial for keeping home air clean, a factor that often becomes more important after weatherization. Topic areas for this portion of the course include “elimination, minimization, and mitigation;” an examination of substances occupants bring into homes and how they impact air quality; housekeeping practices; ways to control moisture and reduce odors and pollutant levels; and other related topics.
  - Action planning—An exploration of big-picture methods for addressing IAQ in the community.
  - Funding sources—How to find the resources you need to address IAQ in tribal homes.

For more information on this upcoming course, please contact John Mead at john.mead@nau.edu, or Mansel Nelson at mansel.nelson@nau.edu.
Onetime ITEP Intern Carries Environmental Training and Experience into Tribal Work

by Graylynn Hudson, ITEP-EEOP

Each year the Institute for Tribal Environmental Professionals’ Environmental Education Outreach Program (EEOP) offers internships, with funding provided by U.S. EPA, to students from around the nation. These valuable internships place students with tribal and federal environmental agencies for ten-week terms. Under the guidance of host agencies, students learn valuable skills and contribute to exciting research projects.

During Summer 2011, nine internship positions were granted to students nationwide. One of the students selected, Virginia Blue, had the unique opportunity to work with the Sac and Fox Nation of Missouri in Kansas and Nebraska Environmental Department on air quality issues. During her internship, Virginia gained hands-on experience with air monitoring as well as education and outreach. After completing her internship, Virginia was offered a full-time job as an Environmental Technician.

Virginia is a member of the Navajo Nation and a graduate student in Public Health at New Mexico State University. She also interned with ITEP during Summer 2010; her internship then was with EPA’s Office of Air Quality Planning and Standards, based in Research Triangle Park, North Carolina. Virginia says that since her first internship with ITEP she has developed a fondness for environmental health work. Her goal, she says, is to combine her public health background with her environmental experiences to address issues in tribal communities.

Virginia is currently employed by the Sac and Fox Nation. Their mission is to “integrate environmental awareness and responsibility throughout the community, encourage environmentally sustainable practices, and protect the health of humans, our environment and our wildlife.” The Environmental Department was established in 2001 with grant funding. Oversight is provided by the Tribal Council. Programs include Air Quality, Clean Water, and Tribal Response. According to Virginia, “Air monitoring on the Sac and Fox Nation reservation is very important because it is surrounded by a number of coal-fired power plants, which generate a lot of fine particle air pollution.”

Visit the internship site to find out how to apply as an intern host site or to apply as a student, at: www4.nau.edu/eeop/internships/index.asp.

ITEP-EEOP is interested in updating the activities of past interns. If you are a previous intern or know one, please contact Graylynn Hudson at graylynn.hudson@nau.edu.

National Tribal Forum 2012

Make plans now to attend the National Tribal Forum on Air Quality in Tulsa, Oklahoma. This year’s Forum, sponsored by ITEP and the National Tribal Air Association, will offer all the advantages you’ve come to expect from our yearly gathering of tribal air quality professionals: workshops, expert presentations, regulatory updates, networking, camaraderie, traditional cultural performances, vendor tables, and more. NTF is designed to hone the skills of experts and help get new air-program staff up to speed in their work and connected to the supportive tribal air community.

National Tribal Forum ‘12 will take place May 22–24 at Tulsa’s Hard Rock Hotel & Casino, a facility owned and operated by the Cherokee Nation of Oklahoma. For more information, contact Lydia Scheer at lydia.scheer@nau.edu, or call Lydia at 928-523-6887.
do you do that? What’s the best mix of information, and what’s most appropriate for which staff? We’re just getting started on that, the specific goals and ways of reaching them.”

He says finding ways to unify the responses of various federal agencies is a crucial piece of the radon-reduction puzzle, especially in these times of limited federal resources.

Creating such unity will be no small task. “The problem is,” he explains, “the Department of Energy is concerned with energy efficiency, Housing and Urban Development is concerned with durable, safe housing, and EPA and the health agencies are concerned with the indoor environment.” Federal law is strict in regulating how money is spent, which can complicate efforts to shape a coordinated approach.

So, for example, structural repairs (funded by Dept. of Housing and Urban Development) may be required before weatherization measures (Dept. of Energy) can be performed, and both types of renovation impact IAQ, which draws in EPA and various health agencies. All of these disparate programs must function somewhat in sync to best protect and benefit home residents. “Fortunately,” says Harrison, “I’ve been impressed by the way folks from the different agencies are coming to the table to work on the problem of ‘How can we approach our customers in a holistic manner?’ That’s a good thing.”

Sharing World Views

His work on both IAQ and radon-reduction are strongly guided by lessons he’s learned during his tenure working with tribes at R&IE and through the TAMS Center. “I’ve always been hopeful,” he says, “that just as EPA can help tribes with their environmental issues, tribes can help EPA in looking at the environment differently, more holistically.” His present mission suggests that in some respects that process has already begun.

If you would prefer an e-copy of Native Voices rather than a paper copy, please contact Lydia Scheer at lydia.scheer@nau.edu, and we'll include you on our email list.