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INTEROFFICE
MEMORANDUM

J. C. NOVAK

Subject

"Facts About Vinyl Chloride" Video Program

To Distribution

(Location, Organization, or Department)

From H. J. Smith

Chemicals Manufacturing

(Location, Organization, or Department)

cc: J. T. Barr R. J. Meier
J. H. Body J. C. Novak
T. C. Carey R. H. Schenck
R. Fleming L. B. Tepper

Attached is a verbatim transcript of the Facts About Vinyl Chloride. Please indicate your comments at the appropriate point in the transcript and return to H. J. Smith. We plan to begin working on the modifications by 11 January 1980 and request your comments prior to that date.

It is important that we know not only what you feel is wrong, or deficient, but also how you feel the problem should be corrected (i.e. what you would consider acceptable). In addition, we ask that you indicate as priority "A" those items that you feel must be modified to achieve an acceptable program, and indicate as priority "B" those items which are not so critical but could improve the program.

The audiovisual staff will then compile the individual comments, determine what is technically feasible, and propose modifications to the program. The modified program will then be redistributed for additional comment.

In order to make this review process as efficient as possible, and to expedite completion of the program, we request that you focus your attention in the following areas:

1. Clearly distinguishing between PVC and VCM regarding harmful effects, necessary precautions, and coverage under the regulation.
2. Specifying approximate or minimum exposure levels necessary to produce (a) narcosis (b) disturbed liver function (c) abnormal heart rhythm.
3. Providing a perspective on the relative risk of developing angiosarcoma and/or counteracting the inference that working with vinyl chloride automatically equates with disease.
4. Providing a stronger response by the supervisor on the use of Emergency Procedure and Respiratory Protection Manuals given to the "new hire" by the supervisor.

(320)

AP00033870

To: Distribution

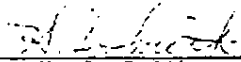
"Facts about Vinyl Chloride"

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5. "Softening" the basically negative tone of the program to reassure viewers that death and disease are the exceptions and not the rule when working with vinyl chloride.

Of course, any other area that you find critically deficient should receive comment.


H. J. Smith

HJS/cd
Attachment

AP00033871

FACTS ABOUT VINYL CHLORIDE

Production Script

OPENING

We see John walking into Dispensary, see the Dispensary sign, he goes in, through lobby, into doctor's office.

DISSOLVE titles in over this scene:

FACTS ABOUT VINYL CHLORIDE

A Presentation of OSHA and
Air Products and Chemicals, Inc.

DISSOLVE to:

SCENE 1 JOHN is in the doctor's office, buttoning up his shirt. The DOCTOR enters, carrying a file folder.

DOCTOR:

Hey, John--I think you're about ready to start your new job.

JOHN:

Oh, great, great. Thanks. Boy, that was some physical - I'll tell you. After all those tests, I feel like one of those white rats they use in labs.

DOCTOR:

(Chuckles.) Well, it may seem like a lot but we literally have to get to know you inside and out.

JOHN:

Well, you ought to by now.

You know, I can see why you'd want to know all about my past history, and uh, why did all those lab tests, and even why my father's diabetes is important for you to know about. But, uh, why do you need to know about things like uh, numb fingers and toes, or uh, urinary problems?

DOCTOR:

Well, John, the problem is that the effects of vinyl choride exposure, uh, can very closely mimic the ub, effects of other diseases and conditions--

JOHN: Oh.

so I have to keep very detailed records of your past symptoms in order to evaluate any future symptoms that could relate uh, to, vinyl choride exposure.

AP00033872

JOHN:

Hmm..that makes sense. What happens to all this stuff anyway? Are my records just filed away someplace?

DOCTOR:

Well, first of all, I use the information to determine your suitability to work with vinyl chloride and to, uh, to use respiratory protection--and then, uh, yes, the information is filed and it's kept on file for thirty years, at least thirty years. JOHN: Oh yeah. Umm...Then as required, you'll receive a statement of suitability from me.

DOCTOR:

Now, I'll want to periodically monitor your health--just like your personal physician does. And OSHA requires us to keep our records for future statistical analysis. And too, if your personal physician wants to gain access to the records, they are, uh, readily available to him.

JOHN:

Oh! It sounds like I'll be pretty well taken care of.

DOCTOR:

Well, that's what we are aiming for, John. Uh, and as long as you are working with vinyl chloride or polyvinyl chloride, your employer will check you once a year for the first ten years that you're working and then every six months thereafter, JOHN: I see, to verify your continued good health. Of course, if there is an emergency and you're exposed to vinyl chloride, then, uh, we'll check you out right away. JOHN: Good, good. Any other questions?

JOHN:

Oh gosh, no, I don't think so. Thanks very much.

DOCTOR:

Okay, your supervisor, Sam Marsh, is waiting outside; he's going to show you around and, uh, see you next year. Good luck on your new job.

JOHN:

O.K., same time, same place next year, right?

NARRATOR:

Like John, you probably didn't know much about vinyl chloride before you were hired to work around it. Well, there are in fact some things you need to know about PVC and vinyl chloride.

AP00033873

This program is presented to satisfy, in part, the training requirements specified in the Occupational Safety and Health Administration's standard on vinyl chloride.

It's set in a polyvinyl chloride manufacturing facility, but the information applies to any operation involving the manufacture, reaction, packaging, repackaging, storage, handling, or use of vinyl chloride or polyvinyl chloride. We will also discuss specific hazards which could result in exposure to vinyl chloride and specific engineering and work practice controls. This information may not apply to general audiences.

Additionally, we'll provide information about: health hazards associated with chronic exposure to vinyl chloride, fire hazards, acute toxicity, and an explanation and description of the medical surveillance program and the monitoring program.

We'll also provide general information about personal protection, including respiratory protective devices, the kind of operations which could result in vinyl chloride exposure, emergency procedures and tips on recognizing conditions which could possible result in the release of vinyl chloride.

To completely satisfy OSHA's training requirements, you must receive additional instruction, including information about the specific operations in your plant which could result in your exposure to vinyl chloride in excess of permissible limits and necessary protective steps to take in these areas, an explanation of the purpose for and limitations of respiratory protective devices and instruction in their proper use the specific emergency procedures followed in your plant, specific information to help you recognize conditions in your plant which could result in the release of vinyl chloride, and a review of the OSHA standard on vinyl chloride, during your initial training and every year.

Okay, let's see how John's doing.

SAM:

John Weaver?

JOHN:

Yeah.

Oh, hi. I'm Sam Marsh the supervisor in your area.

JOHN:

Well, how are you doing Sam, nice to meet you.

AP00033874

SAM:

Nice to meet you. Say, uh, is this your stuff here?

JOHN:

Yeah.

SAM:

Well, why don't you grab it and, uh, I'll show you around. JOHN: Sure (Hands JOHN hard hat and safety glasses) Now you have to wear these at all times once you pass the gate. JOHN: O.K. Say, are those safety shoes you have on?

JOHN:

Oh, you bet they are.

SAM:

Right, okay, let's go.

JOHN:

Alright.

SAM:

Here we are, right here. What did you think of that physical? Pretty thorough, huh?

JOHN:

Oh, no kidding.

SAM:

Ah, put the old seatbelts on here, buckle up for safety.

JOHN:

Right. Say Sam, now that I know all about the medical department and they sure know all about me, could you tell me just what is vinyl chloride, anyway?

SAM:

Well, technically, vinyl chloride is a colorless, flammable gas. Uh, we store it as a liquid under pressure, uh, but as soon as it hits the atmosphere, uh, well, it vaporizes.

Uh, and those vapors are heavier than air so they tend to fall and build up near the ground. When that happens it only takes a tiny spark to set them off. In fact, it only takes 3.6 percent vinyl chloride with air to make a flammable mixture.

JOHN:

Oh yeah, yeah.

SAM:

(Chuckles.) Well, if you really want to know what it looks like, take a look at your lunch box.

JOHN:

My lunch box?

You mean they make lunch boxes here?

SAM:

(Chuckles.) No, not exactly. We manufacture the polyvinyl chloride--PVC. Now, it's one of the plastics they use in making lunch boxes and vinyl car seats, and lots of other products.

JOHN:

So I get to take my lunch box back where it came from?

SAM:

Well, almost, but not quite. You see, your lunch area is separated from the main process area of the plant. Now for health reasons, no food, drink or tobacco are allowed in the process area. Well, okay, here we are. Let's go inside and sign in.

JOHN:

Okay.

SAM:

You got all your stuff?

JOHN:

Yeah, I sure do.

SAM:

Okay.

AP00033876

NARRATOR:

John didn't know that vinyl chloride is the starting point in making vinyl plastics--plastics then used for lunch boxes and other everyday products. He probably also doesn't know much about the health hazards associated with excessive exposure to vinyl chloride--you may not either. Let's take a few minutes to outline what we know about those hazards.

First off, the mild, sweet odor of vinyl chloride is too faint for humans to smell until the concentration in the air is over one thousand parts per million, clearly about the levels set by OSHA standards.

So, appropriate instruments and a thorough surveillance program are necessary to detect the presence of the gas.

Your nose alone just won't do the job. There are two kinds of effects of excessive vinyl chloride exposure: acute effects and chronic effects.

Acute effects occur soon after exposure and may follow a single exposure to vinyl chloride concentrations well above the OSHA limit.

Among the acute effects are anesthesia or narcosis. The symptoms resemble alcohol intoxication. Lightheadedness, some nausea and dulling of vision and hearing responses may occur with acute exposures.

At high levels of concentration, thousands of parts per million, vinyl chloride can act as an anesthetic gas, causing unconsciousness, and even death if brain functions become severely depressed.

These effects may be and usually are fully reversible if the victim is removed from the contaminated atmosphere and breathing is maintained, clearing vinyl chloride from the body. But, artificial respiration may be necessary.

Another acute effect from high levels of exposure is disturbed liver function. Again, this is usually reversible. But the victim may not show any symptoms of being ill, so lab tests of blood samples are taken to detect abnormal liver function. Sometimes, these same blood tests are influenced by other forms of liver disease, like viral hepatitis or by the excessive use of alcoholic beverages. So, a doctor might request additional diagnostic tests. Generally, abnormalities of liver function gradually disappear and normal function is restored within several weeks, provided no further exposure occurs.

In a few cases, abnormal heart rhythms have been observed after exposure to high levels of vinyl chloride. Experience with similar compounds suggests that these abnormalities can be fatal under certain conditions.

After the body eventually eliminates the vinyl chloride, a process which takes several hours, normal heart rhythm usually resumes.

AP00033877

However, anyone who has been exposed to high levels of vinyl chloride and who suffers from abnormal heart rhythms should receive immediate medical attention.

Okay, those are the acute health effects, short-term effects, usually of no continuing health significance except in rare situations when the acute effect is intense enough to cause death. In a few moments, we'll look at some of the chronic effects of vinyl chloride exposure. But first, let's check on John and Sam.

SAM:

Okay John, why don't you sign in right there.

JOHN:

Okay, why do I have to sign in anyway?

SAM:

Well, we have to keep track of who's in the area.

JOHN: Yeah, get my name down here. SAM: So, alright, through this door. We'll go right on down this way.

JOHN:

Okay.

SAM:

This is the control room for the entire plant. From here, we control all the systems and constantly monitor the area to provide a continual analysis of the workroom air.

Now, the gas chromatograph periodically records vinyl chloride concentrations from various sampling points. And of course, we keep a record of all the analyses performed by the monitoring system.

JOHN:

What happens if they run across a heavy concentration of vinyl chloride?

SAM:

That's it exactly and when you hear it, you evacuate the area immediately, in accordance with established emergency procedures and you'll be briefed on those when you report to your area. Now, after you evacuate the area, we locate exactly where the leak is and take care of it.

AP00033878

JOHN:

Well, who takes care of the leak?

SAM:

Well, specially trained and equipped emergency team. Now, they investigate the situation, using a direct reading instrument to measure the concentration. They'll let you know when it's safe to return to the area.

Say, before we go into the plant, let's step into my office a second.

JOHN:

Sure.

NARRATOR:

While John's getting the story on protection from exposure to vinyl chloride, let's learn more about why that protection is so important. We covered acute effects; now let's look at chronic effects.

Chronic effects of vinyl chloride are effects that develop over a long time, and are often delayed in appearing.

Chronic effects may occur after repeated exposures which, individually, are not intense enough to cause obvious immediate symptoms.

The most serious chronic effect is cancer. Specifically, exposure to vinyl chloride is known to cause angiosarcoma of the liver, a very rare tumor in humans.

While angiosarcoma of the liver has appeared in people with no known exposure to vinyl chloride, it is fair to say that many cases of angiosarcoma of the liver have followed overexposure to the substance. A number of the world's vinyl chloride workers have had this disease. Their exposures, when known, have been high--not necessarily high enough to cause acute symptoms, but well above the currently accepted limits.

Commonly, the cancer is detected ten to twenty-five years or more after the beginning of exposure.

Angiosarcoma is difficult to detect and there is no effective treatment. Untreated angiosarcoma of the liver is usually fatal within 8 months of diagnosis. Even with treatment, death usually occurs within 16 months. Therefore, the emphasis must be placed on prevention of the disease, not treatment. The OSHA vinyl chloride standard was designed with this goal in mind: prevention of disease.

AP00033879

Preliminary evidence from studies of vinyl chloride workers suggests that exposure to vinyl chloride may also be associated with other health risks. Among the possibilities are brain cancer, lung cancer and lymphoma. Whether or not this apparent association can be confirmed is a matter of continuing investigation.

And to complete the discussion of chronic effects, let me note that a number of workers exposed to very high levels of vinyl chloride--these workers were mostly reactor cleaner--have developed a condition known as acroosteolysis. In association with this deterioration of bone in the fingertips, the patient will commonly suffer from a numbness and coldness of the hands. A skin condition, contact dermatitis, is also seen. Thanks to the use of methods other than scraping by hand to clean reactors, and strict control of airborne vinyl chloride, we are not observing any more new cases of acroosteolysis.

Okay, in summary: The most important human health effects associated with vinyl chloride exposure have been loss of consciousness, impairment of liver function, and cancer. These effects have all been associated with exposures to levels of vinyl chloride far in excess of those which we now regard as acceptable. Preplacement and periodic medical examinations make sure that conditions, which could possibly be confused with known vinyl chloride effects, are detected at an early stage.

SAM:

Okay, I see you've been through our respirator training program.

JOHN:

Yeah, I sure have. They told me why I have to wear one, uh, what the limitations are on the different types, uh, plus they showed me how to be sure the respirator fits, uh, how inspect it and how often, uh, how to clean and disinfect it, uh, even how and where to store it.

SAM:

Sounds very thorough; you remembered all the key points. Okay, let's say that this is your respirator. JOHN: O.K. Now, let's give it a test.

JOHN:

Okay, fine, uh, do I have to wear this thing all the time?

SAM:

No, only if the vinyl chloride concentration exceeds one ppm.

SAM:

Okay. We're going to put these straps on, alright?

JOHN:

Okay.

AP00033880

JOHN does.

Yeah, Okay.

JOHN:

This one is pulling on this side. There, that's better. Okay.

SAM:

Does that feel better?

JOHN:

That one, that one, here, and here, and the top one is okay.

SAM:

There, you've got it. Why don't you give a good negative pressure test?

JOHN:

Alright.

SAM:

All right, now. I'm going to attach this vapor canister and we're going to test with some banana oil.

SAM attaches to canister, ad libbing appropriately.

Now, I'm going to wave this around and you tell me now if you notice the odor of bananas, Okay?

JOHN:

Fine, fine.

SAM:

Now, you just keep breathing normally, right?

JOHN:

Sure, sure.

SAM:

How about right in here?

JOHN:

Nothing there.

AP00033881

SAM:

No?

SAM:

How about over in here?

JOHN:

Wait a minute, wait a minute, yeah.

SAM:

Right there?

JOHN:

Yeah.

SAM:

Okay, hang on a second.

Let me tighten these straps up a little bit. See if that fits a little more snugly. Now, how's that? Still comfortable?

JOHN:

Yeah, that's fine.

SAM:

Okay. Now, you just relax, keep breathing normally, alright?

JOHN:

Fine.

SAM:

Okay now shake your head side to side.

JOHN:

Okay.

SAM:

Okay, just keep breathing and talking normally.

JOHN:

Alright.

AP00033882

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SAM:

Now, move your head up and down.

JOHN:

Up and down.

SAM:

That's right. Okay.

SAM:

That mask seems to fit nice and snugly. You've just got to remember, you keep those straps tight.

JOHN:

Fine, can I take it off now?

SAM:

Sure, go ahead.

JOHN:

Oh boy! AH!

I'll tell you something, I just thought of this. If, uh, it's a good thing I shaved my beard off because this thing wouldn't fit very well if I still had it.

SAM:

You're absolutely right. You know, if you had the beard, the, uh, respirator might not you know afford you the, uh, protection you need. Now the same would be true if you had, oh, irregular facial characteristics or wore glasses the respirator might not fit properly.

JOHN:

Well, then I guess my Uncle Ralph couldn't wear one of these. He's got a chin like you wouldn't believe way out to here (he demonstrates, and the laugh.) But seriously though, do these things come in different sizes?

SAM:

No, not really we do use three different types, and each one has different fitting characteristics, but each one of the same type is the same size. Now we just use for the different devices the different levels of ppm.

AP00033883

JOHN:

Oh, hold on a second Sam, here, you've mentioned that a couple of times-- what's a ppm?

SAM:

Well, that's how we measure the concentration of vinyl chloride in the air, the parts of vinyl chloride per million parts of air, parts per million ppm. Okay? Now to give you an idea of how small that is, it's like, uh, one inch in sixteen miles.

JOHN:

Oh[That's hardly worth noticing, right?

SAM:

Hey[Absolutely wrong; When you're talking about vinyl chloride, it's well worth noticing. That's a very important measurement. Okay, now, the respirator you've got there is an air purifying respirator. Now it's only good if the vinyl chloride concentration stays below 25 ppm. Now if it goes higher, have to wear one like this, alright? Now, this is the type that you'll normally carry in the plant.

JOHN:

Oh yeah, I remember this one, too. Its a...a...type "C" continuous flow respirator, isn't that right?

SAM:

Exactly, very good. Okay, now that good up to one thousand parts per million. Over a thousand ppm and we use a self-contained breathing apparatus like that pressure demand type right over there on the floor that's in for service.

Now, even with that one, the emergency crew won't enter an area if the vinyl chloride concentration is over thirty-six thousand parts per million, now unless, of course, it's to save somebody's life.

Now, that also holds true if there are any unknown concentrations.

JOHN:

Okay, got ya. Uh, let's see now. All of these have to be approved, isn't that right?

SAM:

Right. And they all are by NIOSH, the National Institute for Occupational Safety and Health. Okay, now, before we go into the plant, let me give you these babies right here, okay. JOHN: Yeah. Now, this one is the written respirator program and this one is the written emergency procedures program.

AP00033884

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JOHN:

Heah, Well, uh what do I do with these?

SAM:

Well, uh, you read them and hold onto them and, uh, they describe the respirator program and the emergency procedures program fully. Now those are part of your training. Okay?

JOHN:

Okay.

SAM:

Okay, now let's go out into the plant; you can leave your books there and we'll just pick them up on the way back. Okay?

JOHN:

Yeah, that sounds good. Well, I think I'm clear on what to do in case of an emergency but, uh, how do I recognize an emergency situation myself?

SAM:

Well, you know you can't see or smell vinyl chloride at low concentrations, so your first indication will probably be a warning from the monitoring system.

JOHN:

Is there anything specific that I can watch out for?

SAM:

Well, now, there're several ways that vinyl chloride can be released.

Now, suppose a piece of equipment isn't properly assembled, leak tested or operated. Well, you might get a release. You can get a release from damaged, dirty, worn or uneven flange faces or sealing surfaces or through loose connections or valve stem packing leaks.

JOHN:

I bet you can't say that one twice! So what you're saying here is that if equipment is assembled and leak tested properly, whey then, there's nothing to worry about, right?

AP00033885

SAM:

No, that's just part of the problem. Now, you might hear some unusual noises coming from pumps, agitators, or compressors. Now that could indicate an unsatisfactory condition and if that happens, you notify your supervisor right away. Now, you can also have a problem from exceeding normal operating conditions.

JOHN:

What do you mean by exceeding?

SAM:

Well, you see we have standard procedures and special instructions for our operations that must be followed exactly and we must also closely monitor temperatures, pressures, concentrations and flow rates.

JOHN:

Boy, oh boy, sounds like everybody really has to stay on their toes around here, right?

SAM:

That's for darn sure. Now, there's one more thing that might cause a problem and that's improper purging. Now that's caused when vessels and pipes aren't cleared of vinyl chloride before opening, so you always have to make sure that the equipment is properly purged and there is adequate ventilation.

JOHN:

Okay, Hey, Sam, what's that guy doing over there?

SAM:

Unloading vinyl chloride. It comes in by railcar.

JOHN:

Is he expecting rain?

SAM:

Well, I'll grant you, it kind of looks that way but that outfit he's wearing is called a slicker. It's a protective suit that must be worn when you're performing any hazardous operation directly dealing with liquid vinyl chloride, which can cause frostbite on contact. Now you'll notice he's also wearing goggles and a respirator. Why don't we step over here a minute?

SAM:

Say, Bob! Bob! Could you come down here a minute?

Bob, shake hands with John here.

BOB:

John, how're you doing? What can I do for you?

SAM:

Now, John be joining us. (As soon as I get done showing him around, he'll be going to work. (SAM points to air sampler on BOB). Now, you see this? That's a personal air sampler.

Now, OSHA requires that no employee be exposed to concentrations of vinyl chloride greater than one ppm over any eight-hour period. Now that's the so-called time weighted average, TWA.

Nor is any exposure permissible in excess of five ppm averaged over any fifteen minute period.

So, to determine that no employee has been exposed in excess of those limits, we use this personal air sampler to monitor the amount of vinyl chloride in the air.

JOHN:

Oh yeah, but I thought that's what the gas chromatograph was for.

SAM:

No, the gas chromatograph only measures vinyl chloride concentrations at specific points, to determine what respirator to use, and to activate the alarms. Now, to get the true picture of what you're exposed to, we carry these samplers with us and wherever we go they monitor continuously.

JOHN:

Boy! Maybe you'd better explain that some more, okay?

SAM:

Okay. Well, I'll tell ya, I've been through this so much I feel like, I've got the book memorized. Well, you see, several years ago, we instituted a monitoring program to determine if any of our employees had been exposed to concentrations one-half part per million. Now, that's what OSHA calls the "action level". Okay

AP00033887

now. Based upon the results of that monitoring program, OSHA regulations tell us when we have to resample. Now, for example, if the results are that the monitoring shows that an employee's exposure is below one-half ppm, well then we can stop monitoring. If the exposure is between one-half and one ppm, we well then monitor quarterly. And if the exposure is greater than one ppm well then, we have to monitor monthly.

JOHN:

Yeah, I see. Well, does this go on forever?

SAM:

Well, no, not necessarily. You see, we can stop monitoring on any employee if two consecutive tests, taken at least five working days apart, show that the exposure is at or below the action level.

Or, of course, if we have any process changes or if we have any reason to suspect that any of our employees have been exposed to anything exceeding the action level, then we have to start all over again.

Now also, if we find that, uh any area has, uh, been exposed in excess of the permissible limits, well, then we have to regulate that area and only allow, uh, specific employees into that restricted area.

JOHN:

Oh, yeah, I see.

SAM:

Say listen, Bob. I appreciate your coming down. Thank you very much.

BOB:

Oh yeah, I'll be seeing you again, okay?

SAM:

Why don't we walk back over this way?

JOHN:

Sam, I just thinking. If I were wearing a respirator, wouldn't the sampler be testing the air outside the respirator, not the air that I was actually breathing?

SAM:

No, for the purposes of monitoring, we ignore the respirator and just assume that you're exposed to the vinyl chloride concentration around you.

AP00033888

JOHN:

No offense Sam, but how can I be sure all this monitoring is being done right?

SAM:

Hey, listen, I appreciate your concern. But, uh, we provide reasonable opportunity for our employees or their representatives to observe our monitoring system and ascertain for themselves the accuracy of our system.

JOHN:

Oh, good! That sounds good.

SAM:

Now you know, we don't really like to see anyone wearing a respirator but sometimes it's a necessary item. Now, we're committed to control the release of vinyl chloride to the working atmosphere by engineering means, such as double mechanical seals, uh, rupture discs under safety relief valves, open air construction, local exhaust ventilation and work practice controls. Now, hopefully, some day, we won't have to have anyone wear a respirator.

JOHN:

Yeah, I can see where it would be better not to have to wear them. They are kind of uncomfortable. Say, another thought just occurred to me. Where does all this sample analysis go on?

SAM:

Well, right here at the plant over at the chem lab. Come on, I'll show you.

JOHN:

Fine, let's go.

SAM:

Now here, this is a personnel monitor about to be processed.

JOHN:

Is this where the sample is stored?

SAM:

No, that's just an air pump. Now that's used to draw the air through this. Now the sample is collected in here.

AP00033889

JOHN:

Hey, wait a minute! Aren't you afraid you'll let that whole sample out?

SAM:

This is just a holder for the sampling tube. Now we don't collect the air, just the vinyl chloride.

JOHN:

Oh, that's a relief.

SAM:

Now, while we're sampling, there's a tube inside this holder like this one. (He picks one up from the bench).

Now that's packed with a special kind of charcoal that traps the vinyl chloride as the air passes through it.

Then we analyze the charcoal to determine the amount of vinyl chloride it picked up.

JOHN:

Oh yeah, kind of like an aquarium filter, uh?

SAM:

Well, almost, but not quite. You see, this filters air instead of water. The vinyl chloride we pick up is then compared to the amount of air pulled through and that tells us the average vinyl chloride concentration in the air.

JOHN:

Do I get the results?

SAM:

Sure, you can look at the results. If they show that any worker was exposed to greater than their permissible exposure limit, he or she will get the test results in writing, along with a description of the steps being taken to reduce the exposure to below the limit.

JOHN:

Okay. You know, this is really neat in here. I've loved fooling around with things like this ever since I got my first chemistry set when I was a kid. My Uncle Ralph, you know, the guy with the chin, he gave it to me one year for Christmas.

AP00033890

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SAM:

(Chuckles.) Look, why don't we go out to the car and get your lunch box. We'll go to the lunchroom and I'll introduce you to some of the guys.

NARRATOR:

Well, John's ready to begin his new job.

He's had a thorough physical, been briefed on the health hazards of over-exposure to vinyl chloride, knows about the plant's safety operations, and is familiar with the respirators he'll use.

It's a great deal of information, but it's all important. Your employer is just as concerned as John's that you be fully aware of the safety requirements when working with vinyl chloride. Your health and safety are top priorities and your cooperation in the total effort is vital to its success.

If you'd like further information regarding any of the material we've covered, or if you ever have a question regarding vinyl chloride and your health, just ask your supervisor.

Good luck on the job.

AP00033891