

U B L I C H E A R I N G

before

ASSEMBLY AGRICULTURE AND ENVIRONMENT COMMITTEE

on

GASOLINE STORAGE TANKS AS A SOURCE OF
WATER POLLUTION AND RELATED ISSUES

Held:
March 4, 1982
Assembly Chamber
State House
Trenton, New Jersey

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Assemblyman Raymond Lesniak (Chairman)
Assemblyman Anthony S. Marsella
Assemblyman Thomas A. Pankok
Assemblyman Elliott F. Smith

ALSO:

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New Jersey State Library



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ASSEMBLYMAN RAYMOND LESNIAK (Chairman): The public hearing of the Assembly Agriculture and Environment Committee will now come to order.

Good morning, everyone! This is a public hearing on leaking underground gasoline storage tanks.

Here present today as members of the committee are: Vice Chairman Anthony Marsella to my left, Thomas Pankok to his left, and Elliott Smith to my right. And we have our Committee Aide, Norman Miller, on my right and Mark Smith at the end of the table.

We will be hearing today from Arnold Schiffman, Director of the Division of Water Resources, Department of Environmental Protection; Oliver Papps from the New Jersey Petroleum Council; Jerry Ferrara, the Executive Director of the New Jersey Gasoline Retailers Association; Francis Haviland, Executive Director, Gasoline Jobbers Division of the Fuel Merchants; Ed Neshoff, Owens-Corning Company; John A. Ainlay, Technical Consultant, Steel Tank Institute; Jim Avagliano, A. O. Smith Inland Company; and Charles Frey from Highland Tank and Manufacturing Company.

Today's topic can best be introduced by relating some incidences that happened recently. This past month, on February 17th, gasoline from an unknown source found its way into the basement of a savings bank in Upper Montclair. The fumes ignited and a flash resulted in serious injury to a human being. In another instance, on January 29th, nearly 10,000 gallons of gasoline, an incredible amount of fuel, leaked underground from a gasoline station in Budd Lake, a community in Morris County. In addition to contaminating groundwater sources in that area, the automobile fuel seeped into the nearby lake from which the town derives its name.

In 1982, and this is early March, we have already had 54 underground gas leaks reported to the Department of Environmental Protection. That is 54 that have been reported and we are certain that there are unknown additional numbers that are unreported.

The culprits of these environmental horror stories are leaking underground gasoline storage tanks which have spilled their contents into the surrounding soil and groundwater. These leaks usually result from the corrosion of steel storage tanks which have an average life of only 16 to 20 years. Many of the steel tanks in question were installed during a service station construction boom in New Jersey following World War II. A degree in mathematics is not required to calculate the effects age has had on the containment ability of the tanks that are now failing in alarming numbers.

While such tanks are identified primarily with gasoline service stations, they can also be found beneath fire stations, stores, farms, trucking firms, abandoned tanks on the grounds of former gasoline stations and fuel oil tanks at private homes.

In addition to the obvious flammability of such leakage, many wells have been closed when gasoline, which includes the carcinogen benzene, was discovered in the water.

Today this committee will hear testimony from environmental officials, private industry and other organizations in order to better assess the problem, explore the ramifications - both environmental and economic - and the impact of related legislation on the gasoline retail industry and the economy in general.

The testimony compiled here today will be used in the development of a comprehensive legislative package that would:

- * mandate the transition from the corrosive steel tanks to corrosive resistant fiberglass gasoline containment units
- * establish construction and design standards for said units
- * set a timetable for the removal of steel tanks and installation of non-corrosive tanks

of gasoline. Of course, gasoline isn't very soluble in water. But you still have a tremendous potential if you are looking just at the benzene alone.

Some of these numbers and statistics are misleading because an agency like DEP only responds to major leaks. Slow leaks probably never get reported, often go undetected, and over a long period of time you can get substantial contamination from them. So, the numbers and figures are really misleading in that sense because the number of leaking tanks are far greater. And, as you mentioned, steel tanks are all subject to corrosion. Further, in my experience, a lot of the leaks often develop from the lines that are connected to the tanks, not just the tanks themselves.

This problem, as I have said, has been around for a long time. I might note that the major oil companies recently are quite good at detecting and recovering gasoline that leaks and seeps into the ground. Technically, they are quite proficient at evaluating the underground system, the hydrology and geology of these cases, putting in observation wells, etc, and recovering the material. Since the product floats on the water table, often it can be recovered. The value of gasoline and fuel oil has gone up considerably, as we all know. And I am sure that is a factor in the concern. It is making it a little more practical to do these things.

There are also programs that they have. If you have noticed, it is pretty common practice to replace tanks at gasoline stations. Most of us drive by and just notice the gasoline station is closed for repairs. In many cases, they are replacing steel tanks with fiberglass. Fiberglass tanks, of course, won't corrode. I do know if they are installed wrong, they will crack and break. Then it is a catastrophic type failure and not something that goes undetected for very long. So that seems to be a pretty good approach.

I feel that there are still some problems with other types of leaks that can occur in the connecting lines, etc. Technically, the solutions are relatively simple. The big problem is that we have a lot of things out there already and it is a retrofitting problem. You are dealing with substantial problems, of course. But I don't have any really good information on those issues.

As far as other types of solutions, I would note that we do have the Water Supply Bond Issue of 1981 that was passed. That includes an aquifer protection program. You will see there has already been and there will be bills before you to appropriate those moneys for various projects. Aquifer protection is among them and protection of the well heads in our well fields. That becomes a local land-use issue. If you have a well field, should you have a gasoline station near it? And, if you do, what are the construction standards to make sure that you protect the integrity of large water supplies? We will be looking at those types of things.

We also have the New Jersey Water Pollution Control Act of 1977 which is being implemented to control discharges.

By and large, that is about it. I think maybe I am a little bit jaded on the subject matter; but, to me, this is a very common occurrence. We deal with it every day. That is perhaps the most chilling piece of testimony you are likely to hear. As I said, it has been so long that I regret that I can't come in here with fire and brimstone. But even the fact that it is so common is even more significant.

I would be happy to answer any questions that you would like to ask.

ASSEMBLYMAN LESNIAK: You said that New Jersey is just like any place else. Are you familiar at all with the laws in any other states?

MR. SCHIFFMAN: Yes. Some areas of the country have specific requirements often developed at the local level. From a practical standpoint, usually - and this is variable - the first person who gets the complaint and the call is the local

gasoline here so you can see what some of its constituents are. And I have all of the information that is available to the department for you.

MR. GIARDINA: The only thing I would call your attention to in the data is the fact that as of recently we have seen a larger percentage of our spill fall being caused by underground tank leakage of gasoline. It is highlighted by the first two months of this year. That might just further emphasize your point that older tanks installed after the World War II boom are now reaching their fruition of usefulness.

ASSEMBLYMAN LESNIAK: Would you expect this trend to continue then?

MR. GIARDINA: Well, the real problem would be how fast they replace. Many oil companies in the State of New Jersey embarked on tank restoration plans. Generally, new tanks that are going in are much better than the old ones. They use a fiberylass design.

ASSEMBLYMAN LESNIAK: When you say, generally - but there are no requirements; is that correct?

MR. GIARDINA: That is correct. The real issue involved with leaking tanks is discovering those that exist now, testing to indicate the fact there is a problem, and then an orderly rehabilitation program.

ASSEMBLYMAN LESNIAK: Do we know what tanks actually exist?

MR. GIARDINA: I don't follow your question.

ASSEMBLYMAN LESNIAK: Does the State know how many tanks there are out there in the ground?

MR. GIARDINA: I would say we probably just about know how many gas stations there are. We could check through files and the business registry and then, from there, go further. There is no precise count.

ASSEMBLYMAN LESNIAK: Those are the gasoline stations and the gasoline stations make up about half of the tanks that are in the ground?

MR. SCHIFFMAN: I don't know how many they make up of the problems we have with leaks. These numbers are just things that come to our attention. And from the things that come to our attention, those are the percentages. From my experience as far as groundwater contamination goes, I would say gasoline is a large part of the leaking tank problem.

MR. GIARDINA: If you review the data, you will see that basically a gas station tank is a larger tank on the whole than the private residential tanks that are leaking, therefore creating a greater potential for a problem.

ASSEMBLYMAN LESNIAK: But industrial concerns may store a significant amount of gasoline on their premises.

MR. SCHIFFMAN: They have tanks that leak too.

ASSEMBLYMAN LESNIAK: Any design standards or restoration standards would have to equally apply to those facilities also?

MR. SCHIFFMAN: It wouldn't make sense otherwise.

ASSEMBLYMAN SMITH: Mr. Chairman, may I ask a question?

ASSEMBLYMAN LESNIAK: Sure.

ASSEMBLYMAN SMITH: Do you feel that there is more reporting now because of the intensified and heightened interest in pollution?

MR. SCHIFFMAN: Yes, I really do.

ASSEMBLYMAN SMITH: I think we have had this in the past. But now because people are more concerned about it, I think there is more reporting.

MR. SCHIFFMAN: Sure. As I said, my own personal experience goes back a long time in this. As I look at what my staff is doing, I see that of all the

MR. ALLEN: Exactly. But it is important to note that it is a very, very long process. For example, you may have four service stations on four different corners in a neighborhood. You feel it is this particular station. From a businessman's point of view, it is an extremely uncomfortable position to be asked to spend perhaps several thousand dollars just to test the tanks to see if we are really right.

ASSEMBLYMAN LESNIAK: Who would be responsible in those cases - the gasoline station owner, the owner of the tank?

MR. ALLEN: That again becomes a very big problem. Many times, the oil company actually owns the tanks. That is more of a blessing than anything because you have someone with a very, very concerned interest in that type of problem. Many times it is an independent owner, just a very small businessman that perhaps would go bankrupt - and in many cases have - for getting involved in an underground recovery program. It is very, very expensive.

ASSEMBLYMAN LESNIAK: What part of the department is involved in preventive aspects? What type of regulations are there regarding the obligations of a gas station owner concerning the supply in his tanks? Am I asking the right person?

MR. GIARDINA: Let me take care of that. The way the Spill Compensation and Control Act basically reads now, the prevention and planning function of the department is limited to certain volume quantities of oil and hazardous materials or chemicals. I believe for oil, it is 50,000 gallons - or is it 400,000?

ASSEMBLYMAN LESNIAK: It has to be a major facility?

MR. GIARDINA: Only major facilities are designated under the statute.

ASSEMBLYMAN LESNIAK: Would your typical gasoline station be designated as a major facility?

MR. GIARDINA: No way.

ASSEMBLYMAN LESNIAK: Who then would be responsible for ensuring that proper inventory controls are kept so that leaks could be identified?

MR. GIARDINA: Well, right now, it is up to the oil company and the gasoline station.

ASSEMBLYMAN LESNIAK: There are no State regulations regarding inventory control?

MR. GIARDINA: No, sir.

ASSEMBLYMAN MARSELLA: On leaks - these are just called-in leaks when we find out there is a leak in the area? Basically, it is done by a citizen calling in and saying like you said, "My water tastes like gas." Can we use local control on that where in a given area water testing must be done once a year in that area where there is well water?

MR. SCHIFFMAN: In a lot of this, there are no real substantive programs to test wells, for example, after they have been drilled. Health departments generally test for bacteriological quality. Some local jurisdictions have instituted programs for more sophisticated tests, but that is very uncommon. From a practical standpoint, you can detect by taste and odor very low levels of gasoline in groundwater and a lot of reports come that way.

To give you a little bit of the history of the reaction of people, years ago, in other places in the country, I had a fight with the oil companies to admit any type of a problem and to take any action. Recently, if there is a major oil company and they are confronted with a competent state regulatory agency, they generally take action. I agree with Tom, it is not right off the bat. But if they know they are confronted with a competent state regulatory agency who has the technical expertise to identify the problem, they will generally take corrective action. If it is not a major oil company, if it is an individual, what Tom said

ASSEMBLYMAN LESNIAK: Who would do the testing? - the Department?

MR. ALLEN: No, we have never done any actual testing ourselves. This is normally done by an independent contractor. On occasion, the oil company will perform its own test, but again it is normally backed up by an independent test.

ASSEMBLYMAN LESNIAK: And they would have to certify the results to the department?

MR. ALLEN: Yes, that is pretty much the scheme. But many, many times, the results of the particular tests that are performed are inaccurate - invalid.

ASSEMBLYMAN LESNIAK: How could we know the validity and the integrity of those tests?

MR. ALLEN: In my opinion, there is currently no real way of knowing one hundred percent. There are some tests currently available ---

ASSEMBLYMAN LESNIAK: Would the best way to do it, if you had the resources, be to have the department do it? I don't want to nail you down on this, but I think we ought to get some ---

MR. GIARDINA: If we are trying to talk about two goals: one, saving the department resources and hunting down underground gas station and tank leaks ---

ASSEMBLYMAN LESNIAK: We are not.

MR. GIARDINA: --- and solving the problem, then I think it would probably be the most cost effective approach to figure out some way to certify tank testing or methods of, and licensing people who do tank testing and rely on those companies and those companies only.

ASSEMBLYMAN LESNIAK: Do they exist now?

MR. GIARDINA: I am sure there are reputable companies. We have gotten good results from reputable companies and we have gotten bad results. I would much prefer to address the problem of figuring out who is giving us better tank testing results than address the problem of sending inspectors out to all the gas stations on a periodic basis. I think that is a more prudent use of State resources.

MR. DAVID MATTEK: Assemblyman, one of the more important things in any kind of effort in prevention and planning is just the function of public education. I think your meeting here today and those during the month on related subjects get very much into that kind of a mode of dealing with the problem. Some of the kinds of actors that have to be enlisted in an attempt to end groundwater problems, which you want to end because there are serious implications for potable water and 50 percent of the potable water in the State comes from groundwater ---

ASSEMBLYMAN LESNIAK: Ninety percent in South Jersey.

MR. MATTEK: That's right. In some areas of the State the percentage is very, very high, similar to the Long Island situation. But there would be an effort called for by the State Department of Environmental Protection and other State agencies. Also local governments, particularly local health departments, would have to be enlisted in an effort to move ahead. Local planning agencies in approving building permits and other standards should be brought into the effort. Potable water companies who take the groundwater and distribute it to the people, which is the subject of your future committee meetings, are another set of actors that have to be involved. Perhaps most important of all is bringing the industrial and business community into the process. And they are pretty much moving into the same line of thinking that we all are - and the bigger companies generally first.

ASSEMBLYMAN LESNIAK: We will be hearing from them.

ASSEMBLYMAN SMITH: May I ask a question?

ASSEMBLYMAN LESNIAK: Sure.

ASSEMBLYMAN SMITH: If we have test data coming in - for instance, the

ASSEMBLYMAN LESNIAK: You are talking about a tank that has been in the ground over 15 years.

MR. SCHIFFMAN: Yes, an older tank.

ASSEMBLYMAN LESNIAK: Any other questions? (No response.)

Can you stay around for the rest of the hearing - at least one of you - to answer any additional questions we might have as a result of the testimony?

MR. GIARDINA: One or two of us will remain.

ASSEMBLYMAN LESNIAK: Thank you very much.

Also introduced into the record will be the United States Department of Energy report entitled "Motor Gasolines, Winter 1980-81," which gives a summary of values, motor gasoline survey. I think by values, they mean the composition. (See appendix volume for report.)

We will now hear Oliver Papps, New Jersey Petroleum Council.

O L I V E R P A P P S: Good morning, Mr. Chairman and members of the Committee. My name is Oliver Papps. I am Associate Director of the New Jersey Petroleum Council, a Division of the American Petroleum Institute. We are a trade association with offices in Trenton representing the major oil companies doing business in New Jersey.

The Petroleum Council would like to thank the Committee for this opportunity to present our views at this fact-finding public hearing. It is encouraging to participate in this type of hearing where a legislative committee seeks to learn as much as possible about a complex subject before drafting "corrective" legislation. The Legislature is to be commended for this approach.

I will not attempt to explore the engineering and chemical aspects of the subject, as there are people here today who are qualified to do so. I will, however, highlight some industry-wide practices which have been adopted by nationally recognized organizations as well as some sister states.

First of all, the petroleum industry recognizes that a problem does exist in certain locations and also recognizes the need for appropriate measures to detect underground leakage of petroleum products. The growth of the automobile industry after World War II and the construction of the Interstate Highway system were two major factors leading to a similar boom in service station construction. Many of these tanks have similar "birthdays" and a small percentage of these have developed leaks. I stress that it is a small number, based on the many thousands of underground gasoline storage tanks in New Jersey. It should also be kept in mind that many of these tanks are owned by entities other than service stations. Examples are: farmers, many private commercial companies, airports and governmental locations. Age, however, is no certain indicator of the likelihood of a tank developing a problem.

Generally, the incidence of underground leaks is rare. Nevertheless, gasoline supplying companies have undertaken extensive programs in recent years to prevent their occurrence. These efforts have encompassed sound maintenance programs and testing procedures, removal and replacement of suspected leaking tanks. We as a trade association have provided nationally known experts to assist local authorities in locating and correcting those extremely rare instances which have occurred. In the past, we also have conducted free seminars for maintenance personnel and local officials as part of this continuing program.

Based on the industry's awareness of a need to evaluate the condition of their storage tanks, all major companies, to my knowledge, have initiated testing and modernization programs which entail tank replacement if necessary. Furthermore, the API, through its member companies, has found strict and accurate daily

To answer a question that came up earlier, OSHA also has a requirement that that be done.

ASSEMBLYMAN LESNIAK: What happens if this isn't done?

MR. BURRELL: Let me just continue for a moment if I may. We also have a program where the retail sales representative on a yearly basis conducts an independent meter stick variation report with the retailer. So we do have a check, using our own company personnel.

ASSEMBLYMAN LESNIAK: What happens if this isn't done?

MR. BURRELL: Our salesmen call on these individual service stations generally on a weekly basis. And part of their counselling effort is to continue to counsel them on proper inventory control.

ASSEMBLYMAN LESNIAK: Do you want to answer the question or not?

MR. BURRELL: I thought I did answer the question.

ASSEMBLYMAN LESNIAK: That is it, counselling? In other words, "Listen you really ought to start doing this. You are not doing it"?

MR. BURRELL: That's right. As I said, it is written in the service station lease.

ASSEMBLYMAN LESNIAK: But there is no enforcement of that, no penalties, no lease revocations?

MR. BURRELL: I guess we would have the option, if continuing counselling did not help the situation, to possibly look at termination.

ASSEMBLYMAN LESNIAK: They do not?

MR. BURRELL: Well, I am not in a position to answer that right now because it is a recent piece that has been put into our service station lease.

One other question that came up earlier - you indicated that you did not know how many tanks were in service in gasoline service stations. It is a requirement under vapor recovery that everybody register to obtain a vapor recovery permit. As part of that registration requirement, you must list the size of your tanks and how many you have.

ASSEMBLYMAN LESNIAK: Who registers with whom?

MR. PAPP: The DEP, Division of Air Pollution Control.

ASSEMBLYMAN MARSELLA: What year was that?

MR. BURRELL: In 1976, the first 14 counties in the State required vapor recovery and, just recently, the other seven counties have required it.

ASSEMBLYMAN MARSELLA: That was for all storage tanks of what capacity?

MR. BURRELL: Two thousand gallons or greater.

ASSEMBLYMAN LESNIAK: Which would include all gasoline stations.

MR. BURRELL: Yes.

ASSEMBLYMAN MARSELLA: And private. Isn't that true.

MR. BURRELL: That's correct.

ASSEMBLYMAN LESNIAK: Oliver, your suggestion was to require testing only in cases where the inventory control system indicates. Of course, we already know that the inventory control system may or may not be successful, depending on the enforcement actions and the degree of counselling of the gas station operator. Assuming that an inventory control system could be established where we could have good controls - assuming that - don't you think --- Let me ask you this question first: Do we know the "birthdays" of these tanks? Do we have a good idea.

MR. SCHWINDINGER: I would say in most cases we have a pretty good fix on when the tanks were installed.

ASSEMBLYMAN LESNIAK: At least in terms of the major oil companies - okay. Would you not think after a certain number of years that testing should be required regardless of any inventory system?

of a tank leaking at any particular location. Based on this, when we get a high probability, we go in for a tank tightness test to determine whether it is leaking. In conjunction with our retail representative's inventory control, it gives us a couple of good tools to work with. We are spending well over \$100 million nationwide on this program and we have come up with some very good results. When it turns out that the tank is leaking, it is then we determine whether we will take out all the tanks and replace them with fiberglass or, at that point, whether we would go in and epoxy-line the tanks. It would be an economic decision.

ASSEMBLYMAN LESNIAK: Do you have any idea how many other companies are doing this?

MR. SCHWINDINGER: No. I do believe there are a couple of similar programs in the industry. But I am not really aware of who has the exact same program. I think this initially took place in Canada a couple of years ago. I don't know what company started this program. But it was a Canadian experiment two years ago.

ASSEMBLYMAN LESNIAK: If your company is doing it, don't you think all companies should be doing it?

MR. SCHWINDINGER: Well, yes, something similar.

MR. BURRELL: Exxon also has a program similar to that. For a point of information, just in fiberglass tanks alone here in the State, we have probably spent over the last 6 to 7 years in excess of \$30 million just replacing storage with fiberglass. We also have a program to take steel tanks and cathodically protect them. We spent a lot of money on that as well.

ASSEMBLYMAN LESNIAK: Can you give us the benefit of those programs in a document form, in terms of what the policy of the company is, either of you?

MR. SCHWINDINGER: You mean the number of tanks that have been ---

ASSEMBLYMAN LESNIAK: No, no. What the policy of the company is? In other words, what you do in terms of soil analysis and at what point it is your determination that they should be replaced. You must have a company policy. I think that would be very helpful to the Committee. If something is being done by one company that is beneficial in terms of preventing or minimizing leaks, there is no reason why that should not be applied universally, not only in terms of health protection but in terms of economics. Why should one company be doing it and not others if it should be done.

MR. SCHWINDINGER: I believe I can come up with something.

MR. PAPPS: I think virtually every company has a program going. Certainly, first hand, I know Shell has and Arco. I think they are all involved in it. The variations I can't tell you about. But, certainly, A.P.I. has some recommended practices for installation, inventory control and a number of other documents which I would be happy to get to the Committee.

ASSEMBLYMAN LESNIAK: I feel it is very important for us in developing legislation.

MR. PAPPS: I was stressing mandatory inventory control, not voluntary.

ASSEMBLYMAN LESNIAK: I understand that. It is even hard for us as a government where we have the penal enforcement aspect of it. We can write the toughest laws, but it is how they are implemented and how they are enforced that determines whether they are any good and having any effect.

The point I was trying to make is that inventory control is not enough. And if we can through other methods get a good handle on what needs to be replaced and what needs to be tested, it ought to be done also.

MR. PAPPS: There is an enforcement arm already through the Division of

ASSEMBLYMAN LESNIAK: Do you own all the tanks in the stations that you distribute oil to?

MR. SCHWINDINGER: We have about 50 stations, plus or minus, in the State of New Jersey - tanks that we own. We have an additional number of two-party accounts where the dealer owns his own station and his own tanks. I would say we probably have half of the stations in New Jersey where we do own the tanks.

ASSEMBLYMAN LESNIAK: Is Arnold Schiffman still here? Who is here from the department.

MR. GIARDINA: I am still here.

ASSEMBLYMAN LESNIAK: Paul, are you familiar with the programs that Exxon and Chevron have in terms of inspection and replacement?

MR. GIARDINA: I am more familiar with the Exxon program because of recent experiences in discussing it with their personnel.

ASSEMBLYMAN LESNIAK: How would you gauge the effectiveness of the program in terms of controlling leaks?

MR. GIARDINA: It is hard to gauge because I haven't gotten that much detail from Exxon, itself, in what they are doing. All I can do is look at statistics that they provide.

ASSEMBLYMAN LESNIAK: What do those statistics show?

MR. GIARDINA: I would say 25 percent of the problems we have listed in the first five pages of gasoline stations are Exxon.

ASSEMBLYMAN LESNIAK: That is 25 percent. That is the statistical data that you provided showing the amount of leaks from 1978 through February of '82?

MR. GIARDINA: It is the underground tank leaks contained on the first 6 or 7 pages. You just go through and count them. Approximately 40 are Exxon's. Maybe 150 to 200 are there overall. Now, maybe the program hasn't taken effect yet or maybe Exxon owns 25 percent of the gas stations in New Jersey.

ASSEMBLYMAN LESNIAK: That's all. Thank you. We would appreciate very much if you would submit the documents that we asked for and the programs. It would be our intent to implement a program statewide. We do want to mandate some action in this regard. It is quite obvious that even if action is taken, it certainly is not the entire answer to the problem. And, at the very least, we should have it done by everyone, not just on a company-by-company basis.

MR. PAPPS: Thank you very much.

ASSEMBLYMAN LESNIAK: I would like to call Jerry Ferrara, the Executive Director of the New Jersey Gasoline Retailers Association.

J E R R Y F E R R A R A: You now have the man at the bottom of the totem pole after listening to the previous speakers.

My name is Jerry Ferrara. I represent 3,000 members of the New Jersey Gasoline Retailers Association, of which there are approximately 4800 service stations in New Jersey.

I appreciate the purpose of this hearing, that you are listening before you start to make laws. And, hopefully, you will listen as to where the impact could come, whether it is on the small dealer or on those who probably could afford it.

Rather than bounce all around, I think the question you are talking about is: How do we control leaks?

Let's get to the first issue, inventory control. Gentlemen, inventory control in our industry to the small businessman is more important now than it ever was before and not because of worry about contamination of the water supply or somebody's cellar. It is important to us because of the cost of gasoline. Gasoline is no more 20 cents a gallon. We pay well over a dollar a gallon for a gallon of gasoline. And any gallon

ASSEMBLYMAN LESNIAK: But if the responsibility were on the supplier and the supplier had to pump out any excess gasoline that the station owner couldn't afford, then that wouldn't be a problem.

MR. FERRARA: We have tried to work that out. Sometimes we do.

ASSEMBLYMAN LESNIAK: I would think that if it is necessary, we could do something like that.

MR. FERRARA: Now, the issue of steel tanks versus fiberglass - I don't think if you barred steel tanks, you would solve the problem. Steel tanks have been in the ground for many, many years. It depends on what area you are in. You do see through the news media leaks. But you must remember, fiberglass tanks weren't really in existence when the steel tanks were put in. So what you are seeing now is steel tanks leaking. When fiberglass first came in several years back, they had a problem when we measured the gas of having the stick put a hole through it. The industry is evolving and making things better. There are steel tanks now that are treated and they will give you a guarantee of 15 years or better.

ASSEMBLYMAN LESNIAK: There aren't any guarantees on the tanks that are in the ground now and were installed years ago, are there?

MR. FERRARA: Oh, no.

ASSEMBLYMAN LESNIAK: I am talking in terms of economics for whoever sold them. Certainly, there is no 15-year warranty?

MR. FERRARA: No. I don't think they give you a 15-year warranty today either. They may give you a 1-year warranty. What I wanted to relate to the Committee here is: don't blame all the leaks on steel because that is all we had. And the proper steel tanks can serve the purpose. Why I am concerned is, if you just barred steel tanks, it would have an economic effect on my dealers. Many of the companies now are using in some instances - and I don't use the phrase loosely --- using the excuse of possible leaking tanks to close down stations. One major company decided that they were going to get out of what stations they felt were uneconomic, and that usually is the small neighborhood dealer who may be doing 15,000, 25,000 or 30,000 gallons.

To illustrate to you so you understand that it wasn't the tanks, I will give you three illustrations. One, the company owned the entire property. The dealer who was there was third generation. This was in South Jersey. They said they were going to close down the station or he could buy it. But if he bought it, they were going to pull out the tanks because they did not want the responsibility for the tanks. That could be a justified reason if that were the sole reason. If they pulled out the tanks, they effectively wiped out the station because he would have to expend, if he put steel in, maybe anywhere from \$20 to \$30 thousand. If he put fiberglass in under the current regulations, putting peat gravel, sand, etc. in, it could go as high as \$50 or \$60 thousand.

So we leave him and go to another station where a dealer owned his own property and was 50 years with a particular company and they wanted to pull his tanks out. The life spans of those tanks were different. I traced this all the way up north. We started in Cape May. We went to Burlington County. Then we got into Hudson County. A dealer owned his property, owned the tanks and pumps, and they wanted to pull out of there. The reason was: it is uneconomical. Of course, this has nothing to do with this hearing. My argument, of course, is: Is it uneconomical to deliver one truckload of gasoline to you who may use one or two a month, or to someone else who uses one a day? It is still a truckload.

I am very conscious of the fact that if you make these regulations and decide that fiberglass tanks may be the only thing, you are talking a double investment for my individual, truly independent dealer, who may be forced to buy his tanks.

he wasn't.

The other one, the company has made pretty much good. That was in the papers. They have spent approximately \$400,000.

ASSEMBLYMAN LESNIAK: Are you talking about Rockaway?

MR. FERRARA: Rockaway. That one was a puzzle to us. We know the dealer concern and we really would like to find the answer to that one. Was it a quick sudden leak and, because of the water table, did it react that way? His records are pretty good. I am talking from my side of the deal. He is not going to lie to me because he is going to expect me to teach him how to cheat if he is going to get caught. He finds, much to his dismay, of course, that is not my policy. If we have a leak, we have got a leak. That one is a real puzzle. But those are the ones that possibly are one of the reasons for this hearing.

So, I almost beg you, don't put a set of rules in that wipe out that little guy. We are willing to go along with it.

ASSEMBLYMAN LESNIAK: We have no intention of doing that.

MR. FERRARA: I don't think so. But I just would like to reiterate that.

ASSEMBLYMAN PANKOK: Are there any fire codes in New Jersey that would require gas stations in New Jersey to keep accurate inventories as in some of the other states?

MR. FERRARA: No.

ASSEMBLYMAN PANKOK: In some of the other states, they are very strict as far as fire codes are concerned, keeping the inventory?

ASSEMBLYMAN LESNIAK: The inventory controls are on a company-by-company basis. We do not have State or local regulations for that?

MR. FERRARA: OSHA requires it. The State requires you keep a record of purchases for two years. That is the Motor Fuels Act. I brought it with me. The Motor Fuels Tax Act requires that we keep --- I can give you the section.

ASSEMBLYMAN LESNIAK: Sales.

MR. FERRARA: The Motor Fuels Tax Act.

ASSEMBLYMAN PANKOK: This is one of the things that really needs to be written into our legislation: a strict inventory record.

MR. FERRARA: Come to think of it, you can amend this section. It might do the trick. Let me see where I am now. 54:39-33 Records Kept. "Every wholesale dealer and retail dealer purchasing fuels taxable under this Act shall maintain and keep for a period of two years a record of fuels received and sold, the amount of tax paid to the distributor as part of the purchase price together with delivery tickets, invoices and bills of lading, and such other records as the Director may require."

ASSEMBLYMAN LESNIAK: So it shows a thousand gallons purchased and a thousand gallons sold.

MR. FERRARA: This could be amended to probably cover part of the mandatory daily inventory - the stickings. This is just to check whether somebody is paying their taxes or not. I thought we had inventory control in here. But you could probably put it right in here.

ASSEMBLYMAN SMITH: Mr. Chairman, that might be a suggestion because what you would have would be another part to that form. You are already filling out this one. Let's not give them another form to fill out. Let's put a part in this form that requires that they give this to somebody as close as possible to the operator at the municipal level to keep an eye on this type of thing. I think that is a possibility.

ASSEMBLYMAN PANKOK: It looks like the inventory is really necessary.

MR. FERRARA: To give you an idea how we do inventories - I think they tried to explain it - let's start today. I take over this station and I am opening. I stick my tanks with a stick that measures inches. I take as close an accurate reading with quarter inches as I can and translate it into gallons. I enter that on my daily sheet: unleaded, regular, premium - x number of inches, so much gasoline. At the end of the day, I have sold gasoline at my pumps and I take the readings off my pumps which are both money and gallons. I take the number of gallons sold, subtract it from the opening inventory, and then I go stick my tanks again. When I stick my tanks again, the gas that has gone out of the ground has to be the same amount that was sold through the meters. I enter the new stickings onto my sheet. If a fellow doesn't stick it every day, even if he does it every two or three days, unless there is a sudden leak, he will still discover it. A few tanks may have a problem that you can't do it every day. If a tank has tilted in such a fashion and the measuring hole is over here and he hasn't got one over there, then he has a problem. It takes a little art to strike an average. Sometimes you get in the middle. If he has two measuring sticks, then he measures here, measures there and splits the difference. But you can tell within a day or two at the most whether there is a leak. If it is a sudden leak, you can tell right away.

ASSEMBLYMAN LESNIAK: If I walked into any gas station in the State of New Jersey and said, "Let me see your inventory records," - that is, if I had the authority ---

MR. FERRARA: I was just going to qualify that.

ASSEMBLYMAN LESNIAK: --- and they consented to it, what would I see? Would I see that or would I not see it?

MR. FERRARA: Yes. He would either have it on a daily sheet or in a separate book, which is the way some fellows do it. I advise keeping it on a daily sheet. You would see that.

ASSEMBLYMAN LESNIAK: Are you saying that just about every station owner does this?

MR. FERRARA: A good percentage. I am not going to sit here and tell you that 90 percent do, but a good percentage do. Again, using as my criterion the other day, of 75 to 80 dealers, 2 weren't. I didn't ask, "What do you mean, you don't keep any at all?" I didn't even get into it. I didn't want to embarrass them.

ASSEMBLYMAN LESNIAK: And if they don't, there is no penalty?

MR. FERRARA: There is no penalty. OSHA could put a penalty on. And the companies have an added reason for checking dealers too, particularly today. If somebody wants to co-mingle gasoline, which is not a big issue - but that is another way of checking if he is co-mingling gasoline. That is why the company drivers take meter readings off the pumps. Every once in awhile, the company will have their drivers take the meter readings off the pumps so they have a back-door way of checking if everything is kosher, so to speak.

ASSEMBLYMAN LESNIAK: But if there were penalties, that would be an added inducement to that person who just doesn't care.

MR. FERRARA: Yes, and again, when we come to penalties, let's make the penalties within reason. There is a difference whether we want to educate or be punitive. If you want to educate, you can slap a fellow's wrist. Even \$25 is enough to take them up. But if you try to be punitive, then you get resentment. And I think that is pretty unfair. We have enough punitive measures on the little guy at the end of that nozzle. We can't do anything. We have to collect waste oil and EPA says, "You are a toxic waste collector." Then we don't want to collect waste oil. Meanwhile, the Energy Department says, "You have got to." My new bulletin going out this month

already kept by the retailer or those that Mr. Ferrara was talking about.

ASSEMBLYMAN LESNIAK: We will have to ask the department for that. I would ask DEP to give us an idea as to what the parameters are for that notice because I certainly agree with that notice provision.

MS. AYRES: All right. The notice requirement - if there are discrepancies, this would trigger immediate pumping out of the tank unless an accounting error could be shown.

ASSEMBLYMAN LESNIAK: Or a testing error.

MS. AYRES: Or a testing error. I would say that there should be a submission of a remedial plan. I am not sure I agree ---

ASSEMBLYMAN LESNIAK: A remedial plan if it is determined it is because of leaking?

MS. AYRES: Yes, because of leaking.

I am not sure that legislation should dictate, for example, replacement with fiberglass as opposed to repair with steel and that sort of thing. I think in light of changing technology that should be the DEP's authority to determine in the course of approval whatever remedial action is necessary.

ASSEMBLYMAN LESNIAK: But you would agree that DEP should have the authority to establish design standards and installation standards.

MS. AYRES: There are certain design standards, yes. But I think when you get to a problem of a leak ---

ASSEMBLYMAN LESNIAK: Performance standards. I don't think anyone on this Committee would want by legislation to get into those types of standards.

ASSEMBLYMAN SMITH: Mr. Chairman, aren't those standards, in fact, in place now?

ASSEMBLYMAN LESNIAK: Not to my knowledge.

ASSEMBLYMAN SMITH: I think they are. Installation standards and the like are ---

ASSEMBLYMAN LESNIAK: You mean locally?

ASSEMBLYMAN SMITH: Yes, and OSHA. They are in there now. If you have a hazardous material you are putting in the ground or on top of the ground, or whatever, there are certain groundings and the like that must be done, for instance, explosion proof in electrifying your pumps, etc. All these things have to be met by the codes. So I think there are some standards there now in place, as far as the installation goes and types of materials and the thickness of the wall, and, for instance, the coating of the tank on the outside to prevent corrosion.

ASSEMBLYMAN LESNIAK: I don't know what those standards are.

MR. NORMAN MILLER: Most of this is covered in some of the materials in your packets, such as the corrosion control things.

ASSEMBLYMAN LESNIAK: If they are adequate, that is fine.

MS. AYRES: I haven't looked at it, but I just received in the mail the Nassau County local ordinance.

ASSEMBLYMAN LESNIAK: You have received it? We haven't. Can you give us a copy.

MR. MILLER: You have more influence than we do.

MS. AYRES: I believe they refer to some national fire prevention standards.

ASSEMBLYMAN LESNIAK: Can you give us a copy of that?

MS. AYRES: Yes, I can.

A third or a second part of the plan deals with prospective action; and that is, there might be notice to DEP upon installation of such a tank, including location,

MR. HAVILAND: The jobbers, yes.

ASSEMBLYMAN LESNIAK: Do you own any of the tanks? Do the jobbers own the tanks?

MR. HAVILAND: Oh, yes, in several cases - in most cases.

ASSEMBLYMAN LESNIAK: In most cases.

MR. HAVILAND: We are very much aware of the problem of possible leaks in underground tanks and their consequences. I do not wish to discuss the difference between steel and fiberglass tanks. The economic decision is for the supplier to decide. The permissiveness of the decision still rests with some municipalities, despite the fact that the equipment installers labor under the BOCA and OSHA Codes.

That there is a severe problem was recently pointed out by an American Petroleum Institute study. They made a study of 1,717 tanks that had failed. Gauge sticks punctured almost one-third of all the fiberglass tanks found leaking. Eighty percent of all leaking steel tanks had fill drop tubes and 29.2 percent of these had a leak directly beneath the mandated drop tubes. Fortunately, newer tanks have been modified to correct these conditions.

Along these same lines, I am starting next week with our members a survey to determine the number of tanks which they have underground, the size and the age of the tanks. This is part of an ongoing study which is being conducted by the National Oil Jobbers Council out of Washington.

Replacement of tanks, in our opinion, should be on a phased-in basis as the need becomes evident. Independent marketers do not have the financial strength that the major companies do. And a hastily conceived mandated program for replacement could well cure the disease but kill the patient. We urge caution in formulating a future program.

We strongly support the daily sticking of tanks by dealer operators, checking for both gasoline and water levels, which can indicate underground leaks, such records to be maintained for inspection by local authorities.

Presently oil company attorneys are recommending that dealer leases and/or product supply agreements should insist that dealers comply with all federal, state and local environmental laws, that they should take daily stick readings, take daily pump readings, and periodically furnish these readings to their supplier; that they should have the supplier held harmless in any suits in case there is a leak in the tank. We are supportive of this philosophy.

In regard to the last part regarding liability, as a point of information, on January 1, a combine of 39 insurance companies, including Prudential and Etna, have formed a new Chicago-based organization called Pollution Liability Insurance Association. The purpose of the Association is to provide insurance for damages stemming from underground gradual leakers. They have explosion insurance, fire insurance, and everything else. But to my knowledge, this is the first time a policy will become available to guard against slow leakers. The policy is not yet formalized nor have premiums been established - I talked to a local agent yesterday - but it is in the works.

I would like to quote from this recommended practice for bulk liquid stock control at retail outlets. It says: Any merchandising operation in which a commodity is handled in bulk is susceptible to stock or inventory losses. This problem becomes even more critical at retail outlets selling motor fuels since the principal commodity handled is volatile. Thus special care must be exercised to hold product losses to a minimum so as to provide a safe environment for the operator, employees, customers, and neighbors, and to minimize air and water pollution and to maximize profit. The negative effect of product losses on profits needs no explanation. However, the

they invited us to attempt to help them solve a problem, that of leaking underground storage tanks. Since that time and up until day, there are well over 40,000 fiber-glass, reinforced, plastic tanks in service for the major oil companies. Most of them, as you heard earlier today, have some programs that involve replacing or trying to prevent underground leaking storage tanks.

I sent to Mr. Miller some information that I hope you have had an opportunity to look at. Some of it may be redundant, but let me just cover the items: Number one, I sent a copy of the NFPA Code. It is the 1982 issue. It includes most of the things you have been talking about this morning. For example, it does include the daily inventory control, and that has been a part of NFPA 30 Code for several years now. It also addresses the subject of how you solve corrosion-caused leaking underground storage tanks. It is like this and you have one in your hand. If I may, I would just read the first part because earlier today I think there was a question about how you determine whether the soil is corrosive, and then what do you do to solve this problem. Prior to the issuance of a permit, the owner comes to the Fire Marshal in this case. It has nothing to do at this point with the water quality people. But, as it reads, "Unless tests show that soil resistivity is 10,000 ohms centimeters or more and there are no other corrosive conditions, tanks and their piping shall be protected by. . ." Then it gives you a choice. You can either use cathodically protected steel tanks or you can use tanks made of corrosion-resistant materials of construction. So it gives the owner an option of using one of several products to solve the problem.

ASSEMBLYMAN LESNIAK: Do you know whether this is in New Jersey's BOCA Code at the present time?

MR. NESHOFF: That is a point I want to make. This is already, in my view, a law in New Jersey because New Jersey, it is my understanding, uses the BOCA Code. BOCA references the current issue of NFPA 30, which is 1982.

ASSEMBLYMAN LESNIAK: Each BOCA Code in the State is different. They are not all exactly alike.

MR. NESHOFF: The Building Officials' Code Administrators is a model code.

ASSEMBLYMAN LESNIAK: I know. But is it adopted en masse, 100 percent? Most model codes are adopted ---

ASSEMBLYMAN SMITH: Are you saying across the nation?

ASSEMBLYMAN LESNIAK: No. In the State of New Jersey, we have adopted exactly what the model reads?

ASSEMBLYMAN SMITH: Yes.

ASSEMBLYMAN LESNIAK: That is unusual.

ASSEMBLYMAN SMITH: That is the reason for my interjection. The purpose of the Uniform Construction Code in the State of New Jersey is just that. We are going to have a uniform code and it is going to be the BOCA Code. And any updates that come through on it will be automatically put in place.

ASSEMBLYMAN LESNIAK: I understand that. But we have many uniform codes throughout the nation.

ASSEMBLYMAN SMITH: All right. But in New Jersey, we used to adopt the State code if we wanted that code or we would write our own in the municipality years ago. Now, today, the BOCA Code is the uniform code throughout the State of New Jersey. No matter where you go, what municipality, it is the BOCA Code that is being enforced by the Subcode Official.

ASSEMBLYMAN LESNIAK: But that BOCA Code is the nationwide standard that you are quoting from.

ASSEMBLYMAN SMITH: That's right.

a 6- or 7-page document which they offer as something a community, a city or a state could use if they were interested in developing some legislation to help fight the problem of underground leakers. The Commonwealth of Massachusetts adopted this API recommended standard sometime last year. They use that; and, in effect, it says exactly the same thing as NFPA 30. It says, hey, if it's corrosive, do something about it. Here are the things you can do, and they give the choice again of various materials to be used, and it also includes the requirement for daily inventory control.

ASSEMBLYMAN LESNIAK: This prospective - you are talking about installation - this doesn't deal with tanks already in the ground.

MR. NESHOFF: Well, let's see, they term it, "the requirements of the protection and prevention of." But it is primarily having to do with new installations, other than the inventory control, which would have to deal with the existing tankage.

Also, there was mention made of OSHA. The OSHA Code for the most part is a duplicate of NFPA 30 and they have included this requirement for daily inventory control now for several years.

Earlier this morning when the gentleman from DEP was on the stand, I wanted to mention that EPA has made a study. You were all talking about there perhaps being an opportunity for some studies we could look at. EPA a couple of years ago put together a study. There were two booklets. One was entitled, "A Guidance Document for Preventing Underground Leakers," and a companion booklet called, "Methods of Preventing Underground Leaks." I didn't bring those with me today, but I would be glad to furnish those to your Committee so you can see what kind of work the EPA did. They come up with essentially the same thing. It is kind of interesting. Everybody is coming up with essentially the same answer and that is, hey, if there is a corrosive condition, recognize it, do something about it, and here are the choices - there are three or four flavors - as to how you combat the problem.

ASSEMBLYMAN LESNIAK: We would appreciate it if you supply us with that.

MR. NESHOFF: I will be glad to.

At any rate, it appears to me - and everybody is smarter from a long distance and I came here from Toledo, Ohio ---

ASSEMBLYMAN LESNIAK: Welcome to New Jersey.

MR. NESHOFF: It is a pleasure to be here. It is snowing back in Toledo.

It seems to me that you have at least four choices, three of which you could implement almost immediately. One is probably in force even as we sit here; that is the BOCA Code. It is here today. Whether or not it is enforced, or course, is the question. You can write legislation, whether anybody reads it or not or anybody enforces it is another question. The BOCA Code is the law of New Jersey and, it is my understanding, all the communities are required to follow the BOCA Code, which means that NFPA 30 is alive and well and this is what is required. So the local Fire Marshal, before he issues a permit, says, "Hey, ---"

ASSEMBLYMAN LESNIAK: If I may, I would like to ask a question of a member of the Committee because he is much more familiar with this area than I am. Elliott, what would be your reaction to that?

ASSEMBLYMAN SMITH: I think he is absolutely correct on new installations. On old installations that are in place, I think it must be a system of inventory control with a reporting to that sub-code official.

ASSEMBLYMAN LESNIAK: But in terms of new installations, do you have any feeling about whether the Code is being enforced?

ASSEMBLYMAN SMITH: I know in the municipality in which I reside, it is. I assume by now everybody has their sub-code officials in place. I think DCA

electric company and the water company and the gas company have piping that runs underground. When they treat these pipes and cables and what have you, they frequently cathodically protect them. They have cathodic protection committees in communities to make sure it doesn't cause a problem with someone else's system. So there are people available to do this. It is more than just sticking a meter in the ground and reading a number. It has to do with the water table and stray electrical currents and things like that. So someone should be qualified to do it and I believe they say "qualified." Yes, they say selection of the type of protection to be employed should be based on the corrosion history of the area in the judgment of a qualified engineer. They try to cover that base in the NFPA 30. The committee of NFPA 30 is made up of a wide cross-section of the industry: the insurance, the fire service, the oil industry, and the equipment people, etc. So everybody had a chance to bang on this pretty hard and they came out with a document that they are all reasonably in agreement with.

ASSEMBLYMAN SMITH: On your technology, as far as the reinforcement of fiberglass tanks was concerned, initially I guess you have some problems with sheer weight of the tank, the material of the tank causing splits, punctures and the like. Have you overcome that pretty well now? I assume you have because you have had some experience in the field and have some tanks in the ground.

MR. NESHOFF: Like any other new product, the first year or two, we had our headaches because it was a different material and the people who put the tanks in weren't familiar with it. So we spent a good bit of time explaining: This is a fiberglass tank and here is how it is installed.

ASSEMBLYMAN SMITH: Select fill, I imagine, is very important.

MR. NESHOFF: Foundation support is critical to the performance of the tank. On the other hand, the installation instructions for re-enforced plastic tanks are very much the same as that for a steel tank. They all deserve to be installed properly and deserve foundation support. The API survey found and the API bulletin states that the backfill is very critical to the performance. The placement of it should be observed by a representative of the owner.

ASSEMBLYMAN LESNIAK: Thank you very much. And, as soon as possible, we would like to receive those EPA reports.

MR. NESHOFF: Fine. I will be glad to supply them.

ASSEMBLYMAN LESNIAK: John Ainlay, Technical Consultant, Steel Tank Institute.

J O H N A. A I N L A Y: I am a consultant to the Steel Tank Institute. However, I would like to give you a little of my background so that you will understand why I am interested in the subject.

My first job out of school was as a gasoline chemist for the State of Nebraska. Then, in 1944, I become an employee of the American Petroleum Institute. I served 29 years with the American Petroleum Institute. During that time, I become probably the first guy in the whole country to become really interested in underground leaks. Back 25 years ago, you couldn't find anybody that knew a thing about leaks. They were rare. But from a public relations standpoint, here is a leak out in some town and it is the first time they ever experienced one. They didn't know what to do about it. They didn't know where it was coming from. I would just from a public relations standpoint for the oil industry volunteer to go and help. I became acquainted with the language of the fire departments and so forth. The first thing I knew I was making demonstrations on flammable liquid fires. I began to put on fire schools. And I have probably actually trained more firemen on gasoline fires than any man in the United States. Today, since I retired, I made two movies on gasoline fires. On one, I was

MR. AINLAY: Yes, sir.

ASSEMBLYMAN LESNIAK: So when we talk about corrosive resistance, we are not just talking about fiberglass. We could be talking about steel.

MR. AINLAY: That is right. In fact, here is the NFPA Code 30 that you know about. That was another qualification I forgot to tell you about. I am a member of the NFPA Committee on this pamphlet. There is another NFPA book called 329, which is specifically underground leaks. I am also on that committee. We had a meeting just two weeks ago about bringing that bulletin up to date.

ASSEMBLYMAN LESNIAK: When do you expect that will occur?

MR. AINLAY: The 329?

ASSEMBLYMAN LESNIAK: Yes.

MR. AINLAY: Unfortunately, it takes quite a little while. It has been adopted by the committee. But the regulations of NFPA are that once they draft what we have put together, then it has to be sent out ---

ASSEMBLYMAN LESNIAK: Could you submit to this Committee a copy of the draft or is that confidential information?

MR. AINLAY: I think you would have to get that directly from the NFPA. They are in Boston as you know. If you want their address, it is: National Fire Protection Association, Inc., Battery March Park, Quincy, Massachusetts, 02269. I doubt if they would let it out right at this minute because it has not been sent out to the committee for corrections yet. But once it is approved by the committee after it has been sent out, then it still has to be approved by the entire NFPA and that may take a year.

You have already heard that either corrosion-proof or cathodically protected tanks are permissible in soil that has a soil resistivity of less than 10,000 ohms. This is in NFPA also and I got their wording from the book over there. There is another interesting thing on page 18 of this pamphlet. They tell you again about these two methods. But they have added another paragraph on this that says, "Steel Tank Institute Standard STIP3: Specifications for STIP system of corrosion protection of underground steel storage tanks are approved." In other words, they automatically will approve this STI tank and that is the only tank in the whole code that is mentioned by name. This is the only one that they approve by name.

ASSEMBLYMAN LESNIAK: The old steel tanks without these protections, regardless of the soil - if a tank has been in the ground 20 years, what would you say off-hand the chances are of it leaking?

MR. AINLAY: That reminds me of something I wanted to say anyhow. There is a lot of exciting things happening. When I first started working on these things ---

ASSEMBLYMAN LESNIAK: When you open up a faucet and gasoline comes out, that is very exciting. Is that what you are talking about?

MR. AINLAY: --- I couldn't get people even in the oil industry to get concerned about leaks. Gasoline was cheap. They would maybe go out and replace a tank and whatever was in the ground stayed in the ground or they moved someplace else. I preached over and over and over --- Now that has changed. Every company today has specialists on underground leaks. If their company has the slightest suspicion of having a problem, they are there because there is liability involved here now. There is cost of product. So this is rather exciting.

Now, there isn't any company where there isn't a specialist on underground leaks. They didn't used to have them. But one of the things I think is interesting is that the American Petroleum Institute two or three years ago made a survey. They asked each one of the major companies - this is only people who kept records --- they asked each major company to go back four years and report to the American Petroleum

leak. That is what we have got here. I think what I am trying to drive at is that just because it is steel doesn't mean that it is not going to do the job for you.

There are 12,000 of these tanks in the ground today in the United States. There are about 20,000 similar tanks in Canada. They are not called P-3's. We know where every one of these tanks is because we warrantied against leaking.

ASSEMBLYMAN LESNIAK: How long is your warranty?

MR. AINLAY: It is a 20-year warranty. The tank was designed originally --- when the engineers first started out, they said, let's build one that we can guarantee for 30 years. We can monitor this tank. If you are asking for a tank test, we can monitor and tell you whether the anodes are still functioning. And as long as the anodes are functioning in that tank, it will not corrode. This is the gadget we use for testing (indicating). This is called a copper-copper half-cell volt meter. You can do it in three minutes time. On the end of the tanks when you install them, if they ask for it, we will put this protection-prover on it. If they don't ask for it, you have to use a little different method of testing. You have to be able to contact the tank. So if you hook this terminal to the protection-prover, take this off and touch it to the ground - you can touch it to pavement or asphalt if it is wet - read the voltage on here, then the Bureau of Standards says that if that reads more than a negative .85, the steel is not corroded. If it reads less than .85, then you have problems.

We can monitor this and it doesn't take three minutes with one of these instruments.

As I said, we insure them. We know where every one of those tanks is. There are 12,000 of them in the ground here. We haven't had one leak. We haven't had to pay off on any one leak. I am just emphasizing this to let you know ---

ASSEMBLYMAN LESNIAK: We get the point.

MR. AINLAY: --- that practically every place where there is any code, they recognize this as a corrosion-proof tank.

ASSEMBLYMAN SMITH: How does that tank compare in price with a fiberglass one?

MR. AINLAY: I don't know anything about prices. I am not an authority on prices. The Steel Tank Institute meticulously stays away from that. We have 50 places in the United States manufacturing that. My job right now mainly with them is to inspect. I drop into these plants. If they have any P-3's, I inspect them. I check the coatings. I check the bushings. I check the anodes and all their construction to see if they meet our specifications.

ASSEMBLYMAN SMITH: I have one other question. It has always been my impression that you should have everything electrically continuous in an installation. You are talking about putting bushings in the outlet. What does that do in terms of ---

MR. AINLAY: One of the purposes of the bushing - if you had a bare tank in the ground and if you put enough anodes on it, you could protect it. But the anodes would work so hard that they wouldn't last very long. They would get eaten up. By putting a very dielectric type coating on the tank, you cut down the use of those anodes to a great extent. However, if you have a direct connection of your piping system through the pump and electric system out here, that anode could be used up very rapidly. So we put those bushings in there to stop that.

ASSEMBLYMAN SMITH: Your grounding then would be ---

MR. AINLAY: We don't ground that tank at all.

ASSEMBLYMAN SMITH: (Continuing) --- specifically on the system. The system would be grounded, but the tank would not be grounded.

MR. AINLAY: The tank is not grounded. That is correct.

There is one more advantage that we have on this. The piping system has

ASSEMBLYMAN LESNIAK: Thank you for you input.

Gregory Cirangle with the Mallory Components Group is next.

G R E G O R Y E. C I R A N G L E: Hopefully, I will be able to address the problem of what to do with the tanks that are presently installed in the ground a little more than some of the other gentlemen who have spoken today.

There are approximately 175,000 gas stations, 48,000 industrial sites, 30,000 truck terminals in the U. S. They have a common problem of potential leaks of gasoline and other hazardous materials.

ASSEMBLYMAN LESNIAK: By the way, do you have a copy of your testimony?

MR. CIRCANGLE: This is in a real rough draft.

ASSEMBLYMAN LESNIAK: Which means we have to pay attention.

MR. CIRCANGLE: Why don't I do this. We have heard many of the horror stories today of major gasoline spills gone undetected that have migrated along a water table into someone's basement and there is a subsequent fire or the destruction of the value of the property. These are the types of criteria which have led to the establishment of sophisticated products developed by my company.

It is, of course, not my purpose or function to be a salesman today. But I do feel it is important to recognize that present-day technologies, combined with an ever-increasing knowledge of what happens during underground spills, have made products such as ours available, and available in a most economic and practical manner.

ASSEMBLYMAN LESNIAK: What products are they that you are talking about?

MR. CIRCANGLE: We are talking about an electronic monitoring system to be installed around tanks that are presently in the ground that will provide a 24-hour monitoring system. It will detect any hydrocarbons that are leaked from the tank electronically within two to five minutes of contact with the probe.

ASSEMBLYMAN LESNIAK: Is that permanently installed?

MR. CIRCANGLE: Yes, it is permanently installed. It offers protection on a 24-hour basis, 7 days a week. It is not contingent upon inventory controls. It is not contingent upon human error. It is self-monitoring. If the system were to be inadvertently taken out of service, the device will tell you that also. It will not only detect hydrocarbons leaks, but it will also monitor itself to make sure it is in a constant operating mode.

ASSEMBLYMAN LESNIAK: What is the cost?

MR. CIRCANGLE: The cost is between \$1450 --- the average service station, I would have to say, would cost about \$3100 in equipment cost.

ASSEMBLYMAN LESNIAK: Per tank?

MR. CIRCANGLE: No, per service station. Installation costs vary from site to site, depending on whether you are retrofitting or whether you are putting it in with a new installation. But I would say installation costs could run upwards to \$2000. A total system would run between \$5 and \$6 thousand installed. That is a ball-park figure.

ASSEMBLYMAN LESNIAK: How many of your systems are in place?

MR. CIRCANGLE: We have placed over 55 systems with major oils - Exxon, Mobil, Shell, Texaco. We have placed several systems on a national basis with IBM and in several manufacturing locations around the country.

In New Jersey, unfortunately, there is only one installation to date. In Upper New York State, Westchester County, we have done two towns on a complete basis. Every service station in the town of East Chester and New Windsor, New York, has an electronic monitoring equipment. This has come about because of leaks that have developed in that area. If I might, I would like to go on.

ASSEMBLYMAN LESNIAK: I am very interested.

MR. CIRANGLE: I have some technical brochures with me today. Any additional information that may be necessary - I can make myself available or a company representative will be more than glad to work with you.

ASSEMBLYMAN LESNIAK: Very interesting.

MR. CIRANGLE: Is that it?

ASSEMBLYMAN LESNIAK: That's about it. Thank you.

MR. AINLAY: Mr. Chairman, I want to add two things, neither one of which is connected with this. But several of the ideas that I originated on determining where product is coming from, whose it is, etc. --- for example, when I go on a job, I carry distillation equipment with me because of my old days of gasoline chemistry. I can tell you whether it is old gasoline or fresh gasoline I am dealing with. I carry lead-testing equipment. Sometimes you eliminate a lot of searching if you know whether it is lead-free or leaded gasoline. But some of my other systems are a part of the API's method in their pamphlets on leaking. If I can be of any help later, I would be glad to help you.

One other thing, I have heard a lot today about inventory controls - taking inventories. I think probably 95 percent of the people do a good job of taking inventories. It is required by companies. It is required by OSHA. It is required in NFPA. It is required in the uniform fire code. Yet, in all my years, I have investigated leaks where there was probably a lot of gasoline lost and they didn't keep an inventory. I have never known of an administrator ever filing a charge against a man for not keeping inventory control. This part of it is part of the Administration Code. If you get a leak here some place in this State and they find that that man cannot produce a good inventory every day, then he ought to be prosecuted.

ASSEMBLYMAN LESNIAK: How good an indicator is an inventory control?

MR. AINLAY: An indicator?

ASSEMBLYMAN LESNIAK: Of a leak.

MR. AINLAY: I think it is the first line of defense if it is properly done.

ASSEMBLYMAN LESNIAK: You would say just about every leak will be detected by proper inventory control?

MR. AINLAY: If it is properly done, yes. Nobody can say specifically - I am often asked this question - how much of a shortage do you say is a leak. This has to be determined by each company because he may have more evaporation loss than the other guy. But if he does it every day, he will detect a change in the pattern.

ASSEMBLYMAN LESNIAK: How do we establish a notice standard so that the gasoline retailer would be required to notify DEP if he or she determines a certain ---

MR. AINLAY: I don't know what that would do. All the codes simply require he must keep it available to the enforcement officer.

ASSEMBLYMAN LESNIAK: Even if inventory records are kept, how does the State or anyone find out that there is leaking taking place?

MR. AINLAY: Some of your State Fire Marshals or your city Fire Marshals occasionally visit stations. All they have to do is ask: "Let me see your inventory." I think if you started sending them in --- I used to be an administrator of a gas tax and I found it is awfully easy to ask for a whole bunch of records that you finally get so sick of that you start putting them in a pile. I think this could happen.

MR. FREY: I think what you are saying is that there should be an amount that inventory could be out before you consider it a leak.

ASSEMBLYMAN LESNIAK: There should be an amount set where the retailer would be required to notify the local health authorities or DEP that something may be wrong here.

and the customer builds his own inventory record. What is happening historically in our industry is that consumption is down as opposed to being on the upswing. So we have a very close monitoring of the inventory in terms of fuel oil. I don't believe it is a problem in terms of our industry.

I also want to assure the Committee incidents that occur are very often responded to immediately because of the one-on-one relationship that we are dealing with and the fact that we are not dealing with large tanks.

ASSEMBLYMAN LESNIAK: I would agree with you on that. I think our new Construction Code certainly addresses that. I would hope it does. I just do not think that would be the thrust of this legislation.

MR. SACCO: We know Norman; and, if there is a problem, he can reach us. We will certainly be available to the Committee for any assistance.

ASSEMBLYMAN LESNIAK: I want to thank everyone for testifying and giving us this valuable information. It is the intent of this Committee to deal with this problem and offer solutions to the problem in a reasonable and sane manner. And we certainly intend to consider all of the recommendations made here today. I want to thank you for your help on behalf of the Committee. We have an awful lot of work to do. But we certainly have the talent and the ability and the dedication of members of this Committee to come up with legislative proposals within the next couple of months so that this problem will be abated and minimized. Thank you very much.

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