UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the Matter of:

IE TMI INVESTIGATION INTERVIEW

of

Sydney W. Porter, Jr.
Health Physics Consultant

Trailer #203
NRC Investigation Site
TMI Nuclear Power Plant
Middletown, Pennsylvania

April 26, 1979
(Date of Interview)

June 21, 1979
(Date Transcript Typed)

85
(Tape Number(s))

NRC PERSONNEL:

Thomas H. Essig
Owen C. Shackleton

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SHACKLETON: This is an interview of Mr. Sydney W. Porter, Jr. (First name is spelled S-Y-D-N-E-Y; middle initial "W" as in William; last name Porter -- "P" as in Peter, o-r-t-e-r). The time is 1:29 p.m., April 26, 1979. This interview is taking place in Trailer #203 at the Three Mile Island Nuclear Power Plant. The trailer is located just outside the south security gate. Present to conduct this interview from the U.S. Nuclear Regulatory Commission is Mr. Thomas H. (middle initial "H" as in Henry) Essig (last name is spelled "E" (as in easy) s-s-i-g)). Mr. Essig is the Chief of Environmental and Special Projects Section, Region III. Also present to sit in on this interview at the request of Mr. Porter, is Mr. William H. (middle initial "H" as in Henry) Behrle (last name is spelled "B" as in baker -- ehrle). Mr. Behrle is a Project Engineer with the Metropolitan Edison Company. The moderator speaking is Owen C. (middle initial "C" as in Charlie) Shackleton (S-h-a-c-k-l-e-t-o-n). I am an Investigator in Region V for the U.S. Nuclear Regulatory Commission. This is the second interview (ah) on tape with Mr. Porter and ah, just for the record, ah, Mr. Porter do you recall the advisement document that we gave to you the last time we talked with you on April the 24th, 1979, advising you of your rights? And that you do not have to give a statement?

PORTER: Yes, I do.

SHACKLETON: Fine. And would you like a copy of the tape of this (ah) interview as well as you did last time?

PORTER: Yes, I would, please. Now, I ask for the transcript rather than the tape.

SHACKLETON: Oh you'd rather have the transcript rather than the tape?

PORTER: Yes.

SHACKLETON: OK. That will be arranged.

PORTER: Is it possible to get the tape of the last ones since I did not have a personal tape of it?

SHACKLETON: Yes. Certainly.

PORTER: As well as the transcript?

SHACKLETON: Yes.

PORTER: Very good. May I be on record as asking for both the tape and the transcript of ah, the ah, session that we held on the 24th of April, 1979.

SHACKLETON: OK. We'll make record of that and see that it's done. Ah, for the record, Mr. Porter is the owner and Chief Executive Officer of his own company, Porter-Gertz Consultants, Incorporated. That's spelled capital "P" (as in Peter) o-r-t-e-r, dash, "G" (as in George) e-r-t-z (as in zebra), Consultants, Incorporated at 76 Rittenhouse Place (Rittenhouse is spelled "R" as in Roger, i-t-t-e-n-h-o-u-s-e) located in Ardmore, (that's A-r-d-m-o-r-e, Pennsylvania, zip code 19003 and Mr. Porter can be contacted through his company area code 215/896-5353. And now Mr. Porter, inasmuch as you have put together information that you spoke of last time that you would like to get on the record, please go ahead.

PORTER: Ah, I'd like to just review some of the timing of the receiving of the emergency radiological environmental monitoring program data on the 30th of March. The samples were picked up on the 29th of March, in the afternoon, and essentially had 1½ days worth of exposure from the TMI Unit 2 event on them. In talking to (ah) Dr. Gertz from my home office, (Dr. Steven Gertz) he tells me that he called me on approximately 8:30 a.m. in the morning in Unit 1 control room of Three Mile Island and gave me information concerning the TLD results and essentially the statement was that the first day and a half (ah) there were no offsite results that were in excess of approximately 10 mR. And that was the highest onsite results. All of the rest, many were significantly lower than that by the way. Secondly, he gave me the

results of the air iodines, and he thirdly gave me the results of the iodine in downstream water plants, all of which were negative, all the iodiner results were negative, both in the air and in the water. He also tells me that by 11 a.m. that morning, he had personally contacted Mr. Robert Bores of the NRC Region I and Mr. Bores was given these results by him personally. This was a point that I believe Mr. Donaldson was trying to establish in the record, during our meeting 2 days ago. And so I just wanted to get these times. I told you I just did not know what the times were if you remember, and if you remember, Mr. Donaldson must have asked me three or four times for the time. And I said I do not know the time of day that this information was relayed. I had to get back because I had given very strict instructions that every time anybody called me they were to put down the date and the time of day and the subject of the call so that there would be a record made of this because I knew that with the pressure that we had on us in the control room those early days, there was no way that I was going to be able to keep those records straight.

ESSIG: Are these records available?

SHACKLETON: Yes, these records are available for your review, and as you know Ardmore is quite close to your King of Prussia (ah) headquarters and you're welcome to send somebody down to see the records and to talk to Dr. Gertz.

ESSIG: OK. (ah) Syd, I think that does fill in (ah) the question that we had the other day (ah) fairly well. Ah, just a couple of additional points for clarification. Ah, you indicate that you were called by Dr. Gertz at 8:30 and that was on 3/30?

PORTER: Yes, that's correct. On 3/30/79.

ESSIG: OK. And the date and time that he, Dr. Gertz called Bores was at 11:00 on that same day?

PORTER: Yes, he said approximately 11:00 a.m. for Bores.

ESSIG: OK. Now you indicated that, on the TLD's, that there were none offsite greater than 10 mrem?

PORTER: Yes, that's correct.

ESSIG: And that was for the (ah), for the exposure period running from, I believe, did you say that was for the day and a half, or what was the exposure period on that. On those TLD's?

PORTER: The exposure period on those TLD's was considerably longer than that, but they ah, they were picked up on the afternoon of the 30th, the late afternoon of the 30th. They had run, some of them for

1 month, and others for 3 months. However, we do have good records on what the environmental backgrounds are.

ESSIG: They were picked up on the 30th or the 29th?

PORTER: Ah, excuse me. They were picked up on the 29th.

ESSIG: OK. OK, so some were for a month and others were for the full quarter?

PORTER: That's correct. But we do have good records on what the background is for the month and for the quarter here at Three Mile Island. And just for the record, these particular TLD's ah, are the calcium sulfate, very high sensitivity TLD's, and we also have a number of in-transit controls as well as normal background signal controls with those. And so we put fairly high reliability on this data as being accurate with the minimum possible of errors involved with the data. We don't really know how to do anything better than what we're doing. Let me put it that way.

ESSIG: OK.

PORTER: Ah, for the record, we also got iodine in milk samples, a day later, which would be the 31st from the grab samples on the 29th. All

of those were, ah, all of the cow samples were less than detectable which was 0.2 picocuries per liter. And there was that one goat which is about a mile away and one goat was 1.1 picocuries per liter. Ah, as I told you the surface waters were less than detectable for iodine and then a few days later we got the tritiums from the surface water and they were normal. Normal ranges from around 100 picocuries per liter to maybe 3 - 350 picocuries per liter. That's the normal range for the tritium and surface waters. As I told you the air iodines, which were picked up on the afternoon of the 29th, and by the way, the air iodine had run from 3/21 to 3/29, offsite they all read less than detectable. And less than detectable was .02 to .03 picocuries per cubic meter.

ESSIG: OK.

PORTER: There was one onsite iodine that read 0.47 picocuries per cubic meter. That was at station 1S2 which is the north/northeast sector and was barely above detectable. But, you know, it was a real number, but quite low.

ESSIG: That had also been, had operated during that period of time -- 3/21-3/29?

PORTER: That's correct.

ESSIG: OK.

PORTER: All three offsite and one onsite air iodines had operated from 3/21 through the afternoon of 3/29.

ESSIG: OK.

PORTER: And the discharge waters that we talked about were all below detectable before that period. As far as iodine was concerned, let me see now, ah, excuse me, let me say the surface waters were, the surface waters and the drinking waters that we got downstream at the 4 downstream water users. And the list of these water users, their distance away from the plant are all well documented in the environmental report.

ESSIG: Yes. OK.

ESSIG: Syd, I think we discussed this a little bit last time, and I would like to just to go over it a little bit more. The decision to collect the samples that were collected on the 29th ... was as far as you know, who made that decision?

PORTER: Well the decision was made jointly by Met-Ed Reading, Dr. James Mudge's group, who are the people that an, from Metropolitan Edison who are responsible for the environmental monitoring program, and that decision was made jointly between Dr. Mudge's group and Dr. Steven Gertz of my group.

ESSIG: OK.

PORTER: And that was a joint decision which was discussed and rediscussed.

ESSIG: O.K. There was apparently a balancing then of trying to get information on the impact versus, getting quick information on the impact versus leaving them out longer so that the ah, maybe accumulate, integrate more of the event. I guess one would have to make some kind of trade-off. Is that right? I presume that was brought up in these discussions?

PORTER: That very definitely was brought up in these discussions and that's what the discussions were all about.

ESSIG: Right.

PORTER: Now we knew we had to take the samples. And question was 'what was the optimum time to take the samples?'. However, Met-Ed did

say that during the very first day of the event, that they wanted things to settle down and essentially security didn't want anybody on the site except for Met-Ed employees during the first day, which is very understandable.

ESSIG: Yes.

PORTER: And because of that and other reasons, it was decided that on the 28th of March, that there would be no samples taken and that everyone was in a holding pattern and ready to take them within (oh) an hour's notice was all they needed at the most, probably half hour's notice would have been, they could have started within a half hour to take samples. Everyone was standing by as of late in the morning on the 28th ready to take samples.

ESSIG: OK. There is one other, I think two other points that I want to discuss with you, Syd, and I think that's probably, then, all that I can really think of at this time. I have in my hand ah, a copy of a, I think it's sort of an organization chart which was given to me at your trailer today, that shows the relationship of Porter-Gertz consultants to the radiological environmental monitoring program data center, to NRC, to DOE, to ah, Mike Buring from TMI and other consultant laboratories -- RMC, Teledyne, and so forth. And this was dated 4/4/79. Was this in effect before that? I guess it's not really an

organization chart so much, but its sort of ah, how the information was flowing from ah, one party to another.

PORTER: The answer is yes. This particular chart, by the way, is the hand-drawn chart that we made up to give to the Pennsylvania DER Bureau of Water Quality. Mr. Walter Lyons who is head of that Bureau, specifically asked for this information.

ESSIG: Oh, I see.

PORTER: We had a meeting between the Pennsylvania DER, Mr. Lions and some of his staff members, there was some Three Mile Island, (ah) Metropolitan Edison people there ah, Mr. John Collins from the NRC was representing the NRC personally at this meeting, it was a very important meeting, as a matter of fact, as far as the effluent control and relief was concerned, as far as Met-Ed was concerned, and the State.

ESSIG: OK.

PORTER: And its there that we decided on what information on the water data would go to the State on what time basis. And we had a whole series of data charts that we ah, are continually telecopying to the State up in the Fulton Building in Harrisburg. And these are telecopied to the Bureau of Radiological Health and there they are

taken within that same building and copies are immediately given to the Bureau of Water Quality. In this particular setup, we were giving it verbally to the Bureau of Radiological Health over the Rad Health HotLine, the Pennsylvania Rad Health hotline, which goes from Unit 1, directly to from the Unit 1 Control Rcom at Three Mile Island directly to the Bureau of Radiological Health in Harrisburg. This hotline was manned 24 hours a day for the first 3½ weeks of this incident.

ESSIG: Uh huh.

PORTER: Ah, now this, I think, we should probably enter this particular diagram as part of the testimony because this was given to everyone, John Collins was given a copy of this of the NRC, ah, and there were several copies given to the State, the Bureau of Radiological Health was also there at this particular meeting and they were represented by Mr. Bill Dornsite ah, at the meeting.

ESSIG: OK.

PORTER: As a matter of fact, at the first of this meeting on the 4th, no, there was a meeting on the second, ah, I believe, yeah, there was a meeting on the second of April. And on the Second of April there were also people from EPA at the meeting. I never quite understood why, but they seemed to want to know about this. There were lots of

people there and this particular setup is the setup that was ah, essentially established on the 28th and it was in effect on the 29th.

ESSIG: OK.

PORTER: And the data started to flow on the 30th.

ESSIG: OK. I'll just make a note in here that this was ah, established ah, essentially 3/28.

PORTER: And data flowed on the 30th. No really, 3/29 would be the establishment of all those interagencies there.

ESSIG: OK.

PORTERWe didn't talk to Bores, you know, to, or the NRC, until the 29th about this.

ESSIG: OK.

PORTER: Established on the 29th -- data first flowed on the 30th.

ESSIG: All right. I'll just note that right down here then.

PORTER: Oh, it is important to note though that the NRC had in Unit 1 control room, around the clock, from what I could see usually 3 to maybe 10 representatives there in the Watch Engineer's office at all times.

ESSIG: Yes.

PORTER: Around the clock. And they came in and got all the data they wanted, right on the scene, at the time it was being generated.

ESSIG: Right.

PORTER: And I think that should be on the record. I not sure that thats on the record anywhere. But that needs to be on the record.

ESSIG: OK.

PORTER: That there was complete flow of information from the very beginning of the event as far as the Commission was concerned. And I think that needs to be clearly established.

ESSIG: Right.

PORTER: And I believe that that will be verified by whoever the head I&E person was that was onsite at the time.

ESSIG: Right. OK, ah, I think that the other area that I wanted to ah, that I wanted to clarify with you, well, before I get into that, let me, I visited your ah, data center this morning, and, ah, talked with ah

PORTER: Mr. Lester Slayback or Mr. Gordon Lodde?

ESSIG: Gordon Lodde. I don't know why I couldn't think of his name. Ah, now he indicated to me that he was not as familiar with the environmental data as, as you were.

PORTER: That's right.

ESSIG: And I had talked with him about the data and ah, I said 'could you show me what you have'; and he removed several folders from the ah, drawer, as well as a red three-ring binder, and I ah, I went through those and would you, just to clarify a little confusion in my mind, would you clarify for me that, are you still in the process of, would you characterize your environmental data effort right now as being one of where you're still trying to characterize the data that was collected early in the game, or I mean early after the event, or

do you feel that most of what is available has already been collected by you. Or would you like me to clarify that?

PORTER: Please clarify that; I'm a little confused.

ESSIG: OK.

PORTER: ... with your question.

ESSIG: OK, OK. I'll restate the question. I was over in the Unit 2 turbine deck where the, ah, a lot of data is being coordinated over there and I found the file folder which was ah, I don't even recall now how it was labeled, it may have been labeled something like 'Early Analyses' ah, well this isn't the exact title on the folder, but it said "RMC Early Sample Results", something like on that order. And I looked at it and it contained basically a lot of inplant ah, samples, air samples had been collected in the control room and such. But there was a fair number of samples collected offsite as well. And so, when I went over then to your data center, I expected, based on what I thought you had indicated to me the other day, that I would see essentially a duplication of this there. And I didn't find it. So I was wondering if you hadn't yet gotten to that point as far as backtracking some of the early data. That was really sort of restating my earlier question then. Ah, data such as what I'm holding in my hand now, which is ah,

an analytical data sheet ah, labeled 'Radiation Management Corporation Sample Identification W-11' and ah, date collected between either 3/29 or 3/30/79 from 0542 to 0547 its an iodine in air, ah, an offsite sample. And there are several ah, well I didn't count the number of sheets here but there are a number of them. Are you still in the process, are you in the process of gathering this type of data and you haven't yet gotten to it, or, or where do you stand?

PORTER: OK. Ah, we have to be quite clear on that point because its an important point. There are two sets of people taking data for Metropolitan Edison right now. One set are the set of people that originate from the Island, from Three Mile Island. They're, and they are on a series of emergency monitoring teams and essentially since for the first three weeks of the event, there were 3 to 4 emergency monitoring teams out around the clock. Roughly, their jobs were, one of them would be onsite and taking a profile in and just adjacently out of the plume along both the fence perimeter, the outer fence perimeter, and also along the building lines to the inner fence perimeter so to speak. We're as close into the plume as you can get without walking into a building. And that's what one of the teams did. Two other teams, one would be on the west shore, one would be on the east shore.

ESSIG: Right.

PORTER: Then also, there was a team in the helicopters when we were expecting certain releases that were taking data from the helicopters. So that we had from three to four teams out. I believe that we're down to three right now, ah, but the point that needs to make, that needs to be made is that this data was, 90% of the data roughtly, was ah, beta gamma or gamma readings from a portable survey meter.

ESSIG: I would agree with that.

PORTER: Then, ah less than 10%, probably much less than 10% of the data, they took air through charcoals, charcoal filters.

ESSIG: Right.

PORTER: And these charcoal filters were sent to RMC and and then SAI when they arrived, in order to, and also some of 'em went to B&W in the early days; some of them went, a few went over to the ah, to the TMI Unit 1 Ge(Li) detector which I believe never counted any because of the high background, and then they were rerouted. And these samples are part of the emergency monitoring team evaluation. Ah, I looked over, all this data was, literally on my desk for the first two weeks of the incident. All the data you're talking about.

ESSIG: OK.

PORTER: The Sample Coordinator sat next to me for the first two weeks of the incident or next to one of my people.

ESSIG: OK. And so we continually evaluated that. Any my general evaluation of this is that all of the, ah, Island data, with extremely few exceptions, were negative, were less than detectable.

ESSIG: No. I wasn't trying to imply that it was any other way. What I was just, I was just trying to straighten up a little confusion in my mind based on what you had, what I thought you had indicated to me the other day; which was in essence that you were in an oversight capacity with your operation in Trailer #115, the Health Physics trailer, was to try to pull together a lot of the data that was presently, that had been gathered so far and try to make sense out of it. There are a lot of people gathering data and I think you had indicated to me and Gordon Lodde told me this morning that it was your, one of your missions anyway in life was to, not in life but here on the Island was to, was to ah, gather the data and try to make sense out of it.

PORTER: That is correct. Now

ESSIG: And so when I didn't see this particular, these data here, in amongst the data that you were supposed to gather, I just wondered if you hadn't yet gotten to it, or well certainly you were aware of it, based on what you just said.

PORTER: Yeah. Well now for the first two weeks of the incident, I looked at every piece of data that was collected, ah, as a matter of fact. Since then I've done spot checks on that particular data looking at those charcoals .., charcoals, and I won't pull it all together. I have not pulled that together because there is other data which is positive and much more fruitful, and I think more worthy of my group's time right now. Now we will get to that and write a summary statement. It's going to be a fairly easy summary statement when you essentailly have all negative data.

ESSIG: Right.

PORTER: And so therefore, I didn't feel it was important for me to keep yet another set of those records. The records are up there with the sample collector and he's responsible to see that they don't wander.

ESSIG: Okay.

PORTER: And eventually we'll get up there and do that and that is part of our job, but since it's all negative data.

ESSIG: Okay.

PORTER: And since it was disseminated at the time, the NRC came over every 2-3 hours, and asked for copies of those in the early days. I mean the NRC has an incredible amount of that data themselves (ah) the (ah) ... I thought then that since it's all negative, I did, I just did not feel that it was necessary to spend much time on that data now, because we have lots of positive data that we're gathering from the HPR samples.

ESSIG: Right.

PORTER: And also we have much positive data, or better, statistically negative data that we are gathering from the offsite radiological environmental monitoring program. Now we do not have every piece of data, every piece of datum on, ah, that ah, exists on the offsite emergency radiological environmental monitoring program here onsite. We have summaries of it. This is all being carefully being kept in both Reading and my offices in Ardmore, Pennsylvania. And I just get, at this point, I'm getting oversight reports on these.

ESSIG: OK.

PORTER: Does this clear that up?

ESSIG: Yes, I think it does. Would you say the same comment that you just made applies to the early B&W data also? Would that be over in the, as far as you know, would be over in the Unit 2 turbine deck area where the, where the Coordinator is?

PORTER: No, I would not make that comment. Most of the, first of all, one has to realize that there, that for low level counting, the B&W system is not designed for that; its only a 5% efficiency Ge(Li) detector.

ESSIG: OK.

PORTER: That system is designed for plant process samples. Now occasionally an air sample would wander over there, and get counted with a "less than number" and we try to grab these and then send them back over to RMC or SAI in order to get them counted.

ESSIG: OK.

PORTER: And so the B&W ah, system, in general, is just not designed for that. Now they're being reset up on the Unit 2 turbine deck floor with a lot more shielding and with much more, and you know, and they're supposed to be getting efficient Ge(Li). At that point, it'll be a whole new ball game as far as what we use their counting system for. But, for the environmental data, the B&W data, the B&W system is not applicable for counting.

ESSIG: OK. I think that clears it, sufficiently clears that area up. I would like to move on to, to one last area, if I can. It's ah, related to, since I last talked with you, I've talked to Mr. Dubiel and Mr. Mulleavy of Met-Ed also.

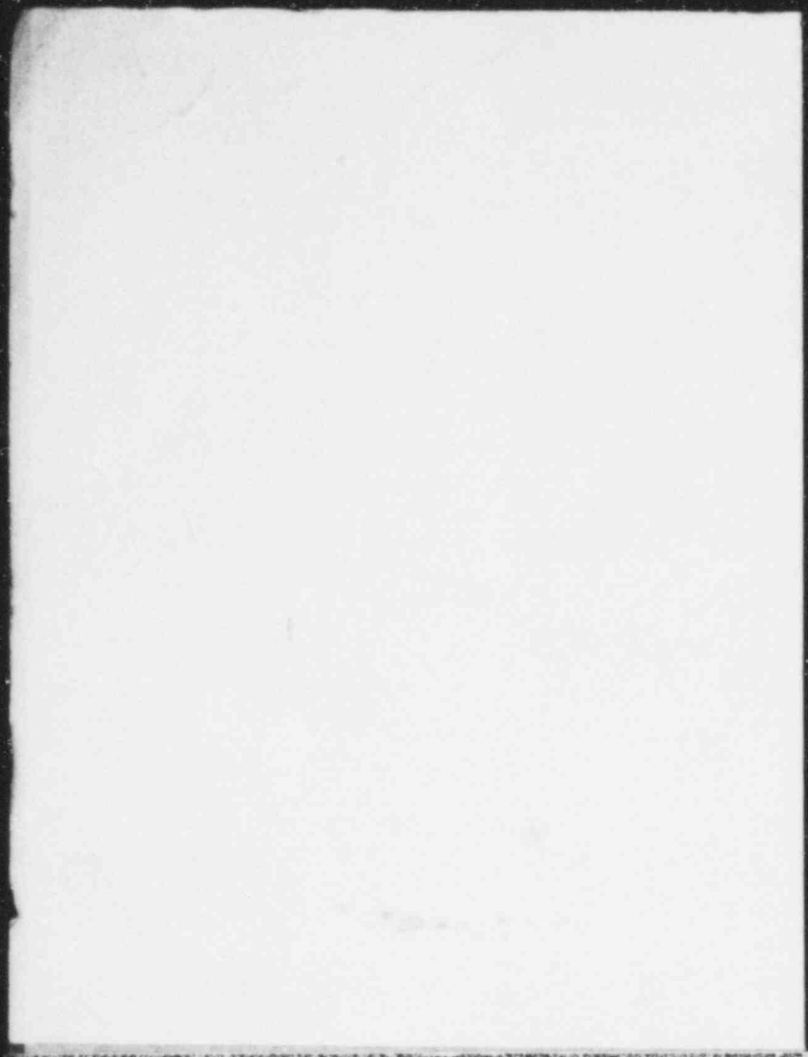
SHACKLETON: Tom, I hate to interrupt you, but I think we're gonna have to change the tape. We're just at the point where it's gonna go off. The time is now 1:59 p.m., April 26, 1979. We'll be off the air for a few minutes while we change the cassette.

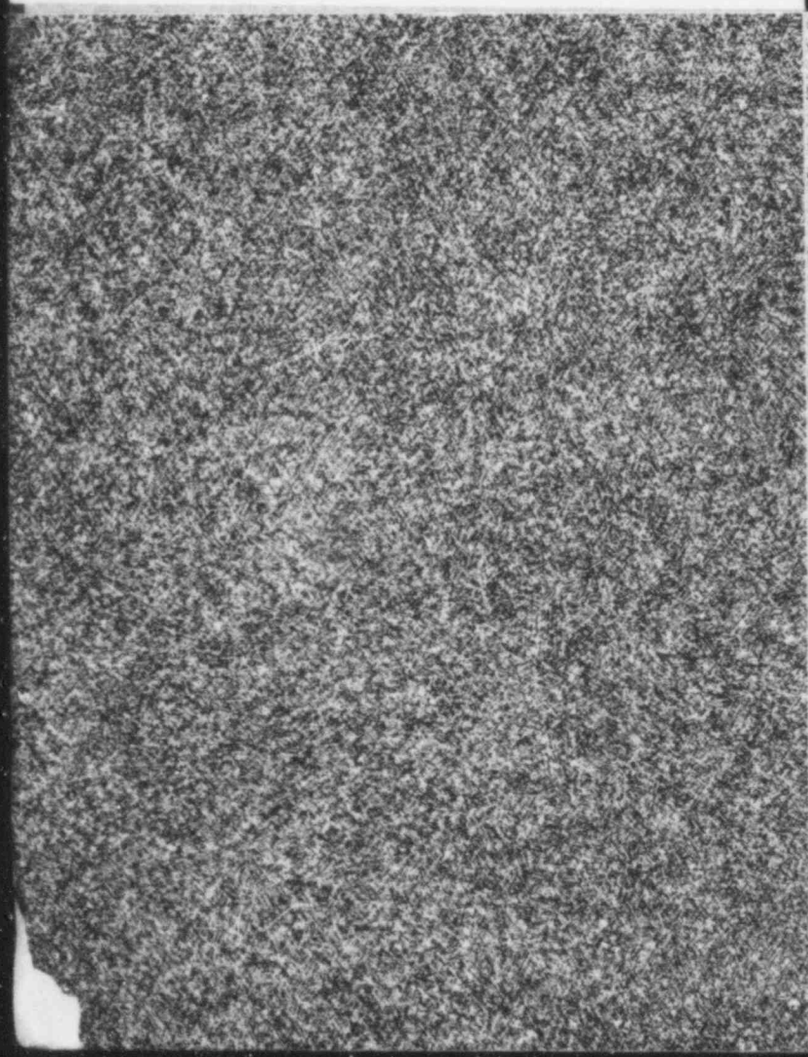
SAHCKLETON: This is a continuation of the interview of Mr. Sydney W. Porter, Jr., and the time is now 2:01 p.m., April 26, 1979. Mr. Essig, would you please continue your questioning.

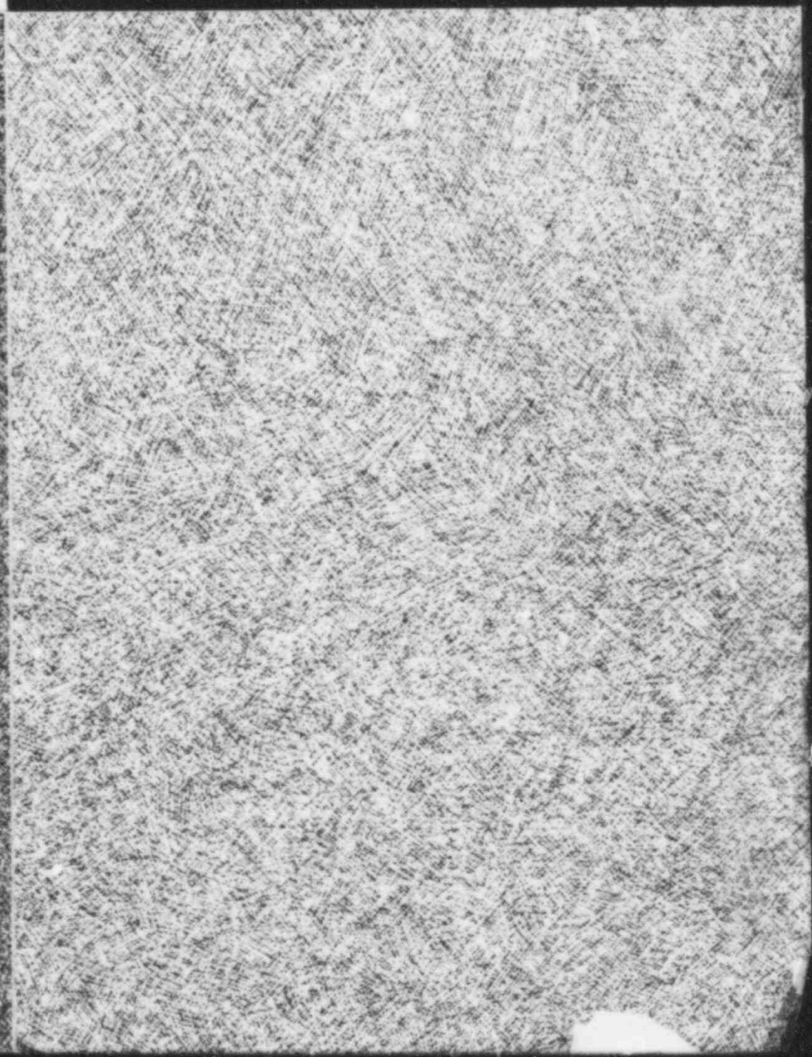
ESSIG: Yes. I started to say before, ah, before we had to change the tape that since I had last talked with you Syd, I talked with ah, ah,

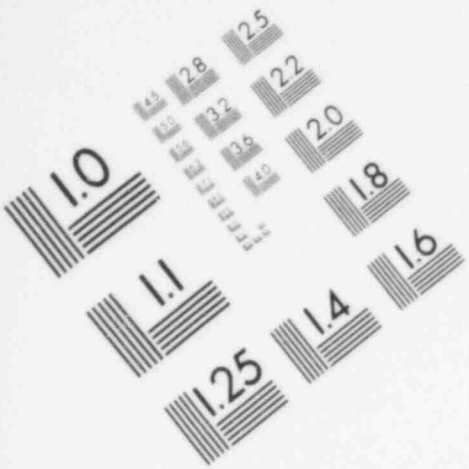
Mr. Richard Dubiel and Mr. Tom Mulleavy, both of whom are in the Regional Protection Organization for Met-Ed. And there is just one area that I'd like to get, I'll tell you what the impression ... the impression I have as to who is directing the offsite survey effort after speaking with each one of those and I'd like to get your impressions as to, as to what was going on. Again, we're focusing on the first three days following the event.

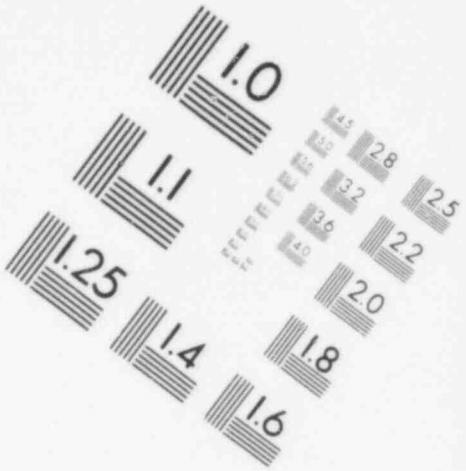
ESSIG: When I talked to Mr. Dubiel, he indicated to me that, that for the first several hours after he arrived on plant he tried to keep on top of several areas simultaneously, which is understandable; there is a lot going on and ah, he was the only one here. Ah, or he was the highest, ah, ah, level of Radiation Protection management here. When Mr. Mulleavy came in at, I think, around 7:30 or 7:45, I've got the exact time written down somewhere else, ah, from the time that he recalled coming in, ah, he, after getting here went to see ah, Mr. Dubeil right away, and, and ah, shortly afterwards he was, and Dubeil filled him in on what was going on at that time, shortly after that and, according to Dubiel, he essentially, ah, turned the, turned the responsibility over to Mulleavy for ah, running the offsite monitoring effort. Mulleavy's story is just slightly different from that. He indicated that the coordination with ah, with ah, Dubiel was extremely close, and that ah, he was touching base with Dubiel on the order of every, every 15 minutes or so and, in essense, asking ah, well maybe











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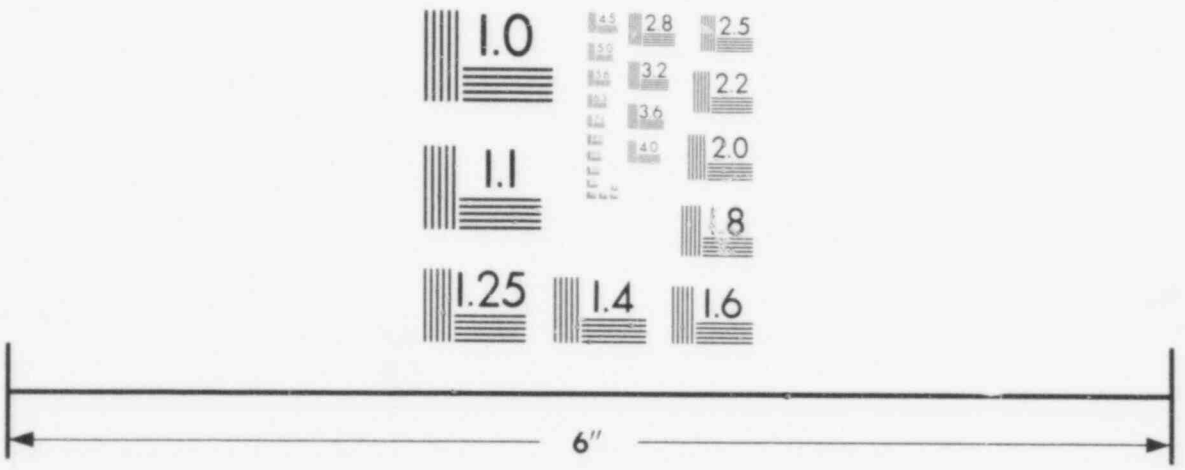

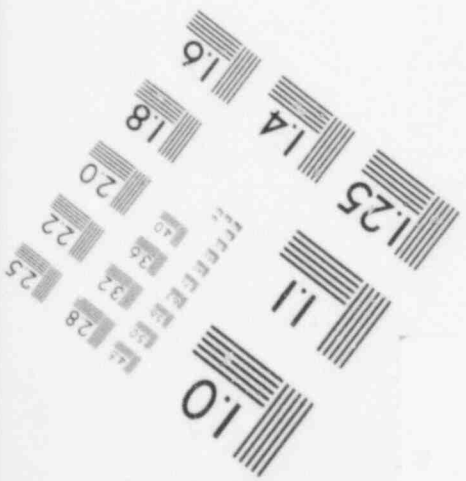

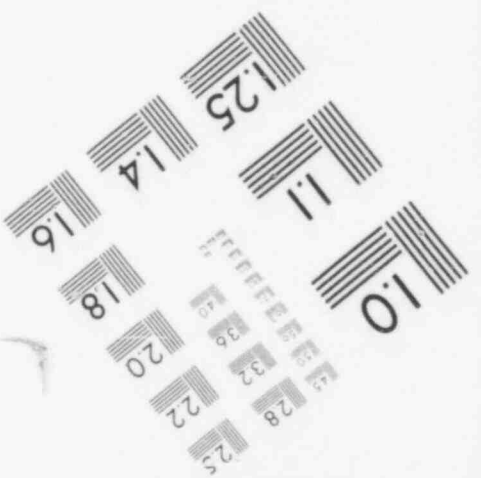

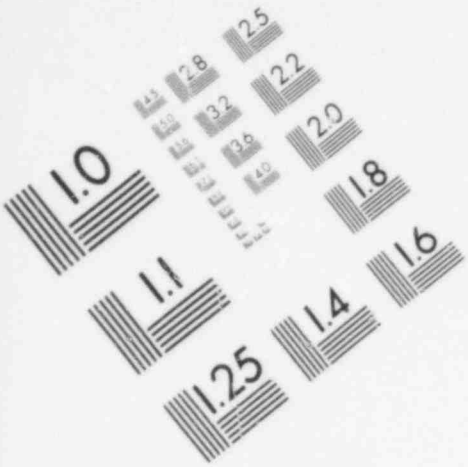

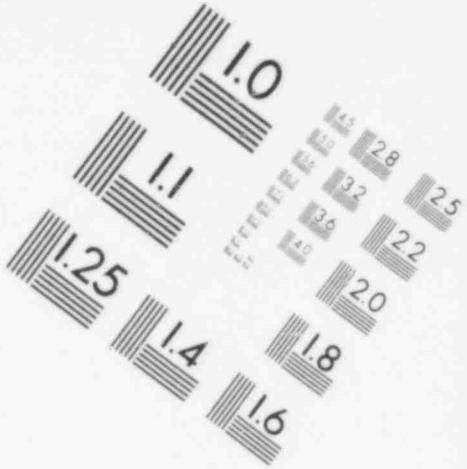

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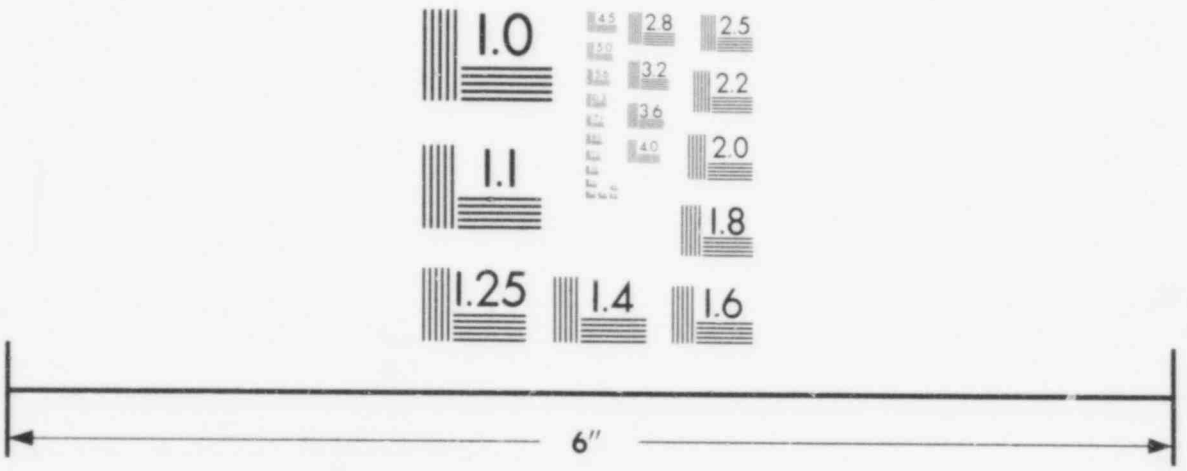

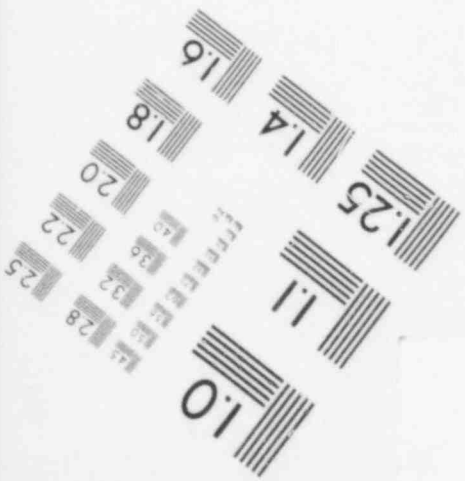

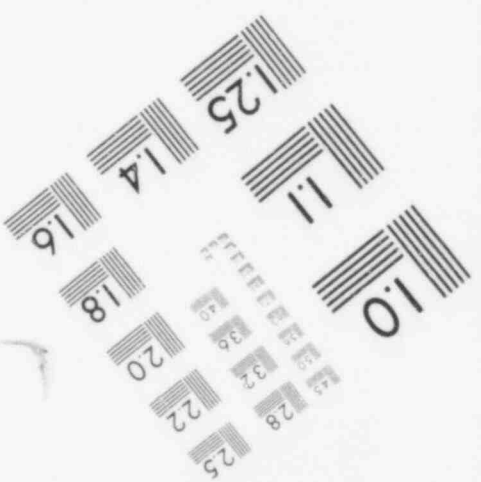

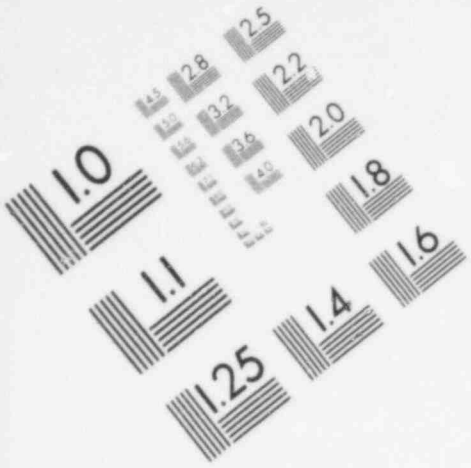

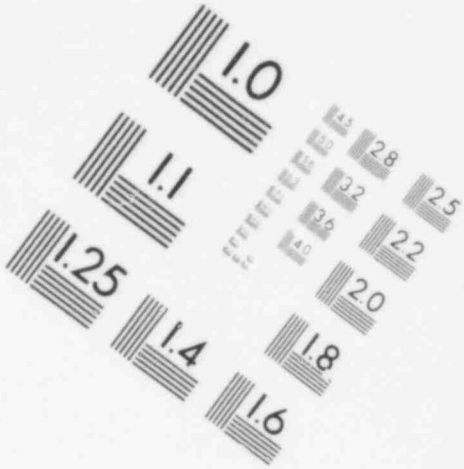

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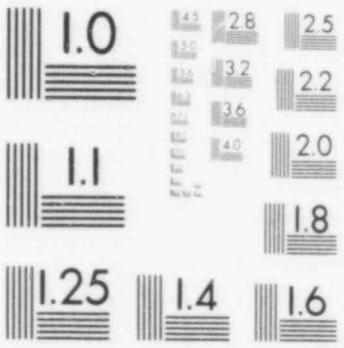

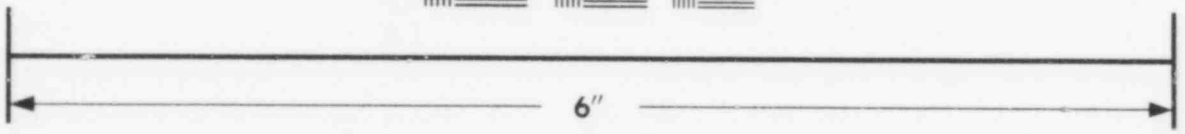

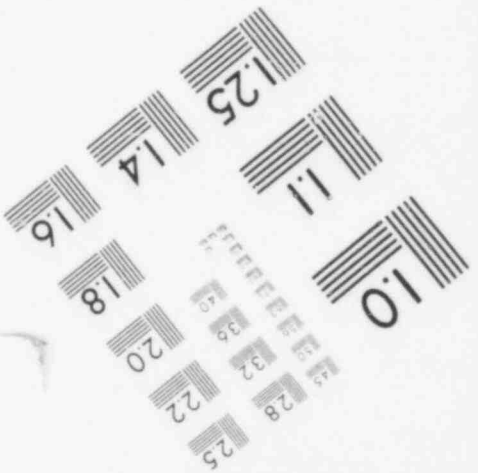

not asking is the correct word but, but, ah, well I'll say asking since I can't think of a better word, asking for Dubiel's approval on, on ah, well for example, I'm going to send the team ah, in the southeast direction toward Bainbridge, or south/southeast towards Bainbridge and we're going to collect air samples, or we're going to make these kinds of measurements and he would almost, the impression I had was that Mulleavy was asking for ah, Dubiel concurrence on many of the actions that he was taking. Whereas, from what I got from Dubiel was that he pretty much Mulleavy a loose and told him, and the fact that I've got, the thing that I wanta worry about now is the inplant health physics. Ah, I think you've got your feet on the ground firmly enough, he told Mulleavy. Why don't you worry about the offsite surveys. Now you were there after ah, after about ah, let's see well I guess you arrived at the observation center at 7:00 o'clock on the 28th and then not too long after that you were in the ah, in the Unit 2 control room. What was your impression as to what went on as far as the who was in charge of the offsite survey teams for Met-Ed? Could you, could you speak to that briefly?

PORTER: Yeah I can, I can speak to that. Ah, from what I could see ah, when I was there it was the person, the person that was, that was running them on a minute-to-minute basis was certainly the person in the Unit 1 control room because he had the direct radio that he was using to talk to them. And he would say, you know, 'go to here, go to

there'. Now something that is happening which I did not mention in my earlier conversation, by the way, I haven't discussed this with either of those gentlemen, I might add, at this point.

ESSIG: OK.

PORTER: At all. It hasn't come up, huh, at all. Uh, but what would happen is you know there's a hotline between Unit 1 and Unit 2.

ESSIG: Right.

PORTER: Now, ah the person in Muhleavy's job, and you remember I could not remember who it was because it, it, it changed every 8 hours, and I was there for many, many, you know for many hours. I was there for about 2½ days.

ESSIG: Right.

PORTER: And so, it kept changing. But what, what happened is that there would be, whenever there was any, anything significant or whenever there was a question, I do know that whoever had that job would simply pick up the hotline and talk to someone in Unit 2, in the Unit 2 control room; because there's a hotline between the two control rooms, and when you pick up the phone it rings in the other control room immediately.

ESSIG: Right.

PORTER: Now, I don't know who was on the other end of the phone. I have no way of knowing that. I was very busy doing what I had to do, and, and was not privy to who, whoever Mulleavy, or whoever it was that had the job was. But the thing is, there was continual, that phone was just always, always ringing. I mean you know, either one way or another, either somebody's picking up or it was ringing back this way.

ESSIG: These were calls that either were coming in to Dubeil or being originated by him?

PORTER: I don't, I don't know who was on the other side, on the Unit 2. I was in Unit 1 control room.

ESSIG: Well, no but the unit 1 control ... okay, Unit 1 would have been ...

PORTER: I was in Unit 1 ... and that's where Mulleavy was ...

PORTER: ...Or Mulleavy's replacement. And there were a number of people that replaced him over those few days.

ESSIG: OK.

PORTER: And so therefore, he was picking the phone up and talking, now who he was talking to, and whether he was talking directly to Dubeil or whether a message was being relayed to Dubeil, I have no way of knowing that.

ESSIG: OK.

PORTER: There was a lot of work to be done and, ah, and when, there was, you know there somebody there like Tom, then you know, he was doing what he had to do, and all I did was, it was, it was the overview function that I talked about earlier.

ESSIG: Right.

PORTER: Now I was not on the radio talking to those teams.

ESSIG: Right.

PORTER: Occasionally, I would, I'd pick up the microphone and ask them questions. But I, as I said before, I was not running those teams on a minute-to-minute basis. And, you know Mulleavy was one of the people doing it and certainly Len Landry was another one who was

doing it, but I did't remember who was there when. Which I think I made that clear in my testimony two days ago.

ESSIG: Yes. OK. So I, from what I hear you're saying then, it, it sounds like ah, you were in the Unit 1 control room with ah, Mulleavy and others that relieved him and as far as you're concerned the radio was in the Unit 1 control room and ah, the direction of the teams that was really taking was, was being made by either Mulleavy or subsequent individuals that may have relieved him and that there was close coordination between that individual and someone in Unit 2 and we'll presume for the moment that it was Dubeil.

PORTER: Yes. I don't know who that person was. The other point that needs to be made was that anyone that wished to in the Unit 2 control room could listen to the conversations over the radio. They have a follow radio there also. And so if someone was interested in what was happening with the teams, all he had to do was simply walk over to the desk where the (ah) follow radio was there, and he could listen to what was being told to the teams and what the teams were saying back to the Unit 1 Control Room. Which (ah) this is something we set up a long time ago just in case that we would have an emergency like this. So that both control rooms could follow the offiste data if they so wished to do that.

ESSIG: Okay. I think there's one other area that I'd like to ... that came up in both the interviews with Dubiel and Mulleavy and I'd like your comments on. I have a ... just because of their inability to recall exact times. I'd just like your impression of when this particular item happened so that we can maybe have then three, possibly three conflicting opinions of when it happened. (Ah) in the interview with Dubiel, and the item in question is both gentlemen said that, that at one point in time, the direction, the management of the offiste survey effort was turned over, not by their choice, but someone had decided - someone as yet I don't know who - had decided that the direction of the program would be made by, from the Observation Center and it was to be done by the (ah) the Electric Boat (ah), another contractor, and ...

PORTER: Of which program, please?

ESSIG: This would be the offsite survey effort, as I understood what they had said. The (ah) (ah) Dubiel indicated that it might have been as early as late in the day on 3/28, or perhaps early on 3/29. The program direction was, was ah, essentially over in the observation center and that all the ah, offsite survey data were being relayed to the observation center by radio, rather than to the ah, Unit 1 control room. Now Mulleavy indicated that ah, the program wasn't really switched over to there untill, until approximately either late in the

day on 3/30 or maybe even Saturday 3/31. and ah, because he had received a call from Mr. Graber? Grabber? Graber?

PORTER: Graber. Bill Graber

ESSIG: Yeah. From Electric Boat. And ah, he had called both ..., Mulleavy and Dubeil to tell them t... as of that time and, and its that time that, that I'm, that these two gentlemen differ on presently. But Mulleavy feels that it was, as of about 7:00 a.m., 3/31, that they in effect were working for Graber and that's what Graber told them that as of this time you're working for me as far as the ah, I believe that the time was limited to the offsite survey effort, but I'm not sure. Did you have any, any such, were you aware that had, that that conversation had taken place and that a ah, a ah, a switch in the management that had occurred and if, so do you know why it might have occurred? They, they both indicated they were rather confused by it. Would you, could you comment?

PORTER: OK. Two things: first of all at that point ah, I might add that both Dubeil and Mulleavy were incredibly busy with other things, I think that comment needs to be made. And they had worked many hours at that point too. Now my impression of what happened is slightly different from that.

ESSIG: OK. OK.

PORTER: And that's why I think I'd better put this on the record, too. Ah, ah, the first overriding comment that needs to be made is that we have to define the term 'management of the teams' is that the term you used?

ESSIG: Yes.

PORTER: Or 'direction of the teams'? Which term?

ESSIG: Well, according to Mulleavy, Mr. Graber said 'you are now working for me'. He used those words. Now whether he actually meant that, ah, and as a consultant I ah, the contractor brought in, I doubt that ah, well unless it seems rather unusual that he would have been given that much authority. And maybe Mulleavy was overstating the case. Now that's quite possible. But he indicated to me that this Graber had told him that as of, whatever time it was within the first two or three days following the event, that he had more or less been given charge of at least the offsite survey effort and, and anything more I don't know.

PORTER: OK. I'd like to speak to that. I have four or five comments on that. First of all, editorial comment ah, Mr. Graber is, is sort of known for ah, his proneness to overstatement. Point 1. I think and that's a fairly objective comment on my part; kind of sitting back and watching him work. Ah, now let me tell you, we have to define carefully what we mean by management and direction, direction of the teams. First of all, the, the direct control of the teams in the field never left the Unit 1 control room, it is still there as of this moment. I think this point needs to be made very clearly.

ESSIG: Okay.

PORTER: The direct control of where that team goes, was never given to Mr. Graber and it is now not in Mr. Graber's hands still, and there's a technical reason for that. The person that controls where the team goes has to be looking at the meterological data to know where the wind is going.

ESSIG: Exactly, and that's ...

PORTER: And there, and that has never, and also Mr. Graber did not get on, as far as, in my recollection because boy I was really close to those teams for the first two weeks. I never heard Mr. Graber on the radio telling those teams word one. Now what Mr. Graber was given

was, Mr. Graber was in charge of the large Health Physics Technician Manpower pool and also had a fair amount of health physics supervisory people working for him directly. And so I would call this operational health physics. He had operational health physics. He was, he was given that. Now out of that manpower, people were assigned to these 4 radiological emergency survey teams. He was in charge of seeing that the people were there to relieve the teams when their time was up. You know they were first on 12's and then moved back to 8's, and I can't remember when they were moved back. I think that's immaterial in this conversation. But the point is that he had the manpower and therefore he was told to make sure that there were replacements for these people, for the teams on a timely basis.

ESSIG: OK.

PORTER: And, and as far as I know, I never heard Mr. Graber's phone, in other words, I, my desk was only about 12 feet away from the radio and I could essentially hear everything on the radio and I never remember hearing Mr. Graber's voice, which is very distinct, I know what it sounds like, I never remember hearing his voice, ever, on the radio giving those teams direction #1 even. And I think that's a very important point that needs to be made here. And they're still being, I think you've been up there several times, haven't you Tom, up to the control room, unit 1 control room?

ESSIG: Yes. Yes.

PORTER: And everytime you were there, they were still being run from on the radio right there; isn't that correct?

ESSIG: The map is ...

PORTER: Right, the map is there and that's where they are run from.

ESSIG: Right.

PORTER: So, I think that you should get ah, Dubiel and Mulleavy back and remind them of this and then ask him about my statement. Because I was fairly close, I was much, see they were essentially weren't offsite where I was onsite and offsite, I was running back and forth.

ESSIG: Right.

PORTER: And, and trying to get ah, make sure, you know, make sure we had a hold on a lot of these things. And I think Mr. Graber just is a slightly, he's wrong to tell everybody that they're working for him at the time.

ESSIG: I see.

PORTER: And, and so the thing is that, ah, and these guys were battle weary at the time that this statment came in. You have to remember that.

ESSIG: Oh yeah, I do.

PORTER: They had ah, very little, very little sleep. But ah, ah, up until I moved into these trailers right here, I, I which was, gee when did I move into these trailers, Bill it was what about 4 or 5 days ago at the most, ah, ah, I, I could hear the radio either in the observation center or either in the Unit 1 control room where my two desks were. And I never heard Bill Graber's voice once on the radio.

ESSIG: OK.

PORTER: As far as I know, Bill Graber, I never saw him in Unit 1 control room. Ah, except for a few times when he would come in and ask you a few questions and go out. In other words he was never aware of meteorlogical data or even the procedures used for running the teams. And so it might be important to get him in here to clarify that point with him.

ESSIG: OK.

PORTER: But ah, I believe that my version of this is pretty well on track.

ESSIG: OK.

PORTER: Does this, ah, is there anything else you want to ask about?

ESSIG: No, I don't think so. It just seemed to me that it was worth clarifying on the record because it, it would appear to be a little bit ah, cumbersome to run a operation such as the offsite survey effort out of the observation center, where as you say, there is no Met Data readout out there. And the ah, one would have to radio the control room to get the wind direction and speed and then tell the, tell the teams that they should be in this or that sector at that time..

PORTER: Now ...

ESSIG: It would make more sense for me to run it out in the control room and that's, I just wanted your impression as to whether indeed it had been turned over to the observation center or if it was still in the control room.

PORTER: It has absolutely never been turned over. Now, let me add one other point here which I think needs to be put on the record. And that is that the observation center had radios, had and, had microphones, and could contact the teams and talk to them. But essentially what they did was they, they were, they were a group that ah, got the up-to-date data from the teams and plotted it there so that Jack Herbine and other management people, such as myself, could walk in and at anytime see what the highest level was onsite and the highest level was offsite.

ESSIG: And I was doing the same thing myself.

PORTER: Right.

ESSIG: Walking in the observation center and doing that very thing.

PORTER: So this was a follow data center is what it was.

ESSIG: OK.

PORTER: And it was also set up that in case we had real problems and had to evacuate Unit 1 control room, which is very unlikely because it does have its own air system and it own filters, etc., and so that you could just put it on 'recirc' and you'd have your own air which would be good for days.

ESSIG: Right.

PORTER: But just in case there was a fire in there or something and people had to leave, then the 'Plan C' was that ah, we would have a, a person stationed at the Met tower, where there is also readout at the base of the meterological tower, with the radio, and he could have radioed the data to the observation center and the teams could have been running from the observation center. And so that's an alternate plan that we've always had, just in case the control room got wiped out for one reason or another. Which is, you know, highly unlikely.

ESSIG: Right.

PORTER: And see, it was my job to make sure that we always had "Plan B" and and "Plan C", and that they were viable plans, and so, and so, and, and that was a very viable plan; that's another reason why we had those radios all set up there; just in case, you know. And thank God we had these because all these alternate communications have been used 100% of the time, they're, they're, you know, ah, they were used up to what, 4 or 5 days ago as a matter of fact.

ESSIG: Um hm. OK. I think that ah, that about takes care of the questions that I have for you today, Syd. And I, unless you have some further comments, I appreciate the time that you've taken to ah, to

ah, be interviewed by us and the answers that you've provided to our questions. I think the information will be quite helpful.

PORTER: I have one ah, one correction to make to my ah, testimony two days ago and just a little bit more information to to a little bit better, more fully answer one of your questions, ah, Tom. Ah, you asked me about the survey meters that were used by the teams and I had ah, ah, answered ah, by saying that they were essentially ion chambers. And then I made one close, incorrect statement. I said among the ____ chambers was E520B, I might not have used the letter "B", but an E520. And you said that you thought that was a GM tube. And I said 'gee, I think its an ion chamber. Well you're right. It is a GM tube.

ESSIG: OK.

PORTER: Point 1. Ah, Point 2 ah, they used an HP270 probe, ah, which is a GM-tube probe with the E520B, but the other tube service meter used, and there were many of them used, were, are an Eberline R02A, and an Eberline PIC6A, both of which are ion chamber instruments. Now for the record, I would like to give you some data on the response of these three instruments. These are the three major instruments used and I verified this with team members since we last talked.

ESSIG: OK.

PORTER: These are the three major instruments used and I would like to tell you the response of these to the 81 kev gamma which is a the gamma ah, that you get from Xenon-133 which is essentially what you're looking at during this entire incident.

ESSIG: Right.

PORTER: OK. Let's start with the GM-tube. With the open window GM-tube, for gamma only, we had a response of 200%.

ESSIG: OK.

PORTER: With the closed ...

ESSIG: This is relative to the response say for, cesium or cobalt gamma?

PORTER: This is relative to the cesium response, the cesium 137 response, which is what they're calibrated with.

ESSIG: OK.

PORTER: So this is relative to their calibration. Relative to their calibration, the E520B has a 200% open window response and a 92% closed window response.

ESSIG: OK.

PORTER: OK Bob, I got these, I got this, the response data from Eric Geiger who is the Chief Health Physicist for Eberline Instrument Company. And I called him in Santa Fe and got the data directly from him. Ah, ah, because I knew that he had more up to date data on the ah, instruments that his company makes than I do.

ESSIG: Right.

PORTER: OK. For the RO2A ion chamber servey meter, the open window response is 110%; and these are all for 81kev gamma and the closed window response is 105%.

ESSIG: OK.

PORTER: And for the PIC6A, the open window, ion chamber survey instrument, the open window response is 120% and the closed window response is 100%.

ESSIG: OK.

PORTER: Now ah, when one considers the fact that these things are all calibrated to roughtly plus or minus 15 or 20%, then I think that we can say, except for the GM-Tube, which, ah, with the open window, has a large over response, then all the other responses are essentially 100% and no corrections needed at all. And the only correction that would be needed would be for an over response and we don't bother with that one when we're doing emergency surveys and we only worry about under response.

ESSIG: Right.

PORTER: Would you agree with that statement?

ESSIG: Yes, I would agree.

PORTER: OK. I have, I have nothing else here, ah, ah, for you all except that if you want to talk about the effluent ah, data then we need to schedule another meeting.

ESSIG: Right. And I think we'll just ah, we'll probably have to schedule that for ah, we're gonna be taking a break here until next Tuesday, and ah, so we can probably schedule that on Wednesday, Thursday,

or Friday. I'm not sure what our interview schedule is at this time, but I'll certainly try to set something up and give you sufficient advance warning.

SHACKLETON: Very good gentlemen. Thank you Mr. Porter for your cooperation again. All the work you put forth in getting all this data together for us. We're bringing this interview to a close at 2:26 p.m., April 26, 1979.