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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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581TH MEETING

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

(ACRS)

OPEN SESSION

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FRIDAY

MARCH 11, 2011

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ROCKVILLE, MARYLAND

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The Advisory Committee met at the Nuclear Regulatory Commission, Two White Flint North, Room T2B3, 11545 Rockville Pike, at 1:00 p.m., Said Abdel-Khalik, Chairman, presiding.

COMMITTEE MEMBERS:

SAID ABDEL-KHALIK, Chairman

J. SAM ARMIJO, Vice Chairman

SANJOY BANERJEE, Member

DENNIS C. BLEY, Member

DANA A. POWERS, Member

HAROLD B. RAY, Member

JOY REMPE, Member

MICHAEL T. RYAN, Member

WILLIAM J. SHACK, Member

JOHN D. SIEBER, Member

NRC STAFF PRESENT:

BENJAMIN BEASLEY, OEGIB

JOHN KAUFFMAN, OEGIB

KENT L. HOWARD, SR., Designated Federal Official

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P-R-O-C-E-E-D-I-N-G-S

(12:59 p.m.)

CHAIRMAN ABDEL-KHALIK: The meeting will now come to order. This is the second day of the 581st meeting of the Advisory Committee on Reactor Safeguards. During today's meeting, the Committee will consider the following: One, improvements to the Generic Issue Program, and two, preparation of ACRS reports.

This meeting is being conducted in accordance with the provisions of the Federal Advisory Committee Act. Mr. Kent Howard is the Designated Federal Official for the initial portion of the meeting.

We have received no written comments or requests for time to make oral statements from members of the public regarding today's sessions. There will be a phone bridge line. To preclude interruption of the meeting, the phone will be placed in a listen-only mode during the presentations and Committee discussions.

A transcript of portions of the meeting is being kept, and it is requested that the speakers use one of the microphones, identify themselves, and speak with sufficient clarity and volume so that

they can be readily heard.

At this time, we will go to Item Number 9 on the agenda, Improvements to the Generic Issue Program. And Dr. Powers will lead us through that discussion.

MEMBER POWERS: Thank you, Mr. Chairman. I think all of the members on the Comittee now have episodically seen items come to us labeled "Generic Issue" with a number after it, and probably thought no more about that number and the gastrointestinal label that was put in front of it.

But in fact, it is a generic issue. The inception of the concept of a generic issue took place many, many years ago. Even before Shack was on the Committee, the Generic Issue Program existed. It was originally an invention of the ACRS itself, except they called it a Generic Safety Issue at the time, and things were labelled GSI.

I'm not, myself, absolutely certain when it was formulated. But I do have in front of me a letter from 1972 from Chad Sies to the venerable Dr. Schlesinger, then Chairman of the Nuclear Regulatory Commission, reporting on the status of the Generic Safety Issues.

And it's interesting reading, because he

categorizes the issues into those that have been resolved, those that are pending resolution, and those that are in need of further attention. And among the things that he lists, number one on the list of the resolved issues, Dr. Shack, is net positive suction head for ECCS pumps.

Number Seven -- Mr. Armijo is not here, unfortunately, but number seven on the resolved generic issues was protection of primary system and engineered safety features against pump flywheel missles.

The generic issues list goes on, and there are those pending resolution, and those nearing resolution. And you would find it interesting, especially those of the PRA persuasion, because nearing resolution was the issue of common-mode failures.

Well, since the days of yore, when the ACRS formulated and kept the generic issues, the members of the ACRS were no more responsible than the members now, and so eventually the staff says "Maybe it would be better if we took over the generic issues list, and made it our own."

And over the years, there have been some refinements in not only the name, but in what makes

the generic issues. Because so many of the members probably are not familiar with this history, I thought it would be useful for the staff to come refamiliarize the members with the Generic Isssues Program, and to give us some indication of what the status is, so we could update Mr. Chad Sies's letter of 1972 on this.

We're not being asked to write a letter on this. This is strictly for our information. And I thank the staff very much for taking the time to put together a discussion for us on this. And so I'll turn it over to you, John.

MR. KAUFFMAN: Okay, good afternoon. Thank you for inviting us. As you touched upon, we were briefing the Siting Subcommittee on Generic Issue 199 back in november, and Dr. Powers thought it would be a good idea, since there were a lot of new members, to brief the full committee on the program, and also to talk about some of the changes that we've made in the last few years, trying to make the program better.

I would say there's a lot of misconceptions. A lot of people have bad feelings about the program from years gone past. And I figured we'll take every opportunity we can get to

talk about what we're doing. We're proud of what we're doing.

We think we're doing good work, and hopefully we can change some people's minds. That being said, we're always looking to improve the program and make it better, so we are happy to hear what you might say.

I'd just like to acknowledge, sitting next to me is Ben Beasley. He's the branch chief over this program. And Doug Coe is our acting division director. He's not here today.

MEMBER POWERS: I hasten to point out that Doug was a fellow for the ACRS for a couple of years before he went off to a legitimate job.

MR. KAUFFMAN: And some of the previous generic issues staff, for instance Harold VanderMolen, came to ACRS and worked for a few years before he retired. There have been a lot of good people in the program throughout time. But the program has changed.

And we'll talk a little bit about that. My next slide is my agenda. We're going to give some of the historical perspective, basis of the program, the key parts of the program. Going to talk about some of the past program problems. You

can read this slide.

But we're going to give you a good overview, do what we can to explain the program, how it's changed from the prior program, and what we're doing to make it better.

If we go to the next slide, you were able to dig up some stuff that we didn't, as you can tell. None of us were here then. The basis for our program is the Energy Reorganization Act of 1974. And the Act -- I'm not going to read you the law, but it talks about "We will develop a plan for analysis of Generic Issues," or they call them "unresolved safety issues, we will implement protective measures, and we will report to Congress."

So those are our statutory requirements. I'd like to emphasize the Generic Issues Program -- some people in the Agency think it's a research program or a research activity. It's an agency-wide program that is run and administered out of Research.

And that might not seem like a big point, but it's a perception that we're trying hard to change. Because in a lot of cases it's being viewed as an offices against offices program, and

that is certainly not what we're looking for.

I'd also like to emphasize that although it's dealt with predominantly reactor issues, our program is available to all licensing offices. We can deal with security issues, materials issues, new reactor-type issues.

MEMBER ARMIJO: John, does the Generic Issues Program have a budget to fund research, or direct research, to solve the unresolved issue? Or is it --

MR. KAUFFMAN: We're going to talk a little bit about how research and --

MEMBER ARMIJO: Or a role in establishing priorities in Research, if it's needed?

MR. KAUFFMAN: We'll get to that. I would say in general, our activity now is half a branch in Research, and so we have a budget for that. And typically we have set aside some contract dollars to get new GIs started and funded.

MR. BEASLEY: Yes, and that's specific to the program. And another aspect of the answer is that for the active Generic Issues, Generic Issues that are undergoing resolution, they do have separate budgets and separate staffing.

So for instance, GI-191, there's pretty

much a branch in NRR dedicated to that. And they have a budget. So that is independent of the program budget, the program support

MR. KAUFFMAN: One of the points that we'll get to is, the old program, around 1999, prioritized issues. At that point we really stopped prioritizing issues. In fact, we changed the title of NUREG-0933 to clarify that point.

Now, we basically get an issue in, we try and work that issue or find the best place in the Agency to work that issue. Perhaps we analyze it and we find it's been addressed before, it doesn't need to be addressed. But our goal is to find issues and work them actively.

Now, if an issue does require what we'll call longer-term research, one of the problems in the past with the program is a lot of activities got put in there that were, in fact, Research-like activities.

And now our branch tries not to manage Research activities. We try and send that to the Office of Research, and let Research and Research Management, in consultation with the other offices, talk about which work they want to fund and how big of a priority that would be.

As an example, we have have a proposed GI on multi-unit PRAs. The idea is maybe we're missing some of the risk. That would be a huge effort to undertake that, so it's -- the screening analysis is in concurrence, but it looks like that will be referred to Research, and Research will then talk with the other offices and decide, in today's budgetary environment, how much money, if any, we want to spend on that.

MEMBER POWERS: John, you mentioned that you were open to issues of security and things like that. I just had to mention to you, Number 8 on the resolved generic issues in 1972 was "Protection against industrial sabotage."

MR. KAUFFMAN: Well, one thing we find in the program is, issues get dealt with and resolved, and sometimes they come back and resurface.

MEMBER POWERS: Sometimes.

MR. KAUFFMAN: I'd like to point out, status of generic issues is part of the Agency's semi-annual report to Congress. And very quickly, I'm going to talk about, what is a generic issue?

Everybody seems to think they know, but there's a very specific definition for our program.

And that is -- and it pretty much follows the criteria that we'll talk about later -- it's a well-defined, discrete technical or security issue whose risk or safety significance we can adequately determine, and which is generic, applies to two or more facilities, affects public health and safety.

And ultimately that's going to be tied to a risk threshold, because ultimately, if the issue goes all the way through the program, we're looking at backfits and whether or not they can be imposed.

We also are looking to, is the Generic Issues Program the best place to deal with it in the Agency? Are there other places in the Agency that can deal with it better, faster, more efficiently? For example, we have operating experience programs, we have Generic Communication programs. We have a lot of programs.

And ultimately, in the end, it's an issue that could require action by licensees. It could be something that's addressable by revised policy, regulations, or guidance. So the point is, a Generic Issue is something that could lead to regulatory change.

Just a little bit more on what I'll call

definitions. Some people are confused between Generic Issues, Generic Safety Issues, Unresolved Safety Issues. So we'll talk a little bit about what a USI is.

We currently do not have any that are active or open, but a USI is kind of a special case of a Generic Issue. It's only related to nuclear power plant safety, and involves a question of adequate protection. And there's no staff position on one side expected within six months. So if you see a USI, that means it's one of the more important Generic Issues.

As you can see on the slide, our program has dealt with a lot of issues. 853 of them since 1976. Our program is important, because both in Part 52 and in Part 50, there are requirements that applicants for new plants look at the medium and high priority Generic Issues that are in NUREG-0933 and address those in their applications. And as we talked about, it's a very visible program with a lot of periodic and high-level reporting, and these reports go to the public.

When we look at what has become of Generic Issues over time, this pie chart here shows -- the darker blue, 46 percent of the -- well, let

me give one caveat here, before -- this pie chart's based on the 300 high, medium, and low issues that have been dealt with throughout the history of the program.

It does not include issues that were submitted, got a Generic Issue designator, and then were dropped at that point. But 46 percent of GIs lead to a regulatory product, such as Generic Communication policy and rules, changes in Reg Guides, et cetera.

There's a light blue box on the side. Another 18 percent have resulted in what we'll call indirect actions or regulatory products. Other Agency activities that were ongoing were used to address the GI and close it. So roughly two thirds of the issues lead to regulatory change.

And just as a refresher -- I'm not going to go through all 853 issues, but station blackout rule was an issue that was a USI at one point. Similarly, the anticipated transient without scram was another issue that came through the rule.

And many of the TMI action items, for example almost all of 50.34(f) in 10 CFR, changes to and evaluations of aux feedwater at BWRs, HPSI, and RCIC at BWRs, safety parameter display systems,

improved operating procedurs, hydrogen combustion, PORV improvements. So the program is a veritable history of nuclear regulation.

That being said, the program has had some problems in the not-too-distant past. Around the 2005, 2006 timeframe, the Commission was unsatisfied with how timely the program was processing some of the issues. And basically, directed us to do better.

And some of these problems are on this slide. I'll talk about them very quickly. In some cases, ownership and accountability of issues was not clear. And when I say this, the prior program had certain steps of the program -- like the current program -- involve other offices taking activities, especially the implementation and verification stages of these issues.

The problem was, the program was sort of accepting the input we got from these other offices, and that was maybe coming from a worker level. The management in the program offices maybe wasn't involved, and not aware of the input that was being provided.

And there was a lot of frustration, because the Generic Issues Program felt like we were

being blamed for these actions not moving forward. And yet, the people didn't work for us. We couldn't make them do the work.

And so one of the -- and we'll get into some of the changes, but one of the major improvements we've made to the program is to clarify the ownership and accountability of issues. When, if somebody on the Commission isn't happy with an issue, they call Brian Sheron.

And I've already touched on the second bullet. There was sometimes weak management emphasis on resolution. And I also touched on the third bullet, that the program staff was geared towards tracking of the issues, rather than on resolving.

All those affected timeliness. And we've made a lot of changes to try and address that. Another problem with the old program is, andectodally, there were cases where you might have three research people on a panel, and they would decide that this issue should go to rulemaking. They would prepare the memo, and the memo that this issue should go to rulemaking would be about to come out, and everybody would be going "No, no, no. That's the last thing we want."

So in the new program, we'd try and get involvement of offices early on. We try and get involvement of management early on. And we try and surface the different options and disagreements in the earliest stages, where it's easy to address them.

The fifth bullet is minimal public engagement. We've changed the program now, that when an issue screens in we generally hold a public meeting to see if they will want to voluntarily take on this issue. And also just to give them a heads-up, let them know it's coming, and to hear their thoughts and their possible solutions to it.

Again, there's a lot of flexibility built into the new program, but the idea is we want to -- these are real safety issues. We want to deal with them in the best, most expeditious way we can, whether it's in the program or somewhere else.

My next bullet there is, sometimes people played -- I'll call it games -- with our program. There's a provision in 2.206 that if the Agency is actively dealing with an issue, for example if it's in the Generic Issues Program, we don't necessarily have to do anything when we answer the 2.206 petition. Sometimes people couldn't

figure out what to do with an issue, so give it to them, let them figure it out.

And so one of the major changes we've made is, we've kind of tightened up the criteria on what gets in, to give us more control over what gets in and what gets money spent on it. And I think that's helpful. Maybe we've gone too far in that regard. We don't know.

And then a lot of times, again, part of the communications aspect, other offices and the Regions weren't necessarily aware of what was going on in our program. And that still may be the case to some extent, but we make every effort to communicate.

For example, on GI-0199, we had a communications plan. We had several briefings of the Regions, because of the sensitivity of the issue. We did everything we could think of to get the Agency ready to deal with that issue when it was time, when it was right.

And so in many ways, what the program does has changed. In the past, the program did a lot more technical work. Now, we do a lot more management of the technical work resources of others, and a lot more work on the consensus-

building, communication, and coordination. So if I had a takeaway from the meeting, that's the big change of how the program has changed.

The next slide is the Generic Issues Criteria. These are paraphrased and cut down to take out the legal speak from the management director. I touched on these quickly already, but Number 1: affects public health and safety.

And the purpose of this means that we don't look at administrative, organizational, regulatory process or policy issues. Although our program could surface policy issues that need to be addressed.

And ultimately, the first criterion is tied to a risk threshold. If and when it's determined that the safety significance of an issue is low, then we're generally done with it. Although we may hand it off to another office, for example, to issue an information notice or something like that.

Second criterion is, is the issue generic? Does it apply to two or more facilities? That's pretty straightforward. As we mentioned before, we get some of the issues that are difficult. The Agency has a large staff, good

management. They're very good at dealing with most of the issues that come their way. Occasionally, they get some thorny, difficult issues, and those are the ones we tend to get.

But I would say we provide two services there. One, we try and figure out what to do with an issue. And in some cases, we go off and do work to -- what I'll say is ripen, or mature the issue. Develop information to help people decide whether it's a problem or not.

The fourth criterion, again, we're looking at taking issues to regulatory change. The fifth criteria, risk or safety significance, can it be determined? Generally, we try to put numerical values on the risk of issues. But we have provisions to do qualitative, somewhat subjective evaluations of that.

Sixth criterion, well-defined, discrete, and technical. We've had cases in the past where issues have grown. Things got added onto them. And we try and have flexibility. We can group things together that should be. But we also have flexibility to look at things one at a time if that makes sense.

And it might not sound like much, but

the idea that the issue is technical -- our process is open to anybody to submit an issue. We could get a submittal to our program, "I'm worried about nuclear safety." That would be an issues, but we wouldn't spend much time with it, because it's not very well-defined.

In general, since our body of regulations is fairly mature, they have to bring us something that says how this issue isn't addressed by current regulations, how current regulations aren't good enough, how they're based on some assumption that's no longer true. And then finally, our issues ultimately may involve some action by our licensees.

Our next slide is, we have a five stage process. The first stage pretty much happens outside the program. It's identification. As I mentioned, anyone can submit a GI. The form is on the website. Most of our issues come from NRC staff and management; they're internally generated, at least in the recent past.

Our second block there is an acceptance review. I'll call it a quick and dirty review of the issue by the Generic Issues Program staff. And it's geared towards moving the issue forward, unless

it obviously fails one of the seven criteria or there's nothing new on the issue that would suggest there's -- part of it is, we're looking to see if there's a concrete problem there that is being presented to us.

The next stage of our program is a screening process. That is composed of the Generic Issues Program staff or other experts throughout the Agency or from Research that we identify, taking a more in-depth look at the issue and making a recommendation that it is then reviewed by a panel. The panel generally has an SES chair, and it has generally two or more technical experts on the panel.

And the idea here is we're trying to get senior management involvement, and we're trying to get technical experts to give us their take on the issue, and help us identify the path forward.

And of course, the screening panel recommendations are endorsed -- or not endorsed, but the office directors from the affected offices are on concurrence to attempt to get their buy-in, and then the panel recommendations ultimately go to Brion Sheron, our office director, for his endorsement.

If an issue does pass screening, that's when it gets a Generic Issues number, and at that point we will develop a communications plan for it, and generally hold a public meeting to get stakeholder involvement.

After screening, generally a task action plan is developed to perform the safety risk assessment. The idea there is, we're going to develop risk numbers to get a very good understanding of this issue and whether or not it could possibly pass backfit.

And similarly, this will have a panel, and panel members' recommendations have a similar review process. And at that point, if the risk is low, the issue will probably be dispositioned at that point, or it can go on to regulatory assessment, where we will identify possible backfits and attempt to identify the best one.

And as you'll recall , GI-199, we handed that off to NRR after the safety risk assessment stage, when we concluded we didn't have access to the information to let us do the regulatory assessment.

And I'd like to -- the blue box at the bottom there, the issue doesn't have to proceed step

by step through the process. At any point, if we've identified a regulatory action and we get one of the regulatory offices to agree to take on that issue, it can exit the program at that point and go to the regulatory office. We call that a hand-off.

A similar thing, if we decide the issue needs long-term study, it can exit the program for long-term study, have that long-term study work done, and then possibly come back to the program. Or again, if it fails the criteria it can leave the program.

CHAIRMAN ABDEL-KHALIK: Are issues that come up in differing professional opinions automatically entered into this evaluations process?

MR. KAUFFMAN: No, they're not. Although we have had some issues that have come through that process. GI-193, for example.

CHAIRMAN ABDEL-KHALIK: So somebody has to submit it to you for it to go through this assessment?

MR. KAUFFMAN: That is correct.

MR. BEASLEY: And we've sometimes had our management tell us to --

(Mr. Kauffman poured a glass of water.)

MR. KAUFFMAN: My throat's getting dry.

I apologize for getting the water.

MEMBER POWERS: Don't apologize.

MR. KAUFFMAN: Pardon me?

MEMBER POWERS: Don't apologize. We'll sit here.

MR. KAUFFMAN: So one of the things we've talked about is possibly being more proactive in trying to identify and mine some of the data that's available in the Agency for issues.

For example, the Operating Experience Clearinghouse has issues for resolution. We've considered, perhaps, mining that.

MR. BEASLEY: We don't have any current plans to do that.

MR. KAUFFMAN: Right.

MR. BEASLEY: You know, we've talked about that. One of the things that I think John will talk about in a few minutes, that we're trying to do with the program, is just market it a little bit, so that the staff -- you know, newer staff in the Agency -- becomes familiar with the program, knows that we are a place where they can bring issues that they might come across.

And so that's kind of been our first approach, is to just raise awareness of the program.

You know, do some education on the program, so that staff that may have issues and would be willing to bring them to us, would know how to bring them to us.

And so that's kind of been our first approach. We had talked about, but aren't currently pursuing any activities to just go digging.

MEMBER POWERS: You know, I teach a class for the NRC, kind of an introduction to how the regulations came about. I don't have in that class a section on the GI program, but it might be not too much difficulty to put together a few amusing anecdotes, and then a brief description of the program, and point to the place where they can go to submit Generic Issues.

Since it's a class they're required to take, it might not -- I mean, it seems like it's a doable thing. Maybe we ought to chat about it.

MR. BEASLEY: Yes, that would be a great idea. And those types of things are the things that we're trying to take advantage of. We've made presentations similar to this at the vision meetings.

We took advantage of the Generic Issue 199 discussions that we were having around the

Agency to do some of the education, some of the promotion of the program. And so just getting some exposure out there, whatever mechanism we can take advantage of, we want to do.

MEMBER POWERS: I have a one hour section on risk-informed regulation, and it seems like it would fit in there fairly nicely, just as "Here's one of the things the Agency has going on."

MR. BEASLEY: Yes.

MEMBER POWERS: Not with an intent to be an in-depth description, but something that would maybe flag the site on the web, and things like that. Give them a few accounts of issues that have been resolved in the past.

And we certainly have talked about station blackout rule, and the ATWS rule. So it probably would fit in there.

MR. BEASLEY: Yes, that would be great.

MEMBER POWERS: I'll chat with you about that.

MR. KAUFFMAN: Sure. And we're developing a brochure -- we've done a research seminar on the program. And certainly from a knowledge management point of view, we're trying to get the word out on NUREG-0933, and the wealth of

information that's available there.

And one of our engineers has, along with Ben and some others, he's working very hard to modernize, if you will, NUREG-0933, and make it computer-friendly, and all these good things. Okay, enough about that.

So we've already talked about some of these enhancements we've made to the program. I'll touch on them again very briefly. We view it as our role to help management understand the importance of an issue in some cases, and to find the best place for it to be worked in other cases.

So any issue that comes through us, one of the kind of determinations we make is, is our program the best place for this? Even if it doesn't meet our criteria, should something be done on this topic? And can we kind of broker that? Can we talk to people in other parts of the Agency and make that happen?

The second bullet is, being situated in Research, we have access via contracts or through in-house expertise in Research, or through our office contacts to ask for resources in other parts of the Agency, where can we get the resources to work on the issue?

MEMBER SHACK: Is it sometimes difficult to get the appropriate home to accept the issue?

MR. KAUFFMAN: It can be.

MR. BEASLEY: And you know, we haven't had an abundance of issues proposed of late. And so I can't say we have lots of experience with that, but the couple of examples that we have worked on, yes.

There have been some challenges to doing that. But we aren't being frivolous in our rejection of -- not rejection, but not accepting an issue into the program. We have a basis for that.

And so some of that is just a matter of trying to -- I don't want to say convince, but bring the proposer up to speed on what other avenues may be good, may be better for addressing a particular issue.

MR. KAUFFMAN: And I would also say, some of the difficulty we have is, sometimes there's just staff frustration sometimes, if you will, with the regulatory framework, and the backfit framework that we have.

And sometimes they have issues that they're trying really hard to do something about, and they can't figure out a way to do it. Or they

want to write a RIS, they want to change a position, and it's gone to CRGR, and CRGR told them "No, it's a backfit. You can't go there."

We get some issues that way, where we're almost like an appellate court. "Maybe you guys can get a different answer."

MEMBER POWERS: And Shack may want to send a cop up there pretty soon.

MR. KAUFFMAN: And then, again, as we said, these issues aren't always easy and straightforward. And there have been some cases where we've tried to give the issue back to the group that proposed it, saying "We think you have all the tools you need to deal with this."

And they're going "No, we've been trying for 20 years."

MEMBER SHACK: Does it ever get to the point where you have to go to higher management, who says "You take it."

MR. BEASLEY: Not in our experience. We haven't had to deal with that. And the management directive is written that there's not necessarily an appeals process if we don't accept an issue. You know, it's written such that our determination is the determination.

But we take it very seriously, the responsibility of being a good steward of all of these safety issues. It's not that they're non-issues. So we do have that, because we agree that something is an issue.

It's just a matter of what's the best path for getting it addressed. And so we are, at least, working towards the same goal with the proposers.

MR. KAUFFMAN: And I would say for issues that are in the screening and safety risk assessment stage, we talked about before that it's built in that the affected office directors concur on that. And in the last rewrite of the MD, that was a pretty serious point of contention, in that the way it's set up now is, no one office director can force an issue in. No one office director can keep an issue out.

And if the office directors can't agree and get along, then the process is that it would go to the EDO.

MEMBER SHACK: Okay. So there is a resolution process if it comes to that.

MR. KAUFFMAN: Yes. We haven't had to go down that path, but in many cases it takes a lot

of briefings and a lot of selling, and a lot of getting division directors talking to their office directors, and getting the office directors to come to agreement on what to do with -- 199 comes to mind. We did more briefings than I care to think about on 199.

MR. BEASLEY: It was very --

MR. KAUFFMAN: It worked out, but it was not as quick as some of us might have hoped.

MEMBER SHACK: That was going to be my next question, just what's the timeframe before you get an issue, and then you sort of get onto the regulatory part of where it's really getting a serious assessment?

MR. BEASLEY: Each of the stages has a timeframe objective. Because of the complexity of the issues that we tend to be handling these days, it's difficult to meet those timeframe objectives. There aren't firm requirements for processing an issue at any particular stage in a particular time, but that has been a criticism in the past, that issues have taken a long time, and very understandably.

Some of the issues, you know, have been in the program for almost a couple of decades.

There are some issues that we're hoping to close out fairly soon that have been there almost 15 years. And that's admittedly a very long time between identifying an issue and being able to come to some regulatory resolution where licensees have had to make a change, to do something to address that issue.

So yes, there's some guidance on that, but it's not a requirement. And again, we go to the discussion of the complexity of the issue. And Generic Issue 199, for example, is merging the old deterministic seismic requirement as the licensing basis with the new probabilistic seismic hazard curves.

And it's uncharted territory, and we've had to work on figuring out how to assess it, and we also are challenged to figure out how to do something with it with the licensees.

MEMBER RAY: Listen up, everybody.

CHAIRMAN ABDEL-KHALIK: Okay.

MR. KAUFFMAN: Okay. I had one point I was going to add, that in the past, in the early days many Generic Issues could be -- the solutions, the resolutions could be identified by picking a few representative plants and looking at that.

For GI-199, even though it's a generic issue, site-specific evaluations were done at each and every plant to understand the risk at each and every plant. So it was one GI, but it was really more like 104 separate GIs.

This is a quick list of the current GIs. I wasn't going to talk in any detail about these. GI-186 and 189 are, hopefully, going to be closed here in the near future. GI-186, I was looking at it this morning, and I learned that that came about out of USI-836 resurfacing when new information came up.

But anyway, one of the things we talked about is ownership of issues. When issues are handed off from the program now, we call that Regulatory Office Implementation, and that's a status that's in our Generic Issues Management Control System report.

And that means that a program office like NRR has the lead and is responsible for progress on it. And so we have three issues in Regulatory Office Implementation, and those are 189, 191, and 199.

MEMBER BANERJEE: So the S has been dropped, right?

MEMBER POWERS: Pardon me? Oh, yes. A long time ago. I think it was sometime after the staff took over that the S disappeared.

MEMBER BANERJEE: So why do we keep saying GSI?

MEMBER POWERS: Because we're hidebound.

MEMBER BANERJEE: And why does the Commission keep saying GSI?

MEMBER POWERS: Because they're hidebound. We polluted their thinking.

MEMBER SIEBER: I'm just a little bit curious. You know, I look at GSI-186, which is about to close. Well, I was a young man when that was --

(Laughter)

MEMBER SIEBER: Do you know the history? Because back in, I would say, the early 1980s, we were testing cranes, and the controls on them. And that's a long time.

MR. BEASLEY: Yes. And I'm not familiar with the specific issues in 186, but the stage they're at is just confirming that each of the facilities has, in fact --

MEMBER SIEBER: Done their work?

MR. BEASLEY: -- implemented all of

that.

MEMBER SIEBER: They should have been done 20 years ago.

MR. KAUFFMAN: Well, as we talked about, there was a USI on that that was, I think, resolved. This issue came up in 1999. There was a NUREG study done, 1774. Then there were engagements with industry. Industry endorsed -- or we endorsed industry standards.

NRR put out a RIS, and there's an inspection activity. One of the reasons -- you're right. The regulatory process is long. The old program had like seven or eight stages.

And some people might call this sleight of hand in the new program, in that the old stages of implementation and verification used to be considered to be in the program and were part of that timeframe.

Now we continue to track those in our control system and report those to Congress, but they're considered to be out of the program. And there's a lot of tricky words with the program. Resolution, as historically used by the program, meant the answer to the issue. What are you going to do about the issue?

It doesn't mean that the resolution has been imposed and implemented everywhere. And in the last rewrite of the MD, we came up with my own favorite confusing words, and that is "Closed for the purposes of the program."

"Closed for the purposes of the program" means it has exited our program and been handed off to another program. So now we talk about when all Agency actions are completed.

MEMBER POWERS: Just so that you know, in 1972 the Committee defines "resolved for a Generic Issue to mean that a specific conclusion or policy decision has been reached by the Directorate of Licensing and the ACRS. Resolution of the item indicates the Committee is satisfied in a generic sense. However, this does not mean that improvements should not be investigated and possibly implemented."

They've been wrestling with what it means to be resolved since at least 1972.

MR. BEASLEY: And on this specific one and others, for heavy load drops, this may be some aspects that didn't get worked based on the guidance that came out.

MEMBER SIEBER: Yes, because there had

to be something before. Because that's ancient history to me.

MR. BEASLEY: Yes.

MEMBER SIEBER: You know, the paths that you mark on the floor, and all that stuff.

MR. BEASLEY: Right.

MEMBER SIEBER: I'm just surprised it's still around.

MR. BEASLEY: And again, this -- you know, I'm assuming that there are some specific aspects that are the subject of this generic issue.

MR. KAUFFMAN: They are completing the inspections, considering some inspection guidance changes. And we may be getting a new date here in our next quarterly update.

MEMBER SIEBER: Does total resolution mean that everybody is in compliance, or exemptions have been given as appropriate? How do you know that you're done?

MR. BEASLEY: Yes. For all Agency actions being completed, that would be the case.

MEMBER SIEBER: And licensee actions also?

MR. BEASLEY: Yes. Part of the Agency actions are verifying that the licensees have

implemented their changes. Yes.

MEMBER SIEBER: Okay.

MR. KAUFFMAN: And those used to be -- in the old program, those were specific stages in the program. In the last rewrite, we moved those out. Some people say it's sleight of hand. I'm being up front about it. You can judge for yourself.

MEMBER SIEBER: Well, how many are still open right now?

MR. KAUFFMAN: These are the five. And two are set to be completed.

MEMBER SIEBER: That's it?

MR. KAUFFMAN: Yes.

MEMBER SIEBER: That's all that's left on the list? That's not bad.

MEMBER POWERS: When I first came on to the Committee, it was widely presumed that the Generic Safety Issue list was a place to bury an issue. If you didn't want anything done with it, put it in GSI. Since that time, they have a much better track record.

MR. KAUFFMAN: And I think the new criteria, and the fact that no one office director can force an issue in -- and Ben will probably tell

you, too, I'm a little bit perhaps overly protective, at times, about letting issues in. Because taking them to screening and taking them to panels is a lot of work.

We want things to get in that should be, but we want to keep things out that don't belong. And we do want to find homes for things that need work, whether it's in or out of the program.

MR. BEASLEY: And that's the flip side that I wanted to emphasize. We're not trying to just keep them out to keep them out. We really want to find the best avenue for addressing them, and so our expectation of ourselves is that we will find a home for every issue. It might not be in the program, but we intend to find someplace for it to be addressed.

MEMBER POWERS: That's good.

MR. KAUFFMAN: And I'm kind of a convert to the program. I only came over to the program four years ago. I spent most of my career in AEOD Operating Experience, and the last thing I wanted was for my issue to go to the Generic Issues Program.

I wanted to talk about a Generic Letter, this, that or the other. I've been there, so I

wanted to make this program work for people.

MEMBER POWERS: There's just no question. Over the last decade, the resolution rate for Generic Issues has gotten astronomically high compared to what it was when I first came on the Committee.

MEMBER BLEY: And the entry rate is lower too, it looks like.

MR. BEASLEY: Yes.

MEMBER BLEY: By quite a bit.

MR. BEASLEY: Yes, it is.

MEMBER SIEBER: It looks like somebody's been working.

MR. KAUFFMAN: This next slide, the activity level of Generic Issues. You can see that a few years after TMI, in the early to mid 80s, there was just a flurry of activity at that point in time.

I wasn't here, but people tell me there was a whole division in NRR that was working on GIs. And now you can see, the activity is much lower. We're down to half of a branch. But what that does mean is that the issues we have, we can be on top of. And we can push them and move them.

As we mentioned before, there are two

proposed issues that are of some interest right now. There's multi-unit risk, and we also have dam failure. And again, it's sort of like GI-199. It's related to external events and new information.

MEMBER BLEY: Are these a particular set of dams, or just it's really generic and general? Are there a handful of these around the country that we're especially worried about?

MR. KAUFFMAN: Well, NRR submitted this to us, and it was based on some inspection findings and concerns about Oconee and Fort Calhoun. Certainly there are other -- there are a lot of big dams on the Missouri River. There are plants downstream.

There are some other plants. I think there's maybe about 20 plants that possibly need to be looked at. Clearly, it wouldn't be all plants.

MEMBER STETKAR: John, I'm kind of curious about --

MEMBER SIEBER: What is the multi-unit risk?

MR. KAUFFMAN: That was an issue that was sent to the program from the SORCA project, and the idea there is that some events, perhaps seismic events or station blackout events, could affect both

units at the same time.

Staff could be dealing with that at a single site. And so the idea there is, are we missing -- because we predominantly have single-unit PRAs, are we possibly missing some of the risk? And that's a question that, without developing the PRAs, we can't really answer.

And so conceptually, to me, that's an issue that should be sent to Research, and Research and the other offices should decide if that's something we want to spend money on. But we'll see how that plays out.

MEMBER SIEBER: But that's not a new hazard. That's just a redefinition of a meaning of a specific event, right?

MR. KAUFFMAN: Scientific knowledge continues to advance. That's essentially what GI-199 was about.

MEMBER STETKAR: When you say scientific knowledge --

MR. KAUFFMAN: Scientific understanding.

MEMBER STETKAR: Of what? How to do a risk assessment for a multi-unit site? People have done that for about 25 years in the industry. Is it a new -- I mean, I don't understand this process, to

some extent.

MR. BEASLEY: I think the new --

MEMBER STETKAR: I understand the dam failures, and I understand the seismic hazard, because I -- that's evolving knowledge. But this one is curious.

MR. BEASLEY: The multi-unit risk is probably not new scientific understanding, as much as it is the way the Agency has handled assessing risk. We do it per reactor rather than per site. And so that was --

MR. KAUFFMAN: And it's also tied to the fact that we're talking about more reactors at some of the sites, perhaps modular reactors. And I'd just like to emphasize that 933 is a good knowledge management tool. A lot of information.

Go to the next slide where we talk about program initiatives. We've already touched on this. We're trying to improve how we present the information in 933. There's some information in 933 that's significantly out of date, and we're working to correct some of that.

And that's related to the second bullet, that there are some low-priority issues in there that, again, don't belong in the new program. We

don't define things as low priority. It's either in the program or it's not.

And as Ben had talked about earlier, we're trying to increase awareness of the program. We're giving briefings whenever we can. We've gone to conferences out at ICAP, brochures we're developing.

We've done all-hands briefings. We've established office counterparts in the other offices to keep their ears as to what's happening, and bring us issues, help their staff with submitting issues. So we are doing all that we can to promote the program.

One activity that we're going to do in the near future is, on our internal web page, we have lists of proposed issues and their resolution, but we haven't had that on the public page. We haven't periodically put out that to management. That's something that Ben is working on, and thinking about how to best do that.

And there's been a lot of concerns about if issues get transferred out to Research that aren't Generic Issues, say at the pre-GI stage, what happens to them? And so we're looking at how to improve the tracking and accountability and improve

reporting on the pre-Generic Issues that get sent out for research activitities. That was all of the prepared remarks I had.

MEMBER POWERS: Thank you very much. Do people have questions about the Generic Issues Program that we haven't already asked?

Well, thank you very much. And Ben, I'll get in touch with you. I'll put together three or four slides, I think, from this material, and I'll just stick it in when we talk about the station blackout and the ATWS rule, and attach some of this advertising material about the Generic Issue and tell them to get in contact with you if they want more information.

MR. BEASLEY: That would be great.

MEMBER POWERS: I think it fits in nicely, and there are a couple of nice anecdotes to stick in there that could make it quite interesting.

MR. BEASLEY: Thank you.

MEMBER POWERS: Mr. Chairman, it's all yours.

CHAIRMAN ABDEL-KHALIK: Thank you. At this time, we are off the record.

(Whereupon, the above-entitled meeting went off the record at 2:02 p.m.)

Generic Issues Program Overview

ACRS Full Committee Briefing

March 11, 2011

Agenda

- Historical Perspective
  - Basis of Generic Issues Program
  - Key Elements of the Generic Issues Program
  - Results of Generic Issue Evaluations
  - Past Program Problems
- Fundamentals of the Generic Issue Program
  - Generic Issue Criteria and Process
  - Generic Issues Program Enhancements
- Current Issues
  - Current Generic Issues
  - New Issues and Program Initiatives

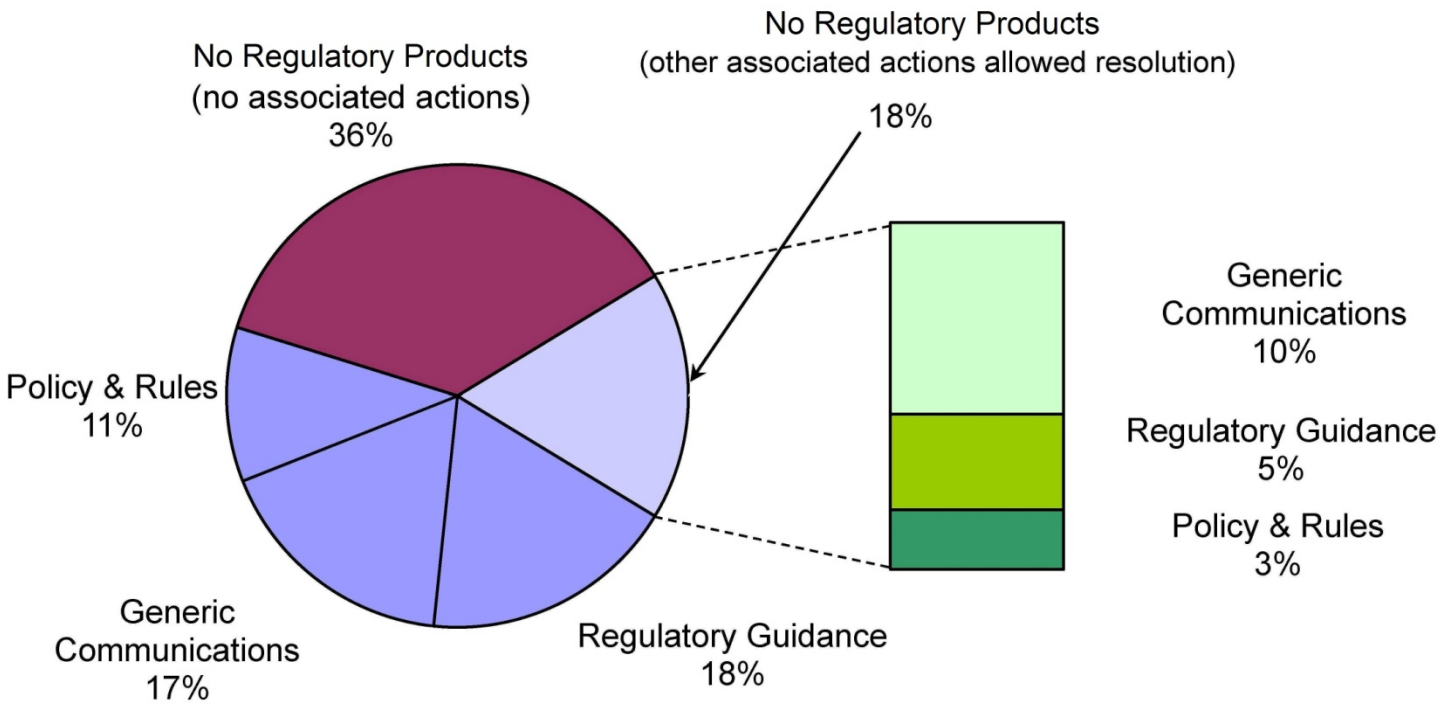
Basis of Generic Issues Program

- Energy Reorganization Act of 1974 (1977 amendment)
  - "Sec. 210. Unresolved Safety Issues Plan
    - The Commission shall develop a plan providing for the specification and analysis of unresolved safety issues relating to nuclear reactors and shall take such action as may be necessary to implement corrective measures with respect to such issues. Such plans shall be submitted to the Congress on or before January 1, 1978, and progress reports shall be included in the annual report of the Commission thereafter."

Key Elements of the GI Program

- Unresolved Safety Issue is a special case of Generic Issue (GI)
- 853 Generic Issues since 1976
- Part 52 has requirements to use NUREG-0933
- Reporting
  - Annual SECY on the Program
  - Semi-annual reporting to Congress
  - Quarterly reports on issue status

Results of Generic Issue Evaluations



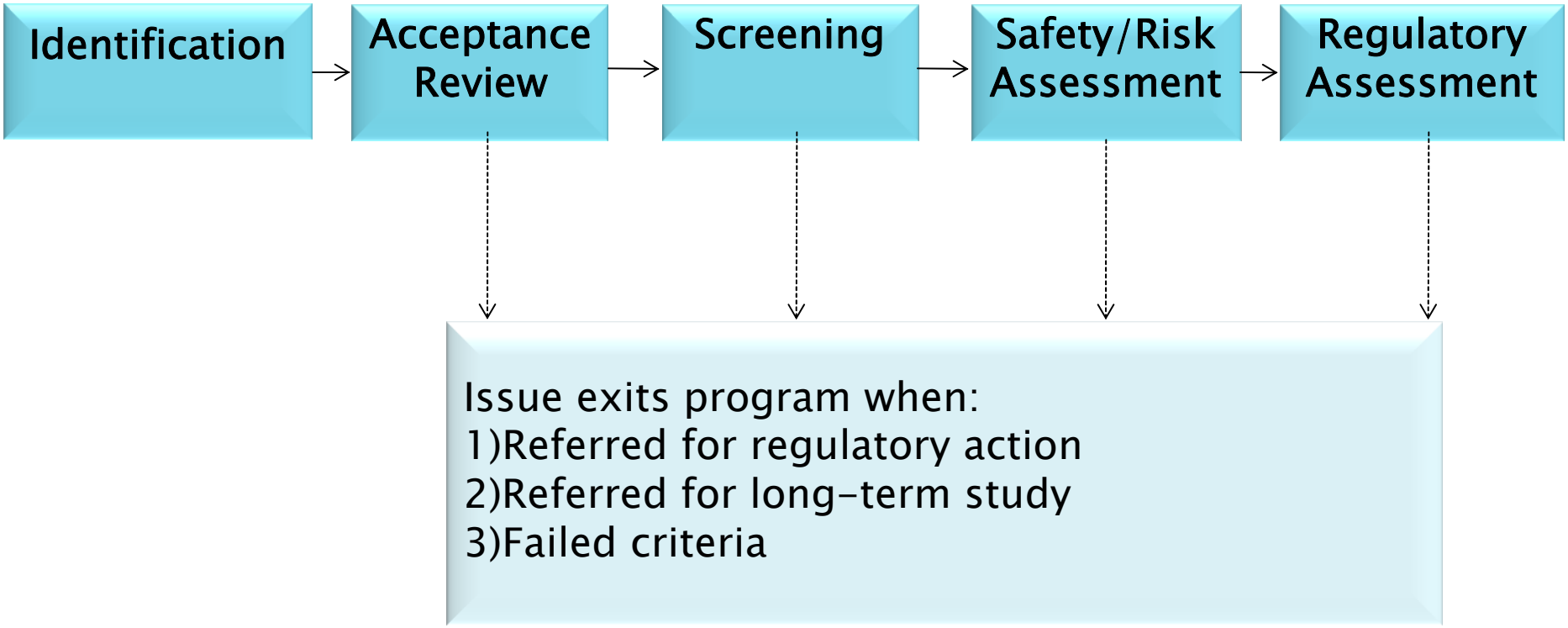
Past Program Problems

- Ownership and accountability not clear
- Weak management emphasis on resolution
- Program staff geared toward tracking and reporting rather than resolving issues
- Disagreement on proposed resolutions surfaced late in process
- Minimal public engagement
- Issues put in or excluded from program at management discretion
- Regulatory Offices and regions not aware of issues being worked

GI Criteria

1) Affects public health and safety
2) Applies to two or more facilities
3) Not readily addressable through other regulatory processes
4) Can be resolved by regulation, policy, or guidance
5) Risk or safety significance can be adequately estimated
6) Well defined, discrete, technical
7) May involve review, analysis, or action by licensees

GI 5-Stage Process

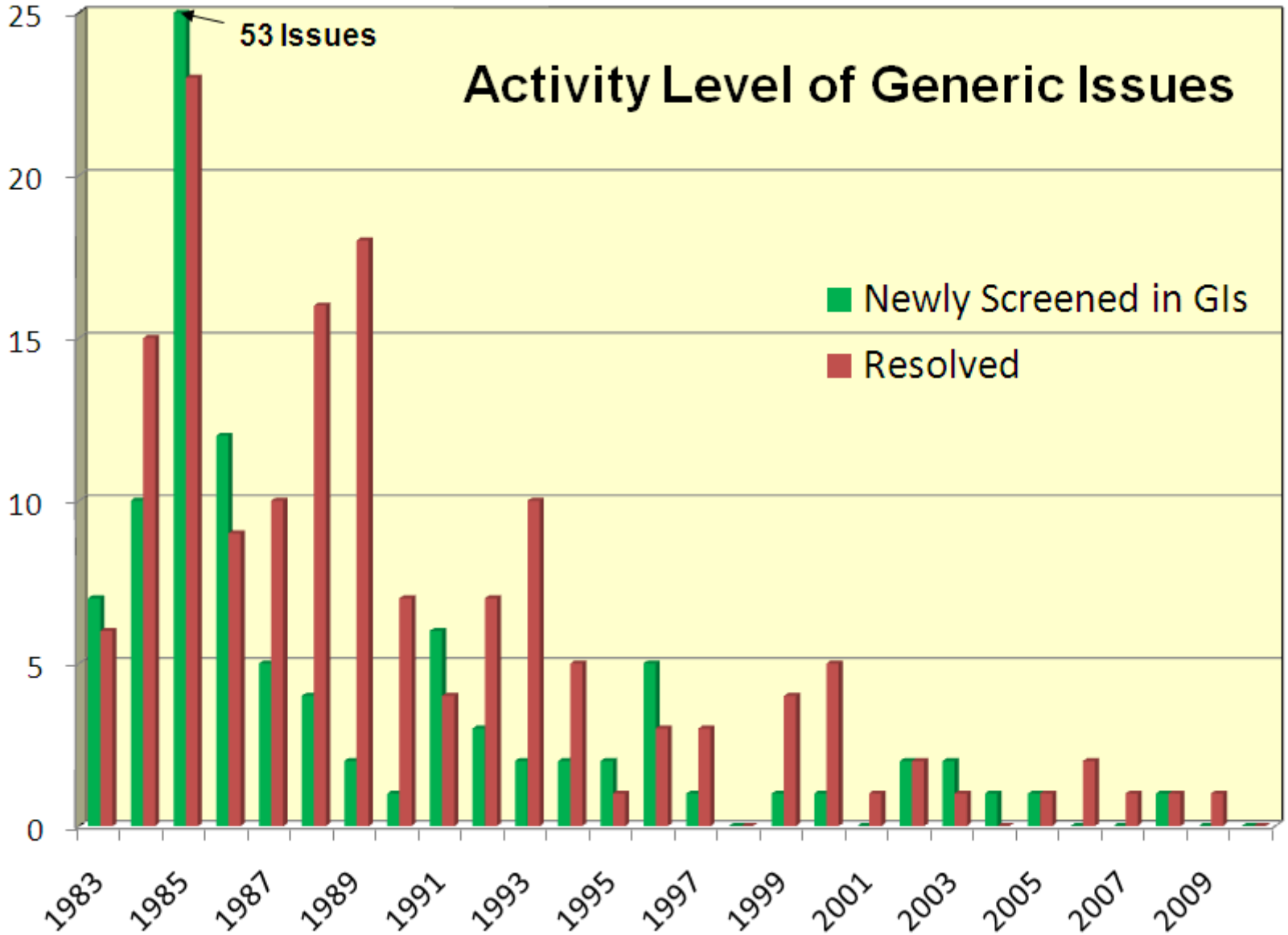


Generic Issue Program Enhancements

- Find appropriate home for issues
- Apply appropriate technical resources
- Screening / Assessment panels
- Concurrence of stakeholder offices
- Issues that meet the criteria for a GI get a Communication Plan and public meeting

Current Generic Issues

- GI-186, Heavy Load Drops (Mar. 2011)
- GI-189, Susceptibility of Ice condenser and Mark III Containments to Early Failure from Hydrogen Combustion (Mar. 2011)
- GI-191, Assessment of Debris Accumulation on PWR Sump
- GI-193, BWR ECCS Suction Concern (in S/RA)
- GI-199, Updated Probabilistic Seismic Hazard Estimates in CEUS (in ROI)


Activity Level of Generic Issues
53 Issues
Newly Screened in GIs
Resolved
25
20
15
10
5
0
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009

New Issues and Program Initiatives

- Two Proposed Issues
  - Multi-unit risk (Pre-GI-001)
  - Dam Failure (Pre-GI-009)

- Contemporary issues are complex

Program Initiatives

- Improve access to information in NUREG-0933
- Disposition older, low priority issues still in system
- Increase awareness of the program
- Increase visibility of proposed issues
- Increase tracking/accountability of proposed issues transferred out for additional research