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**DEFECTIVE WORK, EFFECTIVE LITIGATION,
CLAIMS, COVERAGE AND TRENDS**

EXPERTS IN DEFECTIVE WORK CASES

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Expert witnesses are typically critical to a plaintiff's case that work on a construction project was defective. Determining that something has gone wrong may not be so hard. But establishing the reasons for those problems, concluding whether the causes meant that the defendants had failed to meet applicable standards, and assessing what damages were caused, all may require the kind of specialized knowledge for which expert testimony is particularly appropriate. The challenges for a plaintiff are (1) to identify, at an early point, those areas in which expert testimony will help its case, (2) to select qualified, helpful experts, and (3) to ensure that their testimony is effective.

I. Early Use of Experts

The typical plaintiff in a construction defect case should recognize the need for expert assistance at a very early stage. Long before a lawsuit is brought plaintiff should have made a determination as to the reasons for the difficulties which have been encountered. In that process a careful and knowledgeable evaluation is usually the key.

Thought should be given at the outset to having initial reviews conducted by experts retained by counsel. The opinions of such "consulting" experts are generally protected from disclosure unless that expert is later designated to testify at trial.¹ In this way, a party considering whether to bring an action can have preliminary, candid evaluation done which will not prejudice a later suit if the party chooses to bring one.

Such an independent evaluation is often extremely valuable before a decision is made to go forward with what may prove to be very expensive litigation. For example, if the owner of a power plant is met with conflicting claims by its architect engineer and contractor as to where responsibility for delays and cost overruns in the project lies, a knowledgeable evaluation by a third-

party experienced in the field can inform the decision whether to bring litigation, and if so, against whom.

Occasionally, an expert evaluation is required before a suit may be brought. For example, in some jurisdictions a certification from a licensed architect, is required before an action can be filed against an architect.² Even where there is not such a specific statutory requirement, good sense often dictates the early use of experts.

II. Determining Areas for Expert Testimony

An initial gauge of areas in which experts should be considered are those same areas in which the potential plaintiff seeks technical expertise in making an evaluation as to whether it has a case, and, if so, against whom. An example serves to illustrate how this works. An owner contracts for the construction of a high-rise building using lightweight concrete panels with embedded windows. Shortly after being installed, the panels begin to deteriorate and the windows to leak. The owner would want to consider expert review in the following areas:

- (a) the engineer's design of and the specifications for the panel;
- (b) the manufacturer of those panels, including evaluation of compliance with the specifications, the quality of the materials used, and the appropriateness of the techniques employed;
- (c) conformance with applicable industry standards;
- (d) if the project was not completed at the time the problems arose, the effect of the defects on the remainder of the construction schedule;
- (e) damages suffered by the owner.

Different portions of this analysis require different capabilities. Review of the design

and specifications most likely calls for the expertise of an architect or engineer expert in this type of construction. The second and third questions, the quality of the work and the compliance with applicable standards, could involve the same expert or perhaps one with a different background. Many engineers focus on forensic work, doing failure analysis. As a result a civil engineer with concrete experience related to large structures might well provide the necessary expertise for all three of the initial questions. But, it is also possible that an experienced contractor, with a history in construction projects of a similar type, could provide the necessary insight into the quality of the work and conformance with applicable industry standards.

The last two questions -- delay analysis and damage calculations -- require different types of expertise. If the project is not completed at the time the problem occurs, the owner may want to consider a scheduling expert's analysis to determine the impact of the problems on timely completion of the job. A separate accounting expert might be helpful in determining the extent of non-delay damages attributable to the problems encountered, although an effective record of the cost of repair or replacement may provide at least an initial estimate of those costs.

The same basic analysis is applicable to most construction projects. Areas in which a non-expert owner would require technical assistance to evaluate the cause and extent of its damages are the same areas in which it should be considering the possibility of using expert witnesses to assist in making its case in subsequent litigation.

III. The Rules for Qualifying Experts After *Daubert* and *Kumho*

There is no point in having a testifying expert unless he can qualify to present his expert opinions at trial. So selection of an expert begins with a good understanding of the applicable rules to qualify an expert to testify as to his opinions at trial. Because of two important Supreme

Court decisions, those rules have changed in some important ways in recent years.

Rule 702 of the Federal Rules of Evidence has long stated the general understanding as to who could qualify as an expert. That Rule first identified the areas in which expert testimony was appropriate as those where “scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue.” Clearly, the Rule permits expert testimony on a broad range of issues. As the Advisory Committee Notes to the 1972 Proposed Rules explained, Rule 702 is “broadly phrased” and areas of expert knowledge “are not limited merely to the ‘scientific’ and ‘technical’ but extend to all ‘specialized knowledge.’”

The Rule also broadly stated the bases on which an individual might qualify stating that a person could be an expert “by knowledge, skill, experience, training, or education.” Again, as the Advisory Committee Notes to the 1972 Proposed Rules pointed out, this language brings within the rule “not only experts in the strictest sense of the word, e.g., physicians, physicists, and architects, but also the large group sometimes called ‘skilled’ witnesses, such as bankers, or landowners testifying to land values.” Putting this standard in the context of a construction project, expert witnesses are not limited to architects and engineers. Rather, an experienced contractor, knowledgeable from his working career with the issues at hand, might easily come within the Rule.

But qualifying expert witnesses in the federal courts, and in the 40 states which follow those rules, has been considerably complicated by the Supreme Court’s decisions in *Daubert v. Merrill Dow Pharmaceuticals, Inc.*³ and *Kumho Tire Co. v. Carmichael*.⁴ The *Daubert* decision expanded the role of the trial court in determining whether to accept expert testimony. Rather than simply deciding whether the testimony would be relevant, *i.e.*, helpful to the trier of fact, after *Daubert* the trial court is required to act as a gatekeeper to determine whether the expert testimony

is reliable, *i.e.*, scientifically valid.⁵ The Court provided trial courts with a non-exclusive checklist to use in assessing the reliability of scientific expert testimony. That list is:

1. whether the expert's technique or theory can be or has been tested - that is whether the expert's theory can be challenged in some objective sense, or whether it is simply a subjective, conclusory approach which cannot reasonably be assessed for reliability;
2. whether the technique or theory has been subject to peer review and publication;
3. the known or potential rate of error of the technique or theory when applied;
4. the existence and maintenance of standards and controls; and
5. whether the technique or theory has been generally accepted in the scientific community.⁶

On remand, the Ninth Circuit described the task which the Supreme Court assigned to trial courts in *Daubert* as “to determine whether [the] expert’s proposed testimony amounts to scientific knowledge,” “constitutes good science,” and was “derived by the scientific method.” *Daubert v. Merrill Dow Pharmaceuticals, Inc.*⁷ That formulation tracked the Supreme Court’s emphasis in *Daubert* that the required inquiry by the trial court was a “flexible one” in which the “overarching subject is the scientific validity - and thus the evidentiary relevance and reliability - of the principles that underlie a proposed submission.”⁸

The Supreme Court’s subsequent decision in *Kumho Tire v. Carmichael*,⁹ has

particular relevance to qualifying expert witnesses in a construction case. In *Kumho*, the court extended the trial judge's gatekeeping obligation from only testimony based on scientific knowledge to testimony based on technical and other specialized knowledge as well.¹⁰ The Court held that there was no reason that all experts, not just scientific ones, should not be held to a standard that their opinions have a reliable basis in the knowledge and experience of their disciplines. The Court stressed that the *Daubert* test was a flexible one and that it did not provide a definitive checklist for qualification. Rather, the "gatekeeping inquiry must be 'tied to the facts' of a particular 'case.'"¹¹

The Court summarized the purpose of the rule it stated as follows:

The objective of the gatekeeping requirement is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.¹²

Revised Federal Rule of Evidence 702, which was effective in December 2000, clearly reflects the holdings in *Daubert* and *Kumho*. It codifies the trial judge's gatekeeper function by adding some restrictions to the broadly stated rules for areas in which expert testimony is proper. The new requirement is that the witness who qualifies by knowledge, skill, experience, training or education may provide expert testimony only "if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case."

The job of the trial judge under the revised Rule 702 is explained well by the

Advisory Committee's Notes to the 2000 Amendments. "The trial judge in all cases of proper expert testimony must find that it is properly grounded, well reasoned, and not speculative before it can be admitted. The expert's testimony must be grounded in an acceptable body of learning or experienced in the expert's field, and the expert must explain how the conclusion is so grounded."

The gatekeeper function for non-scientific experts has particular application to the construction area. First, it means that in the use of scheduling and accounting witnesses, the party offering the expert must take particular care that the methodology used is accepted in the field. For example, if a scheduling expert uses a CPM analysis which is widely rejected, his entire testimony might be excluded in a Rule 702 challenge.¹³

A trial judge's gatekeeper function also applies to a construction expert who may be providing less theoretical testimony. But the Notes to the 2000 Amendments to Rule 702 stress that the function does not mean that "experience alone -- or experience in conjunction with other knowledge, skill, training or education -- may not provide a sufficient foundation for expert testimony." Rather it recognizes that the Rule expressly "contemplates that an expert may be qualified on the basis of experience." Among the examples it gives is *Tassin v. Sears Roebuck*,¹⁴ where the court found that a design engineer's expert testimony was admissible when it was based on facts, a reasonable investigation, and traditional technical/mechanical expertise and when he provided a reasonable link between the information and procedures he used in the conclusions he reached. The Advisory Committee Notes, however, warn that, if a witness is relying solely or primarily on experience, he must explain "how that experience leads to the conclusion reached, why that experience is a sufficient basis for the opinion, and how that experience is readily applied to the facts."

The role of these rules will depend generally on the type of proceeding involved. In an arbitration, the formal rule is unlikely to play any role. And in a bench trial, there is generally no need for the judge to serve as a gatekeeper since the fact finder being protected would be the judge himself. As a result most courts have concluded that the “better approach” in a bench trial is to permit all experts to testify and then to allow vigorous cross-examination, presentation of contrary evidence and careful weighing of the burden of proof to test “shaky but admissible evidence.” *Fiero v. Gomez*.¹⁵

But even though in a bench trial the usefulness of expert testimony is more appropriately addressed “through the weight accorded the testimony, rather than through the threshold determination of admissibility,”¹⁶ the *Daubert* factors retain their importance. For it is those same tests of reliability – set out in the factors – which are likely to be determinative in the judge’s assignment of relative weight to particular experts.

Finally, it is worth noting that these rules concerning qualification of expert witnesses are apparently having an effect on the choice of forum by plaintiffs’ counsel. The ABA Litigation Sections’ publication, Litigation News, reported in its July 2000 issue on a study by the Rand Institute for Civil Justice. The article reports the belief among some observers that in states like California and New York, which have not adopted *Daubert*, more plaintiffs are being driven to state court to avoid the possibility of losing needed expert testimony.

IV. Selecting Expert Witnesses

With an understanding of these rules, it is possible to turn to issues surrounding selection of appropriate expert witnesses. In the case of witnesses relying on technical analyses, such as an engineering expert doing failure analysis, it is important that the theories on which the expert

relies have a level of acceptance in his technical community. It is particularly useful if the expert has advanced and defended his theories outside the litigation context such as in a peer reviewed publication. For the expert who qualifies by experience, clearly the depth and relevance of that experience in work similar to that in dispute is critical. If an expert has that experience, the fact finder may well give his opinion at least as much deference as a careful scientist or technician. *See, e.g., K-Square Corp.*¹⁷

Whether the witness is chosen for technical expertise or experience, the expert must be articulate and persuasive. He must be able to explain the facts or data which he has used and the application of his opinion to the facts of the case. Where possible, he should be able to cite independent, validating sources.¹⁸ And it should go without saying -- although, it is too frequently missed -- that the expert should be able to provide opinions specifically focused on the issues critical to the case.

A good expert is a mixture of salesman and teacher. It is virtually certain that the expert will know much more than the jury or the judge about the areas in which he is being asked to testify. His ability to simplify and persuade will be critical to his usefulness to the case. That means he must be able to state his opinions in straightforward terms which a layman can understand.

There are many different sources for identifying potential experts. Prior experience, either with or against an expert may give the lawyer excellent insight into the effectiveness of an expert. Other lawyers and published decisions are also an excellent source. If the subject is a technical or scientific one, colleges or universities with departments relevant to the particular field can be a place to investigate, although care must be taken to avoid someone whose approach is overly academic.

Whatever the sources used to identify potential experts, the client should be directly involved in selection of the expert. In some cases, the client may have an excellent basis for evaluating the expert's qualifications. But in any case, the client needs to be comfortable with the expert and able to work with him effectively.

V. Expert Deposition

There are different schools concerning the way in which an expert should be deposed. Some regard the deposition solely as an opportunity to find out what the experts opinions are and how they are supported. Those supporting this school regard anything more as simply alerting the expert and the opposing lawyer to what will come on cross at trial and giving them the opportunity to prepare for it. Others see the deposition as an opportunity to begin the process of challenging and, if possible, discrediting the other side's expert. Advocates of this view regard the deposition as an opportunity to pin the expert down in testimony which can, if necessary be used to impeach him at trial. In addition, they point out that a high percentage of civil litigation, and particularly of construction cases, is resolved by mediation or other ADR processes before any trial or arbitration takes place. As a result they believe that if an attack on an expert is possible, it must be attempted at the deposition if it is to have any possible effect on the outcome of the case.

Since it is rarely possible to predict with certainty which approach opposing counsel will take with any particular expert, prudence dictates that any expert should be prepared for his deposition with the expectation that his position will be subject to an all out assault. Understanding the views of the other side's expert is particularly important in that preparation since it is likely he will be involved in assisting the opposing lawyer both before, and, perhaps, during the deposition.

VI. Expert's Direct Testimony

1. *Qualifications*

The first goal in an expert witnesses' direct testimony is to establish his credentials to provide his opinion on issues relevant to the case. While this is partially a matter of simply qualifying the witness as an expert, if you have chosen the right expert, it should be more as well. This testimony is the opportunity to begin to impress the trier of fact with the reasons that the expert's opinion should be given particular weight. Among the topics which should be covered, as applicable, are education, including degrees and honors; memberships and participation in professional societies; licenses or certifications; scholarly lectures and publications; and work experience in a relevant specialty. Particularly where your experts credentials appears superior to those of the other side, you should refuse offers to stipulate to an expert's qualifications. In such cases, you want to be sure that the trier of fact hears, and is suitably impressed by, your expert's qualifications.

It is worth remembering that, since the qualifications of a person to be an expert is a preliminary matter, leading questions are not objectionable. Leading the witness through qualifications may have a dual advantage. First it overcomes any problems which might arise from the expert's discomfort in elaborating on his qualifications. Second, there is less danger that the expert will appear arrogant or pompous as a result of tooting his own horn if he is simply agreeing with trial counsel's summary of his qualifications and achievements.

2. *Basis for Opinions*

Once qualified the expert's direct testimony must establish the basis on which he is able to express opinions on the matter at hand. Under Federal Rule of Evidence 703, an expert's

opinion may be based on data derived from one of three sources: (1) personal observation; (2) information presented at trial; and (3) other information reasonably relied on by experts in the field. The last category was introduced “to broaden the basis of expert opinions” and “bring the judicial practice into line with the practice of the experts themselves when not in court.”¹⁹ But Rule 703 was amended in 2000 to emphasize that an expert’s reasonable reliance on inadmissible information as a basis for an opinion does not, of itself, make that information admissible.²⁰ Although the Rule continues to permit experts to rely on inadmissible evidence, the trial court is “to consider the information’s probative value in assisting the expert’s opinion on the one hand, and the potential of prejudice resulting from the jury’s potential misuse of the information for substantive purposes on the other.”²¹ The trial court should admit otherwise inadmissible information on which the expert has relied only if its probative value to the jury for evaluating the expert’s opinion outweighs the potential prejudice.

An expert’s first hand knowledge is often regarded as the most convincing basis for expert opinion. As a result, it is extremely useful to have the expert familiar with the work either from the time of construction or as a result of a later site inspection. Some courts have gone as far as to regard the evidentiary value of a witness’ expert testimony as “dubious” if he has no personal knowledge of the underlying factual situation and has relied extensively on information not placed in evidence.²²

Given the built-in preference for opinions based primarily on admissible evidence, it behooves the construction lawyer to give careful consideration to the rules for authenticating and admitting documents in the typical documentation intensive case. Familiarity with the requirement of the business records exception to the hearsay rule (*see, e.g.*, Federal Rules of Evidence 803(6) is

particularly important. Documents from a job which were regularly kept for a business purpose, and were created by, or from information provided by, a person with knowledge are typically admitted so long as they are authenticated by the custodian or other qualified witness, and are determined to be trustworthy.²³

3. *The Opinions*

The last key element in an expert's testimony is a statement of his opinions and the basis for them. Each opinion must be stated clearly and succinctly. And for each opinion the expert must carefully explain the reasons for that opinion. The objective should be to get the expert's opinion out succinctly with enough information about the underlying work to make the basis for those conclusions comprehensible and convincing.²⁴ An expert who has prepared a detailed report need not repeat his entire report in his testimony. Rather, he can use the testimony to highlight the report in order to establish that his opinions are well-founded and reasonable, and then refer the fact finder to his expert report for further detail.

Maintaining the interest of the judge or jury is extremely important. In that respect a few well chosen props can be helpful. But beware of demonstrative exhibits which are too complicated to be easily understood. The ideal demonstrative exhibit is simple and large so as to transmit information or communicate a strong impression.²⁵

Finally, it may be advisable to anticipate cross-examination in an expert's direct testimony. If there are potential weaknesses in the expert's work, eliciting them in direct permits counsel to present them in the most positive light and may defuse much of the effect the information would have if first raised on cross. For example, if a staff member conducted the tests on which an expert's opinions are based, this information can be disclosed on direct with an explanation of how

closely the expert supervised the staff member and the test procedure. But the focus in such anticipatory testimony should be on areas which can be effectively attacked on cross. Some very real weaknesses may be so complicated as to be very difficult for the other side to question in a way which the trier of fact can understand. Leave your opponent to attempt those areas on his own without appearing defensive by anticipating them on cross.

VII. Preparing the Expert For Cross

For a well-prepared expert, cross-examination may well be a better forum than direct. Opinions explained and persuasively defended in the caldron of hostile questioning tends to be given more credence than those expressed in direct testimony which the jury may regard, not unreasonably, as canned.

The job of the lawyer for the plaintiff preparing his expert for cross is to anticipate every possible avenue of attack. Carefully review your expert's prior writings and testimony in earlier cases for possible inconsistencies and prepare him to explain them. Ensure that you understand the learned treatises, accepted in the field, which may express views at variance with those of your experts. Then make sure he is able to explain persuasively why he disagrees with that work. Prepare him to be able to explain clearly and succinctly why he believes the defendant's expert is wrong in areas in which they are at odds. Make sure that he is ready to respond to any lines of inquiry that might be used to question his impartiality. And work with him so that he is able to reemphasize and elaborate on the critical point in his direct testimony in response to what is likely to be a more detailed exploration of his views then occurred on direct.

Questioning of your expert at his deposition may have presented insight into the line of attack likely on cross. Of course, an expert should have been prepared for his deposition. But

counsel should also anticipate areas in which deposition testimony might be used against the expert and be sure that the expert is ready for such questions.

One area that experts are regularly attacked is in the matter of their compensation. While no one who is at all sophisticated in trial work is surprised that experts are compensated, the same may not be true for juries. As a result, opposing counsel may wish to attempt to make a great deal out of the compensation which your expert is receiving. One way to deal with that, of course, is to be sure when your turn comes to extract the information that your opponents' experts are being compensated as well. Perhaps, if you are particularly lucky, or if they are particularly misguided, you will have the good fortune to discover that they have violated the cardinal rule against trying the expert's compensation to the results in the case. A more straightforward way to deal with the issue, however, is simply to take it head on in direct testimony. Consider eliciting from your witness, in an unapologetic and simple way, the information that he is being compensated for his time. If he has served as an expert for contractors, particularly of course if it is the defendant in your case or others similarly situated, have him explain that he was paid in those cases as well. And, if consistent with the facts, have him explain that his compensation is at his regular rates, used for whatever work he does.

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The expert is critical in analyzing, evaluating and presenting the plaintiff's case in a construction project. Employing qualified experts in the critical areas of disputes, preparing them well and presenting them effectively are usually among the most important element in proving the plaintiff's construction defect case.

1. *See, e.g.*, Federal Rule of Civil Procedure 26(b)(4)(B)
2. *See, e.g.*, California Code of Civil Procedure § 411.35(a)
3. 509 U.S. 579 (1993)
4. 119 S.Ct. 1167 (1999)
5. *Daubert*, 509 U.S. at 588-589
6. *Daubert* at 593-594 and Advisory Committee Notes, 2000 Amendments to Federal Rule of Evidence 702
7. 43 F.3d 1311, 1316 (9th Cir.), *cert. denied*, 516 U.S. 869 (1995)
8. 509 U.S. at 594-595
9. 119 S.Ct. 1167 (1999)
10. 119 S.Ct. at 1171
11. 119 S.Ct. at 1176
12. *Id.*
13. *See, generally*, Hahn, Hayes and Pages, “Admissibility of Expert Testimony Under the *Daubert* Standard,” Construction Briefings, 2nd Series, June 1997
14. 946 F.Supp. 1241, 1248 (M.D.La. 1996)
15. 865 F.Supp. 1387 (N.D. Cal. 1994), *aff’d. on other grounds*, 77 F.3d 301 (9th Cir.), *vacated on other grounds*, 117 S.Ct. 285 (1996)
16. *Id.*
17. NASA BCA 1271-23, 76-1BCA ¶ 11,867
18. *See, e.g.*, *Cabrera v. Cordis Corp.*, 134 F.3d 1418, 1421-23 (9th Cir. 1998)
19. Advisory Committee Notes to 1972 Proposed Rules
20. Advisory Committee Notes to 2000 Amendments
21. *Id.*
22. *See, Weaver-Bailey Contractors, Inc. v. United States*, 19 Cl. Ct. 474, 479-80 (1990)

23. *See, generally*, Cohen & Oshiro, “Obstacles to Admitting Evidence in Construction Cases,” *The Construction Lawyer*, January 2000, at pp. 36, 38
24. *See*, Wawro, “Effective Presentation of Experts,” 19 *Litigation* 31, 33 (Spring 1993)
25. *See, generally, Id.* at 36