

## Reader Comments on CWI ‘Endorsements’

I am a long-time AWS member and a current AWS SCWI. My purpose here is to draw attention to a change of policy by the AWS with regard to the AWS CWI program. Many of the parties who may be interested in this policy change (such as representatives of certain industry groups, specification-writing bodies, employers of CWIs, and of course CWIs themselves) are likely not yet aware of the changes taking place in the AWS CWI program. I myself was only informed of this change recently because my AWS SCWI certification was nearing expiration, and AWS sent me the recertification package, part of which detailed the policy change regarding the AWS CWI program.

The policy change to which I am referring (though it has not been clearly called a policy change by AWS) is AWS’s new plan to offer additional codebook examinations as an “endorsement” to a CWI’s certification documents. This is permitted by the recently issued revision to the AWS publication, QC1:2006, *Standard for AWS Certification of Welding Inspectors*, which is the governing standard for that program.

Of all of the various changes in the 2006 edition of QC1, the one change that is potentially controversial because it is in effect a change to an AWS policy that has stood for over 30 years is the aforementioned plan to offer codebook examinations as “endorsements.” Why is this a policy change? Because for the past 30 years, AWS has been stating by the granting of certifications that the AWS policy is that if an inspector can read and interpret one code, then the inspector possesses the skill to read and interpret any code. AWS determines if the inspector in question possesses the skill to read and interpret a code by the administration of a codebook exam during the CWI test (and to a lesser degree by the administration of the practical exam during the CWI test, for which the candidate must use and interpret the AWS-supplied specification).

Additionally, this policy is actually written in certain AWS publications. For example, in the AWS publication, *Welding Inspection Technology* (4th edition, 2000), on pages 1–12 of Module 1 where it describes the CWI program, it states “the CWI certificate does not state what code the inspector used on the examination. A CWI is qualified to use and interpret any welding code or standard.” Another example, the PowerPoint® presentations that AWS furnishes to the instructors who lead the CWI seminars make similar statements. Even AWS’s latest CWI brochure (available at [www.aws.org/certification/cert-ed2006.pdf](http://www.aws.org/certification/cert-ed2006.pdf)) reinforces this standpoint when at the description of the D1.1 Code Clinic it trumpets “as a leading construction code, D1.1 is the ideal tool to teach effective code use.”

This policy now appears to have been changed. The 2006 edition of QC1 defines the term endorsement as “approval of an additional skill documented in writing, and added to a certification credential.” Note that the definition clearly states “additional skill.” If AWS now starts giving endorsements for codebook examinations, then according to the QC1 definition of the term endorsement, AWS is effectively stating that this is an additional skill. This is to all intents and purposes a policy shift by AWS to the position that a CWI does not possess the skill to read and interpret a code unless specifically tested on that code. The plan to issue endorsements for such skills as radiographic interpretation is not at issue. By the QC1 definition of the term endorsement, radiographic interpretation (for example) is not a skill that the CWI has been determined to possess by way of the CWI test. Radiographic interpretation would be an “additional” skill,

and therefore an endorsement could be appropriate. The problem is strictly with the plan for codebook test endorsements, which is not an additional skill.

### What Is Driving This Change?

From what I have been able to gather, there seem to be a number of things driving this whole codebook endorsement thing. These include:

- A perception that it is wanted by certain industry segments;
- A belief that it will help to eliminate the thorny problem of the existence of CWIs who do not have the necessary skills (apparently there have been a number of complaints against CWIs regarding code interpretation);
- A belief that it will add value to the CWI certification;
- Increased revenue.

It may well be that certain industry groups would like verification that a particular CWI has taken a codebook test on their particular code of interest, and that would seem like a need or request that AWS can help with. However, let’s analyze this for a moment. If an industry segment asks for this, what they are in effect asking for is some form of additional assurance of competence of each individual CWI that may work in their industry. The new plan to issue codebook endorsements does nothing to satisfy that need, whether real or perceived. How can I make that statement? Think about the following:

Even if an individual has taken the codebook test portion of the CWI examination using the codebook of interest to our supposed industry segment, all that is required to pass this test is a score of 72%. I think we all would agree that if we got our day-to-day codebook issues right only 72% of the time, we wouldn’t be in business long. Additionally, a CWI can renew his/her certification indefinitely without having to ever retake a codebook test. Can anybody honestly think that a codebook endorsement (let’s even presume a score of 100 was obtained, even though that information would not show up on the endorsement) that states that a CWI took the codebook portion of the test using the codebook of interest to our supposed industry segment provides any value at all 8 or 10 or 14 or 20 years later? If there is no assurance that the CWI has been using the code of interest in the meanwhile, what value does that 14-year-old “endorsement” provide? The answer is none.

Regarding the belief that this will add value to the CWI certification, I just cannot buy into that. The entire time in my career in which I have been a CWI or an SCWI, the position of AWS (up until now) is that I possessed the skill (proven by testing) of being able to read and use a code or other standard. How can having this taken away from my certification add value to my certification? Quite the contrary, the first time AWS indicates on some CWI’s wallet card which code was used during the CWI test, they will in effect be downgrading my and every other CWI’s certification. They will be stating that a CWI is only good for the code listed.

Though on the date I write this I can no longer find it on the AWS Web site, previously the codebook endorsement was being publicized as a means of satisfying the nine-year recertification requirements. This may be perceived by certain individual CWIs as value-added (though to me it seems more like sugar coating), but it would do nothing to lessen the problem detailed in the above example. A CWI tests to D1.1 in year 1, at year 9

gets “endorsement” for D1.5, at year 18 gets “endorsement” for API 1104 — at year 25 what is the value of that D1.5 endorsement received 16 years before? I can only hope that the fact that I no longer find this particular bit of information on the AWS Web site means that those responsible for this are having another long, hard look at it.

For those CWIs who pay for and maintain their own certifications, and there are many, this cannot be perceived as value added. They already have large time and financial burdens to bear because many must maintain multiple certifications (NDT, Special Inspector, state and/or local certifications, etc.) in order to work in their fields. This would only add to their certification costs. The same holds true for those organizations, such as testing labs, that serve many industries. They cannot view as positive the possibility of having to pay for their CWIs to test to numerous codes.

This sort of initiative could possibly increase revenue for AWS. That is good, as the certification program is the number one revenue generator for AWS and those revenues are used to further the art and science of welding, which benefits us all. However, a certification program that does not serve a clear industry need is destined to fail, and failure could actually hurt revenues. There will certainly be a number of CWIs who will say, “Enough is enough!” People are willing to pay a fair price for a credential that certifies they have additional skills and knowledge to offer, but they will quickly see through having to pay extra for something that up until now they already possessed.

## Are There Any Alternatives to This Plan?

There are a number of ways that the issue of CWI code reading competence could be more effectively addressed than does the new “endorsement” plan. Fundamental to any solution is for all parties to understand that AWS will never be able to certify the total competence of an individual, no matter how many tests they give. The CWI test has to be viewed in much the same way as a welder’s performance qualification test. All it does is indicate if a person has the necessary skills to be able to do a particular job — it does not indicate that a person will indeed satisfactorily perform the required duties every day. It is the employer’s responsibility to ensure that an individual is able to and does perform satisfactorily.

QC1 is very well written with regard to the employer’s responsibilities. Paragraphs 1.3, 1.4, and 1.5 of the 2006 edition (available for free download on the AWS Web site at [www.aws.org/certification/CWI/certqc1-06.pdf](http://www.aws.org/certification/CWI/certqc1-06.pdf)) are very clear on this. Taken together, these paragraphs state, “In the certification process, AWS conducts an examination to determine a person’s general knowledge of welding inspection and related technical areas. No determination is made of an individual’s capabilities in applying that knowledge within a specific work environment or under actual working conditions. It shall be the responsibility of the employer to determine that the SCWI/CWI/CAWI is capable of performing the duties involved in his/her particular welding inspection assignment. This standard is intended to supplement the requirements of an employer, code, or other documents and shall not be construed as a preemption of the employer’s responsibility for the work or for the performance of the work.” I cannot imagine that this could be written any clearer.

So if we have the following givens:

- There is a perceived problem with the performance of some CWIs with regard to codebook reading skills;
- AWS is attempting to address this problem, which indicates that individual employers are not living up to their responsi-

bilities as outlined in QC1, and;

- Codebook endorsements will not solve this problem.

Then what are some possible alternatives? First of all, the qualification requirements for CWI could be tightened up. What passes for the required initial welding-related experience can be pretty broad. If you are the guy who delivers welding electrodes for the local distributor, you likely have the minimum qualifications to take the CWI test. The second thing that could be done would be to require some sort of additional “maintenance” of the inspector’s certification, over and above what is required now. Currently, a CWI simply has to document two years of welding-related employment in a three-year period. This could also be tightened up to something similar to what The Welding Institute requires for its CSWIP program. Additional documentation that provides proof of continuing welding inspection-related experience would be necessary, and it would have the added benefit of making the employer document that they are fulfilling their QC1 responsibilities.

The additional codebook examination idea does not need to be scrapped. What does need to happen is that it not be tied in with QC1, and that it not be considered an “endorsement.” In fact, divorcing it from QC1 would have the benefit of opening it up for anybody to take the exam. This could conceivably evolve into AWS offering an independent third-party service that verifies if an individual can properly interpret any particular code or standard. If I am a structural steel design firm, it may well benefit me to have my design engineers take an AWS test on the D1.1 Code. Divorcing it from QC1 would give AWS the flexibility to be able to tailor codebook exams for many different possible end users, not just welding inspectors. This would certainly have a net positive effect on revenues — additional tests, additional seminars, etc. — and could well be more lucrative than codebook “endorsement” tests that are tied to QC1 and therefore limited to welding inspectors.

To sum up, I disagree with the recent policy change in the AWS CWI program, specifically the plan to issue “endorsements” for additional codebook tests. As I have described, the details of this new plan do not appear to have been completely thought through as the new plan, as conceived, will not solve any perceived need and will also effectively downgrade the certifications of all CWIs.

I would like to emphasize that I am definitely not trying to disparage the work done on this issue by those volunteers of the various involved AWS committees. As a member of one of the AWS technical committees, I am well aware of the hard work and commitment that these professionals have given this. I do feel though that with a bit more work, some useful solutions can surely be found that will satisfy the needs of all interested parties. My hope is that this open letter to the editor of *Inspection Trends* will help to make all of the possible stakeholders in the AWS CWI program aware of what changes will soon be taking place, such that they can better inform themselves and voice their positions on this important matter.

Clifford Mankenberg

AWS member and Senior Certified Welding Inspector

## Responses from AWS Certification Committee Members

*I read Mr. Mankenberg’s comments with a great deal of interest, and I wanted to respond to a few of his major issues. I am a member of the Certification Committee, and I remember the heated discussion that took place when we came out with another change in QC-1-96, the SCWI. There were complaints about how this would*

downgrade CWIs, but it didn't, and today many of the people who complained are SCWIs. So, let's move on to current issues.

First, I would like to say that CWIs are **not** qualified to interpret any codes; and I do not believe that AWS policy or the Board of Directors would suggest that due to the liability of such a statement. In fact, codes in this country are legal documents and can only be interpreted by the committees that write them. The welding code committees that most CWIs are familiar with are ASME and AWS D1. Both of these committees publish interpretation documents and have a formal inquiry process for public request for interpretation. I believe what the writer is trying to say is that CWIs have demonstrated by their open book standard exam their ability to **use and apply** a selected code for the purpose of performing visual weld inspection in accordance with their capabilities as stated in AWS B5.1, Table 1, and that they have been certified by AWS QC-1 to do this task. If more specific knowledge of the code is required, then it is normally the responsibility of the employer to provide additional training for the CWI.

But, as the writer correctly pointed out, the Welding Inspection Technology (WIT) documents and PowerPoint® presentation revised in 2000, which a private subcontractor wrote, did in fact make the statement "that a CWI is qualified to use and **interpret any codes** or standard." As I pointed out in the previous paragraph, this is neither AWS policy nor the position of the Certification Committee. This statement will be corrected in the WIT, which is currently being revised. It is unfortunate that when training documents are not proofread carefully, or required to be approved by committee, personal opinion can find its way into the documents without notice. Incidentally, there is a disclaimer in the beginning of all AWS training documents stating, "AWS cannot guarantee that it is error free."

The writer is also correct in stating that the CWI card has never stated codebook exams, and I do not believe that this administrative practice will change in the near future.

The format that AWS staff is developing to document a supplemental standards exam will be a separate card where other endorsements like the RI and the ACCP VT will be recorded. As the writer pointed out, taking a Standards Exam today to a current edition will not demonstrate in years to come that the CWI has kept current. These exams are not designed to qualify any level of competency beyond that demonstrated in successfully passing an exam, at a given period of time, which required preparation training and enough knowledge of the code to pass a test. On one of my recent CWI jobs, the customer's verification inspector did not ask which D1.1 Code edition I tested on, he simply wanted to know if I had used the Structural Code on my CWI exam. The industry apparently recognizes and accepts the open book exams as one substitute for an employer's responsibility to train and prepare CWIs to work with standards, even if we argue the point.

Today we are experiencing changes as CWIs. There are more frequent requests where a particular job, organization, or agency is requiring that a CWI be used who has taken a particular open book standards exam. This may exclude some CWIs from working on these jobs. Under the old QC-1, there was no allowance for taking an additional standards exam, but now you can. I understand that many of us do not like to see this code-specific trend, but it is not our choice when a customer requires a specific code exam for CWIs to work a job. In fact, it happened to me personally twice this year on a structural steel project. Since I work as an independent CWI, and I have no "employer" to provide me with training to demonstrate my familiarity with the required code being used on this job, I had to show one customer my old test score report to prove that I had used AWS D1.1 on my exam, and the other verification inspector who knew me, accepted my word that I had taken the AWS D1.1 Exam. Without that I would have lost this

\$50 per hour job.

AWS will develop additional code and standards workshops, and, incidentally, the writer's suggestion of opening these up to any interested party is an excellent idea, which I am sure AWS will consider. Currently some people who now take the CWI/WIT prep course have no intention of taking the exam, but simply want to know more about welding and inspection. I have a few such people in most of the seminars that I teach.

So, in summary, changes are occurring as the CWI program matures and industry becomes more "specifically oriented." AWS cannot afford to allow our past dominance as a certifying body of welding inspectors to become diluted by other competitive organizations that now offer specialized endorsements and additional code exams. Expanded options must be made available through AWS to enable its CWIs to be competitive with other welding inspectors certified by the CWB, API, SSI, and ACCP VT to mention a few. And, finally, I would like to invite anyone interested to attend our open Certification Committee meetings, especially if you are interested in greater Certification Committee involvement. We are currently looking for new members who have an interest in contributing on one of our many new subcommittee projects and feel they can attend meetings regularly.

Bob Wiswesser  
Chair, AWS Certification Committee  
Senior Certified Welding Inspector

I have not met Kip Mankenberg, but I have communicated with him on several occasions. He's knowledgeable, and he is a volunteer on the BIA Committee on Methods of Inspection. His concerns are real, and his opinions are sincere.

I believe he, like many others, misunderstand the intent of the changes the Certification Committee has made and how these changes affect them as CWIs. Where the misinformation comes from is not as important as the Certification Committee making an effort to correct the misunderstandings.

One step is for the AWS Education Department to correct the information contained in its textbooks and slide presentation. Likewise, the AWS instructors have to understand what the Certification Committee policy is with regard to the intent of the open book examination. The information contained in both the slide presentation and the textbooks are one person's interpretation of QC1. It does not represent the position taken by the Certification Committee nor does it properly interpret the relevant paragraph contained in QC1 concerning the intent of the open book examination. The Certification Committee researched past editions of QC1 and found no instance where it was stated or implied that passing any one open book examination qualified the CWI for all welding codes and standards. While the instructors have the right to their personal opinions and to disagree with the Certification Committee's official position, as contractors or employees being paid by the AWS, they have a responsibility to instruct the students based on the published policy. They can express their personal beliefs outside the classroom.

I believe one of the objections is that many individuals perceive the additional open book examinations as a money grab by AWS. The cost of an open book examination is a fraction of the cost of the "Boot Camp" or some of the other alternatives to the nine-year renewal process.

Another objection is the listing of the specific open book examination on the CWI card. This has been addressed by the decision to issue a separate card for the listing of AWS-issued endorsements.

While the Certification Committee states that taking an additional open book examination is strictly a voluntary decision, it is ultimately the customer or company utilizing the services of the

*CWI that will make the decision of what specific, if any, open-book examination is required for their work. They, primarily Departments of Transportation, have been asking for it; in some cases demanding that prospective candidates show evidence they passed a specific open book examination. Now the information is available and made more convenient to both the inspector and prospective employer/customer. It only affects those CWIs who work for customers or employers that impose that requirement. I suspect the majority of the CWIs will be unaffected.*

*I still believe it is a win-win situation for CWIs and SCWIs. They can renew on their ninth year by several means: professional development hours earned by taking relevant courses at local colleges or seminars offered by professional societies such as ASM, ASME, AWS, AISC, ASNT, ASQ, etc.; they can complete the 14-day marathon "Boot Camp" session; they can retake the entire CWI or SCWI examination; or they can take an open-book examination using the welding standard that is relevant to their sector of the welding industry.*

*Al Moore  
Member, AWS Certification Committee  
Senior Certified Welding Inspector*

(Editor' Note: With regard to the CWI seminar materials mentioned by both Wiswesser and Moore, the D1.1 slide set has been corrected and the revision of *Welding Inspection Technology* (WIT-T) is scheduled for the first half of next year.)