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**From:** Evan Vokes  
**Sent:** Thursday, June 02, 2011 3:23 PM  
**To:** David Taylor  
**Cc:** Robert Lazor  
**Subject:** RE: NDE in fabrication shops

The only form of NDE interpretation certifications recognized in Z662 is GCSB so this must weigh in on our conversation. If I was the board, I would never accept a persons NDE opinion that is untrained in a formal sense as you cannot prove competence as per 54 (2).

Keystone phase II pump stations completed the NDE for pump station fabrication by hiring our own NDE. They had brought in Acuren to both Cord and Abraxus but I had asked Rob Stewart at the time but he did not know how it came about. We hadn't discussed that whole regulation thing yet and so he didn't understand the nuances of my request at that time.

Shane Watt was the welding inspector for this portion and also reviewed all the film. I did not know the NDE was independent till Shane asked me to visit Cord to confirm that some of the DWSI shots and gamma shots were in accordance to the specification. We had looked at his welding records and NDE records at the time. John Riley, Steve Leong and Richard Coglon had transferred over to Keystone but I don't know how they got around to the independence

I had talked to Frank Tse about what he does for fabrication.

Frank is a NAIT material engineering technologist. He reviews the film but does not audit. Frank carries no formal training beyond what he learned in his post secondary schooling.

I could not round him up today for details

Yesterday's conversation with Fred Kubke was pretty convenient as he confirms, that he is not formally trained but he reviews film and knows what to look for with density and wire sensitivity. Fred was very clear that it is not an audit and was relieved to find out that I had written "review" in my memo. This is what he does when he goes into fabshops but I have never seen tools for reviewing field fabrication film in a TC construction trailer or witnessed a review yet so the assumption is the task must take place in the darkroom.

When we started reviewing Fabrication shops in 2007 I was ignorant of any requirement for independence of NDE as I was working off the old spreadsheets that Gerard gave me. This was permissible for NGTL systems as they fell under ERCB and ABSA rules but we had never expanded the scope of fabrication approvals in any of the provinces that fell under the NEB. The only related check we did was to look at ability to qualify and handle subcontractors. The only comment I have made on NDE during a fabrication qualification before is I asked Maloney to hire PT and MT through their subcontracted vendor as the Maloney build vessels had cracked fillet welds on internals in the past. We have reviewed zero NDE procedures as we are only occasionally involved with fabrication. Harry had over a hundred projects and we never issued one hundred different WPS nor did we review and approve hundreds of procedures and technique sheets. The project guidelines are pretty specific about how the welding inspector looks at this but no where is there ever a reference to having a trained inspector look at NDE. It was Crimtech in Red Deer that raised the questions two years ago which is when I found out about the significance of rule 54. Apparently Dave Hodgkinson wrote a memo on this subject that disappeared into the annals of time. This was subsequent to the WestPath ruling but I have never seen this email but from what I gleaned the subject matter was that, "it is not permissible to let any NDE be hired by a construction contractor" and the outcome is that Integrity PMs know that they must hire their own NDE, even for pipe replacements.

There was a very definite reason why the first memo dealt with audit. I know Doug Brunning had submitted two applications to the board for permission to audit Prime contractor hired NDE and he was turned down on both occasions. Either audit is in or out but I cannot be counseled both ways.

It is not an option that has been accepted by the Board so I had included the option in the first memo.

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**From:** David Taylor  
**Sent:** Thursday, June 02, 2011 8:23 AM  
**To:** Evan Vokes  
**Cc:** Robert Lazor  
**Subject:** NDE in fabrication shops

Please find out how Keystone completed the NDE for fabrication in Canada? Also find out from Harry or Frank what the process is for evaluating the NDE? Do we upon the review of fabrication shops review there NDE sub-contractors and related procedures?

Dave