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EDITORIAL

Handling Change

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When Keith, Amy and their family arrived at our house, Ellison, the youngest of their three children, dashed from the car to the Dog House and deposited her luggage on the top bunk, the very bunk her older brother has traditionally "owned". This bed is the favored bunk for the grandchildren even though there are five beds in the Dog House and one other top bunk. Austin, the oldest of Keith's children and a junior in college, sauntered into the room, replaced Ellison's luggage with his, stating, "This is my bunk, it has been my bunk ever since Mamaw and Big Mac built the Dog House and when I'm here I'm going to sleep in this bed". A few words were exchanged before Ellison talked to her parents, accepted the status quo and reluctantly decided to sleep in the blue room rather than the Dog House. The Dog House is our grandchildren's room complete with computer games, television sets, books, movies and other necessities of life, including a door to the lower deck and the water front. The Dog House is governed, by the grandchildren, using a set of rules they developed over a decade ago. The rules are (1) respect other's property, (2) keep voices down, (3) don't interrupt people, (4) keep hands to yourself, (5) do what you're told, (6) don't be a smarthead, (7) clean up all messes and (8) don't touch things you're not supposed to. The rules are hand printed in multicolors on paper that is now faded and the words in yellow are barely readable. No changes have been made to the rules since they were first posted even though the activities in the Dog House have significantly changed.

Several points applicable to many failure analysis laboratories may be related to the Dog House rules. Many laboratories post protocols while others may have notebooks or cards documenting anticipated behaviors. Over the years the established protocols for laboratory practices, failed component examination and handling, sample preparation, examination and storage technologies, customer interactions and analytical evaluations evolve. Unfortunately, some protocols are handwritten and posted on faded, yellow paper while other protocols only exist in the minds of the failure analyst or laboratory technician and formal changes to the protocols are not made. The required practices were well established when they were developed decades ago but new technologies have been incorporated into the laboratory. New equipment has been acquired. New personnel have been hired. However, the faded protocol remains posted on the laboratory wall and hand written changes, some in pencil and some in ink, are listed by adding words and drawing lines through the original copy.

Operating protocols need to be changed but change requires time and time is money so a decision is made to postpone the protocol changes. Actually, no decision is made, the need for change is simply ignored. Failure analysis practices are evolving. New analytical techniques are emerging and personnel capabilities may be improving.

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Keeping abreast of the changes and having the proper protocols posted on the laboratory walls, in notebooks and in the minds of laboratory personnel.

The lack of attention to changing the protocols may lead to a practicing analyst not even following the old, very simple rules (protocols) posted in the Dog House, especially if the failure analysis is critical and rapid results are necessary to please a high value customer. The rule "do what you are told" is ignored so that short cuts may be taken to save time. "Clean up all messes" becomes irrelevant because the timing of the analysis is too critical for housekeeping exercises. The equipment necessary to finish the job may lead to a lack of "respect (for) other's property" and "touching things you are not supposed to" may become a common practice as the analyst scurries around the laboratory. If things go wrong blaming someone for the failure and yelling may replace the rule, "keep voices down". The rules, "don't interrupt people" and "keep hands to yourself" may be replaced by priority actions that shove other programs aside and hog equipment and resources, rather than cooperating with co-workers for the good of all competing programs. Premature guesses as to the root cause of the failure may occur because an analyst believes that obtaining the rest of the data is unnecessary. Often such actions may cause the analyst to become a "smarthead" when the guess turns out to be wrong. Guessing can be avoided by observing the rule, "don't be a smarthead". Premature guesses can, and often do, complicate the development of a root cause analysis because the customer and the analyst become satisfied with the guess and fail to seek the actual answer. "Don't be a smarthead" may be the most important rule posted on the Dog House wall.

Austin's treatment of Ellison when he entered the Dog House is similar to the habits of many managers. "We have always done it this way and as long as I'm here things aren't going to change." Although very few managers would actually make such a statement because of the rapid advances in technology, many management styles adhere to the no-change philosophy. Analytical laboratories are often reluctant to incorporate metallography into their evaluation protocols while metallurgical laboratories frequently avoid the use of finite element analysis and other emerging analytical techniques.

Handling change is always difficult but is also a necessary part of life. Change, when handled correctly, usually brings increased efficiency and joy. Think of the changes you have seen and then laugh at the initial reluctance to accept the change. We use a smart phone to "dial" a number, some metallic golf clubs are "woods" and the lane under a basketball goal remains the "key". Managers often want to do it the way it has always been done and new ideas are difficult to accept. Management frequently wants a premature guess rather than waiting for completion of the data collection and analyses. What about you? Are you a "smarthead" or do you incorporate change into your laboratory practices, technical protocols and keep your protocol posting up to date?