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FOR ENGINEERING AND SCIENCE

# Post-Disaster Treatment

## Author(s)

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## Description

This testimony outlines the post challenger disaster treatment, and the separation of engineers and management. Details the isolation and hostile work environment in the redesign effort at MTI.

## Body

The first hint that there would be separation between the engineers and management occurred during the preparation for the first closed-door testimony to the Presidential Commission. I was given very little notice that a hearing would be held on February 14, 1986. I had approximately two hours total by myself prior to the hearing and was struggling to organize a set of notes to aid me during my testimony, while management had their Publications Department prepare a formal set of professional Viewgraphs for their version of the events leading up to the launch decision. Meanwhile, at a pre-hearing meeting with management, the company attorneys advised us to answer all questions with only yes or no and not to volunteer anything freely. This advice was not followed by me nor Arnie Thompson and Al McDonald and there were obvious tense feelings between management and us after the testimony session.

Approximately five days later at MSFC, two Presidential Commission members requested a closed interview session on with Arnie Thompson, Joe Kilminster and me. During this meeting, I handed a packet of memos and activity reports to a

commission member as a response to one of his questions and this action upset our company attorney. I sensed quite clearly from this time on that I had not endeared myself with MTI Management, since my memos would clarify the true circumstances leading to the disaster and would also counteract both NASA and MTI Management attempts to discredit our testimony up to that point. I thought it was unconscionable that MTI and NASA Management wouldn't tell the whole truth so that the program could go forward with proper corrective measures. Joe Kilminster then had a heated discussion with Arnie and me after the meeting. Joe strenuously objected to Arnie and me constantly correcting his technical version of what the data meant. Joe said that we were welcome to express our opinions but that he also was entitled to express his. We agreed but said we would continue to correct his version if his input was technically incorrect as it had been up to that time.

It was at this point that I realized that both NASA and MTI Management had been using me to supply them with the fine joint details. I had spent hours answering questions about how the joints worked, but I had thought it was pertinent to the failure investigation so I freely answered all questions and supplied all the information that made them appear to be very knowledgeable about the joints. I suspect that I fell into deeper disfavor with MTI Management after my public testimony to the Presidential Commission on February 25, 1986. Again, MTI Management had prepared beautiful color graphic Viewgraphs and printed books, while I struggled with my original notes. However, this time they were not allowed to speak from their Viewgraphs and were only allowed to submit the written material and answer questions. During my testimony, I directly rebutted MTI's General Manager's testimony concerning his statements about our supposedly non-unanimous engineering position at the telecon. My rebuttal was based on the fact that only Arnie Thompson and I were the principals involved during the continuing discussion at the telecon. Brian Russell and Bob Ebeling were the only other ones who spoke and they said only a few sentences. No one else said anything, either pro or con relative to launching, so I therefore consider all these people as non-entities and it matters not what they may say after the fact since they did not have either the conviction or the courage to speak out during the telecon. I know that Mason talked to some of those silent people after the disaster and interpreted what they said as support for the management decision to launch. I submit that his testimony is an example of management's deceit and half truth at its best by his attempt to discredit my previous testimony to the Commission.

We all gathered at MTI's resident office in Washington, D. C. after the testimony on February 25 and the intensity of bad feelings was so great that someone from management suggested that the company jet take us back to MSFC as soon as we gathered our personal belongings from the motel. Eventually cooler heads prevailed and we took a commercial flight the next morning. Later that same evening, management decided to send me back to Utah and keep Arnie Thompson at MSFC until the failure investigation was completed.

I was happy to return home because I wasn't pleased with the way MSFC Management was diligently attempting to find a condition other than low temperature which caused the disaster. For example, I witnessed NASA spend a two to three week side effort to prove that a *Challenger* joint close-out photo showed a twisted O-ring prior to mating. This was after I told them that the photo was only showing a track of smeared grease and not a twist because I had run a desk top test myself some time before to show that the O-ring could not twist as they were contending. I was proved right after their efforts failed to produce a twist in the O-ring and they finally admitted that the photo showed a smeared grease track.

In Utah I now began to sense the first signs of isolation from NASA, but I didn't fully recognize the situation and I continued to argue for full truthful disclosure while factions of MTI and MSFC Management were fully content to tell only half truths about the history of the development and production of the SRB's.

I realized for sure in mid-April that I was actually being isolated from NASA and the main redesign activity since mid-March while MTI Management was telling me of my great importance to the redesign effort. I was being asked to furnish technical design information for the new designs which was sometimes changed without my knowledge and was being presented to NASA by someone else with no copies of the final version of the presentation given to me for feedback. I was, in effect, actually isolated from the main redesign effort. Previous to my testimony, I always prepared and presented my own material and often my supervision gave me total freedom to do so because of their confidence in my ability. Unknown to me at the time, the President of Aerospace Operations at MTI had ordered that I should be kept isolated from NASA, and this was done with great subtlety to prevent detection by me and so I guess the company could say, if asked, "Yes, Roger Boisjoly still works here; in fact, he is the new seal redesign coordinator."

Working conditions kept deteriorating for some of us who had testified. Once again we were called to testify before the Presidential Commission in closed session on May 2, 1986. During the evening of May 1, we met with the President of Aerospace Operations at MTI, Mr. Ed Garrison, and he opened the meeting with a few general remarks about the upcoming session with the Commission. Then he addressed me and chastised me for airing the company's dirty laundry via my memos which I had given to the Presidential Commission. He also stated that MTI had suffered enough as a result of public disclosure but that we should continue to tell the truth, but we should consider the best way to state it before speaking. I quickly took exception to his remarks about me and said that I had simply tried to restore the truth in all testimony and I didn't consider my actions as airing dirty laundry. Bob Ebeling then spoke up with some support for me and he told Mr. Garrison that MTI should form a specific type of engineering development group. Garrison snapped at Bob and told him to stop and quit telling him how to run the company. We went into the Commission session the next day with conditions as tense as they had ever been and Chairman Rogers asked Al McDonald and me about our current job assignments. We answered him and he was visibly upset because we were being punished for honesty in our testimony. The Commission then decided to release the closed session testimony to the public and MTI received tremendous criticism from the Congress, the Presidential Commission and the news media.

A few days later, Al McDonald and I were invited back to Washington, D. C. by the Presidential Commission to review and comment on the final official accident analysis team report which was submitted to them by MSFC. The Commission had somehow found out that neither Al nor I had seen the final report. I submitted 12 pages of comments on the report and gave verbal testimony to four Commission members that the report findings were biased toward an attempt to downplay the effect of low temperature on the joint failure by trying first to focus blame on such things as assembly problems and other factors. The Commission members agreed with our comments and thanked Al and me for our willingness to review and comment on the report on such short notice.

Major morale problems now started to develop within MTI as some of our colleagues perceived that our testimony was causing damage to the company, but we didn't agree with that assessment and decided to try to correct it by requesting a meeting with three top executives at MTI who could do something about the internal strife. A private meeting was held on May 16, 1986 with the CEO, the President of Aerospace

Operations, and the Vice President of the SRM Program. The meeting produced a very candid discussion of problems from our side but it was essentially one-sided with management telling us very little. The CEO even made it sound like we were on probation and if we worked hard and proved ourselves during the redesign activity, then everything would be forgiven. His attitude was certainly consistent with his criticism of Al and me in his previous statement to *THE WALL STREET JOURNAL*. I believe it was at this meeting that the CEO made the statement that the company was doing just fine until Al and I testified about our job reassignments on May 2. He said that those statements caused the company more harm than all the previous releases.

Al McDonald and I were supposedly restored to our former positions after MTI was scolded by some very angry U. S. Senators, but it was only a superficial restoration which the company skillfully reported by inference in a press release as a promotion for Al McDonald, who was to head the redesign activity, while my interface with NASA was restored. Actually, Al got only his old job back without a promotion and was not heading the redesign activity, while some people who had remained silent received promotions and the same people who wouldn't face up to the original bad joint design were now directing the joint redesign effort. Simply put, the joints have been redesigned by top management with direction down to the working level engineer who must engineer the details to make it work.

I had been chastised and criticized before my colleagues and ignored generally both personally and professionally, but I still tried to make my voice heard for the best joint redesign. I was the only one who reviewed the joint seal proposal submitted to MTI by Gray Tool Company of Houston, Texas and finally secured them a chance to present their seal design to MTI Engineering and Management. Many engineers were supportive of the design but, unfortunately for Gray Tool, the primary redesign configuration decision had already been made by MTI Management and they only have a poor political back-up position at this time.

Al McDonald, Arnie Thompson and I, along with MTI Management, were asked to testify at the House of Representatives Committee on Science and Technology hearings on June 17 and 18, 1986. The two days of preparations with attorneys and public relations people plus the testimony itself were almost more than I could withstand when combined with my treatment at MTI.

Approximately one month after my testimony to the House Committee, I could no

longer endure the hostile environment at MTI, so I took some time off at the recommendation of a company executive. During this period of being absent from MTI, I realized that I could not subject myself again to the hostile environment, so I informed them that I would not return to work. I was then placed on extended sick leave from July 21, 1986 until January 18, 1987 at which time I qualified for long-term disability. I currently receive 60% of my former salary and for my disability case, my compensation will stop after two years, which is January 18, 1989.

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## **Notes**

Author: Roger M. Boisjoly, Former Morton Thiokol Engineer, Willard, Utah.

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Case Study / Scenario

## **Topics**

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## **Discipline(s)**

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