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The deadline for completing the experimental work was tight. All of the group members had been working 60-hour weeks all fall in order to complete the experiments and the report. Debbie and her teammates were successful in performing the experiments and the reaction kinetics looked very favorable for a high conversion industrial process. Bill, Debbie's supervisor, had scheduled a meeting to present these results to the research manager tomorrow. Bill had made it clear to everyone that delays are not acceptable.

During the course of the experiments Debbie noticed an unusual peak on the gas chromatograph she was using to monitor reaction conversion.

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Scenario B  Scenario C  Scenario D  Scenario E  Scenario F

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Date Posted: 10/22/01 nas
Those Pesky Side-Reactions:
A Case Study on Ethics for Scientists and Engineers Developing Data in the Private Sector

Scenario B

by
Wayne Seames
Department of Chemical Engineering
University of North Dakota

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After conferring with the research manager, Bill has decided to give the group a time extension to investigate the peak. Debbie and John, another member of the group, have determined that the by-product generating this peak is: 1) not detrimental to the product specifications as currently formulated, 2) is carcinogenic when heated to 100 °F or higher (well below the melting point of the new polymer), and 3) difficult and expensive to eliminate from the final product.

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Bill also insists that all documentation and evidence concerning the extraneous peak be destroyed so that no one can later claim that the company had prior knowledge of potential health risks associated with the product.
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The Polymer Research Group presents the results of their tests to the research manager. In the course of the presentation Debbie suggests that additional toxicological tests be performed to define the potential health risks from this by-product. The manager decides not to accept this recommendation. He decides that the health risks are not sufficient cause to delay product development or expend money on further testing.

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Further, because of their excellent work, all of the members of the Polymer Research group are given promotions from Engineer Class "Lowly" to Engineer Class "Ordinary," which includes a 15 percent increase in pay. They are all awarded a bonus of $10,000 for their efforts. It is made clear to Debbie and her co-workers that these actions are tied to the development of this new product and that both the promotions and bonus will disappear if the product is not brought to market on time.
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