

## **LEADING CHANGE IN THE PUBLIC SECTOR: DR MOURE-ERASO'S CHAIRMANSHIP OF THE U.S. CHEMICAL SAFETY BOARD**

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### **PART 1**

#### **A. OPPORTUNITY TO ADVANCE INDUSTRIAL SAFETY**

"I remember feeling like if I were to die today, I would be satisfied." Dr Rafael Moure-Eraso recalled being overwhelmed by the honor of President Obama nominating him for the job of U.S. Chemical Safety and Hazard Investigation Board (CSB) chairman in March 2010<sup>i</sup>.

It was recognition of his career's work in public safety and health. He had been a key driving force of the University of Massachusetts Lowell's Work Environment Department. As its chair over the past five years, he and his team had built it to be a leading graduate program in preventive approaches to address the health impacts of work environments on workers and communities. Importantly, Moure-Eraso felt that it was recognition for the program's work in raising the public profile of workplace safety standards.

He saw the appointment as an opportunity to give back to the country, being an immigrant from Colombia who became a U.S. citizen about 30 years ago. Specifically, he could further his activism in protecting the rights of workers and neighborhoods around industrial facilities, saying that "the mission of the CSB to investigate root causes of chemical accidents to prevent future incidents really sums up my life's work"<sup>ii</sup>. Since starting his career as an Industrial Hygienist Engineer with the unions, workplace safety had been his lifelong passion. In academia, he was in the Work Environment Department for 22 years, and concurrently served an 8 year stint as Visiting Lecturer in Occupational Health at the Harvard School of Public Health. He was also no stranger to government, with his expertise sought by various agencies. Apart from being a special senior advisor on the prevention of chemical exposures to the Assistant Secretary for Occupational Safety and Health (OSHA), he had served appointments on committees in OSHA, the National Institute for Occupational Safety and Health (NIOSH) and the National Institute of Environmental Health Sciences (NIEHS).<sup>iii</sup>

In the CSB, Moure-Eraso saw an organization that had yet to realize its full potential. Partly in response to the horrors of the 1984 Union Carbide accident in Bhopal, the CSB was created in 1990 to ensure industry chemical safety in the U.S. Its role was to investigate serious chemical accidents as an independent agency and make safety improvement recommendations to the key regulatory agencies of OSHA and EPA. The CSB was largely modeled after the National Transportation Safety Board (NTSB) which investigated accidents in the transport sector and was mainly seen to be very successful in improving transport safety. Unfortunately, the CSB has not been able to emulate NTSB's success. Since turning operational in 1998, the CSB has been portrayed as falling far short of its statute. By the time Dr. Moure-Eraso assumed the chair, the CSB had already been subject to two Government Accountability Office (GAO) reviews with

highly critical findings. These included poor management, conflicts of interest, wasteful expenditures, and low retention of investigators. Partly as a result of these weaknesses, the CSB was able to investigate only a small number of the accidents that met its statutory requirements. For example, in 2007, out of 920 reported accidents, the CSB chose to investigate only 5 of them. 34 cases involving fatalities were not investigated.<sup>iv</sup> Despite being highly selective, a large backlog of cases had built up, and some investigations were taking up to 4 to 5 years to complete. It was clear to Dr. Moure-Eraso that incremental improvements would not suffice. For the CSB to make a meaningful impact, he had to lead an organizational transformation.

Moure-Eraso recognized that the odds were stacked against him. Compounding the challenge, days before his confirmation on June 23, the outgoing chairman John Bresland committed the CSB to investigate the Deepwater Horizon rig explosion. Although there was a tussle over whether the CSB had jurisdiction over the accident<sup>1</sup>, the Committee on Energy and Commerce requested the CSB to undertake the investigation. Then board member William Wark subsequently said “It was offshore. It was something that we had absolutely no business being in”.<sup>v</sup> Moure-Eraso knew that his transformation plan had to be adjusted to accommodate the case. The investigation was expected to be difficult and resource intensive. First, the CSB would be investigating some two months after the explosion. Other agencies had already been investigating the accident, and key evidence would have been removed. Second, the investigation could still be hindered by jurisdictional issues. Unlike the CSB’s past investigations, the drilling rig was not a fixed, land-based facility. Already facing a record high backlog of cases, the re-deployment of investigators would further delay ongoing investigations.

Moure-Eraso was also aware that for the transformation plan to stand a chance, the rest of the board had to share his vision. While the chair served as the chief executive officer and was responsible for the agency’s administration, the board was collectively responsible for the CSB’s strategic direction. The board consisted of five members, including the chair. Each member was nominated by the President for a term of 5 years, and confirmed by the Senate. While members were primarily appointed on the basis of technical qualifications in fields relating to chemical accident and safety engineering, they were appointed by different administrations and had different political affiliations. Reflecting this, the outgoing chairman stepped down so that President Obama’s administration could choose the chair. Bresland (as well as Wark and Wright) was appointed to the board by President Bush and would continue as a member until March 2013.

Much was expected of Moure-Eraso’s chairmanship. With the appointment of him and another member, Mark Griffon, the CSB would finally have a full board (a timeline of the board’s membership during Moure-Eraso’s term is provided as Exhibit 1). Responding to his nomination, a former NIEHS colleague commented that “Rafael will make certain that workers’

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<sup>1</sup> The operator of the Deepwater Horizon rig, TransOcean, claimed that since the rig was an ocean going vessel and not a fixed facility, the CSB had no jurisdiction over the accident. In March 2014, the U.S. Fifth Circuit Federal Court of Appeals re-affirmed the CSB’s jurisdiction in a final decision.

safety and the environment are a part of the conversation when it comes to the deliberations of the CSB”.<sup>vi</sup> His appointment was welcomed by the unions. The Tony Mazzocchi Center for Health, Safety and Environmental Education of the United Steelworkers (USW) union noted that with Moure-Eraso’s background in protecting the rights of workers, he would be a staunch advocate for the safety of workers in the chemicals industry.<sup>vii</sup>

## **B. BACKGROUND INFORMATION ON THE CSB**

### **Role of the CSB**

The CSB is an independent federal agency charged with conducting root cause investigations of chemical accidents at industrial facilities. These causes range from safety management system deficiencies, equipment failures, human errors to unexpected chemical reactions. The Senate Report accompanying the legislation that created the CSB stated that investigation reports “should be issued in a timely manner, usually within 6 months of the accident”.<sup>viii</sup><sup>2</sup> Apart from investigating specific accidents, the CSB conducts studies of general chemical accident hazards and make safety improvement recommendations based on the findings.

Importantly, the CSB was set up to be non-regulatory and independent of other agencies. This was to avoid any conflict of interest should its investigation assess the regulations and enforcement to be inadequate. Hence, the CSB’s investigations do not lead to fines. Instead, safety recommendations were issued to plants, industry organizations, labor groups and regulatory agencies such as OSHA and EPA. The CSB has no power to enforce adoption of its recommendations. Relying on moral suasion, some recommendations required extensive advocacy efforts before they were implemented.

### **Troubled Formative Years**

The CSB’s creation can be traced to the Union Carbide pesticide plant leak in 1984 that resulted in 2,000 fatalities and injured hundreds of thousands in Bhopal. A subsequent leak at a Union Carbide plant in West Virginia further elevated concerns over chemical industry safety in the U.S. These precipitated the enactment of two key legislative reforms. One was the Emergency Planning and Community Right-to-Know Act (EPCRA) in 1986 requiring chemical firms to submit annual reports on use of toxic chemicals to the EPA and local community emergency planning committees. The other was the creation of the CSB as part of the Clean Air Act Amendments of 1990.<sup>ix</sup>

Notwithstanding the CSB’s legislative authorization, it did not receive funding and hence was not operational until 1998. Initially, the Bush Administration did not appoint members to the board, citing concerns that the CSB’s enabling statutes unconstitutionally limited the President’s power to remove its members. Next, the Clinton Administration’s focus on budget

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<sup>2</sup> The Senate probably envisioned a larger agency. An early draft of the bill authorized \$12 million in initial appropriation then.

reduction delayed funding for the CSB. As part of the National Performance Review to improve government, the review task force deemed that the CSB's work would overlap with the responsibilities of OSHA and EPA<sup>3</sup>, and hence was redundant. However, in the wake of increasing scrutiny from OSHA and EPA, the chemical industry, unions and environmental groups renewed their call for an independent safety board as an objective partner in safety analyses.<sup>x</sup> The CSB finally received funding to be launched in 1998, albeit with an initial budget of just \$4 million. In comparison, the NTSB's budget then was \$46 million.

The CSB's initial years of operation were hampered by board members' disagreements with chairman Paul Hill over his management approach.<sup>4</sup> Hill felt that he had sole control of significant agency decisions while the other members took the position that these decisions were the collective responsibility of the board. For example, they objected to his doubling of the CSB's budget request to Congress without their approval. Disagreements over the responsibilities of the chair vis-a-vis the board members escalated to the point where legal clarification was sought from the Department of Justice Office of legal Counsel (OLC). A member acknowledged that the board spent more time and effort resolving the conflict rather than managing the agency. The dispute became public and Hill resigned his position in January 2000, leaving the board without a chair until 2002.

Beset by these difficulties, the CSB's investigations stalled. Even in being highly selective of accidents to investigate, the board quickly accumulated a backlog of cases. Given the performance problems, the Committee on Appropriations tasked the GAO to review the CSB's effectiveness in 2000.<sup>xi</sup> The findings were damning.

A clear weakness was the shortfall of investigators. Of the CSB staff of 27, only 8 were in investigation work. 10 investigation positions were vacant. The CSB explained that recruitment was challenging as potential recruits with the requisite chemical safety skills were typically highly paid in the oil and chemical process industries. The CSB's weak management added to its unattractiveness as an employer. The GAO found that the agency had not developed personnel policies and procedures. There were no policies on leave, office hours and performance appraisal. In most cases, employees had not received performance appraisals. The widely publicized leadership disputes and perception of the CSB as an under-performer discouraged potential recruits. For example, Daniel Crowl, a chemical engineering professor at Michigan Technological University was asked to join the board in 2002 but declined as "it did not appear to be a very desirable job or a good career move." He added that he would have been more open if "things were really going in a very positive direction".<sup>xii</sup>

The CSB was found to be wasteful, spending its limited budget on contracts with little benefits. An Incident and Investigation Information System that had cost \$636,000 to develop was not used as it was overly complex. The investigators who were supposed to have used the system

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<sup>3</sup> These regulators were of the view that there was no need for an independent investigation agency for the sector.

<sup>4</sup> The first board's members and their backgrounds were Paul Hill (Chairman, Chemistry), Irv Rosenthal (Chemistry), Andrea Kidd Taylor (Public Health), and Gerald Poje (Toxicology).

had limited input into its design, and an off-the-shelf database might have met their needs. Overall, the expenditure on information technology contracts far exceeded that for investigations. Other examples of wasteful spending included a \$450,000 baseline study of chemical accidents that was discredited as the statistics had serious data quality issues and the use of contract investigators who produced poor investigation reports. Furthermore, these contracts were made in the absence of contracting policies and procedures.

Overall, the GAO found the CSB to be dominated by management conflicts and inefficiencies. As a result, its resources were directed to peripheral programs while the core mission suffered. It recommended that the CSB be monitored by an existing office of inspector general (IG), notwithstanding that as an independent federal agency, the CSB was not legally subject to an IG.<sup>5</sup>

### **Persistent Weaknesses even as the CSB Matured**

The CSB enjoyed a period of relative stability with Carolyn Merritt<sup>6</sup> as chair from 2002 to 2007. While it continued to suffer from tight budgets and staffing issues, the resolution of leadership difficulties enabled the CSB to pick up momentum. During this period, the number of completed investigations each year doubled to 4 from the past average of 2. A table of the CSB's resources (and comparative numbers for the NTSB) and investigation output from FY2002 onwards is at Exhibit 2. The CSB also started conducting hazard studies. A landmark case in this period was the BP Texas City refinery explosion of 2005. For the first time, the CSB issued recommendations before its investigation was completed and several were classified as "urgent". Together with the outspoken chair's active use of the accident to publicize its safety messages, the CSB was seen to be at the forefront of the government's disaster response. Perhaps in response to the CSB's increasingly proactive approach, it started experiencing pushback from the regulatory agencies. In 2002, the CSB completed a review of the hazards of chemical reactions in the chemical industry, and its resulting recommendations to OSHA and EPA were not adopted.<sup>7</sup> The CSB made public its disappointment with the regulators and categorized their responses as "Unacceptable".

In investigating high profile disasters like BP Texas City and the Imperial Sugar refinery explosion in 2008, the CSB was gaining a reputation as a leading voice on process safety and accident prevention. Working with a small budget, the agency was seen to be adept at 'doing more with less' and its publicity, especially the safety videos, was cutting edge.<sup>xiii</sup> The CSB also

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<sup>5</sup> As the CSB was one of the 54 federal entities for which the IG Act of 1978 did not provide an IG, it had been only required to report its audit and investigative activities to Congress and the Office of Management and Budget.

<sup>6</sup> Appointed by President Bush, Merritt had 35 years of experience as a corporate safety and health professional prior to joining the CSB.

<sup>7</sup> For example, the CSB found that OSHA's approach of listing individual chemicals as hazardous based on its inherent reactivity was inadequate, and proposed that the list be broadened to include reactive hazards from combinations of chemicals and process-specific conditions. While OSHA did not dispute the risks highlighted by the CSB, it declined to amend its regulation explaining that there was no consensus among experts on the best approach to take.

received recognition for the quality of its investigations, gaining support among international safety experts and the communities where the CSB had conducted investigations. Sidney Dekker, Director of the Safety Science Innovation Lab at Australia's Griffith University, noted that "globally, safety experts support the CSB. Despite constraints, they have produced really good material. We use their reports and films all the time. They have been able to create products that set a standard for the rest of the world to follow."<sup>xiv</sup> Reflecting on the CSB's investigation of the Bayer pesticide waste tank explosion in 2008, Ms Maya Nye, President of People Concerned About Chemical Safety, a community health and safety organization, said that "no other entity gives us the level of detail about the incident that the CSB has given us. They have been essential in educating and protecting the public." She added that the CSB overcame Bayer's initial attempt to block the community from learning details of the accident. Expressing similar sentiments, Ms Tammy Miser, President of the United Support & Memorial for Workplace Fatalities, a support group for families of workers killed in workplace accidents, said that "family members absolutely love the CSB's investigations. We are not going to get that detail anywhere else."

Despite the steady progress made, the IGs<sup>8</sup> that audited the CSB during this period continued to find weaknesses in management control, human capital management and ultimately the CSB's ability to fulfill its statutory requirement. In 2008, the Committee on Appropriations asked the GAO to conduct a second review to determine how well the CSB had responded to past IG recommendations. The GAO's assessment was that notwithstanding the implementation of some recommendations, the CSB had not substantively addressed problems in human capital management and investigation output.<sup>xv</sup>

The GAO observed that the CSB continued to have a problem hiring and retaining investigators. Furthermore, senior investigators with 5 to 7 years of experience were leaving and new hires were mainly interns. Resolving the human capital problem was still not a top priority, and the CSB did not utilize measures available to federal agencies to recruit and retain staff (e.g. retention bonuses). The GAO found a weakness of the CSB's management to be its lack of a Chief Operating Officer (COO) to effectively manage operations. The position was eliminated in 2004, with the COO responsibilities distributed to various managers and board members. With revolving board members, the agency lacked a permanent senior executive to provide long-term attention to management and performance issues.

While the number of investigations conducted each year had increased, the GAO noted that they fell far short of the CSB's statutory mandate to investigate all chemical accidents that caused fatality, serious injury or substantial property damage. In 2007, the CSB investigated less than 1% of the 920 accidents that it was notified of. Accidents that the CSB did not investigate included an oil well explosion with 3 fatalities, a propane explosion with 3 fatalities, and a

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<sup>8</sup> Since FY2001, IGs of the Federal Emergency Management Agency (FEMA), the Department of Homeland Security (DHS) and the Environment Protection Agency (EPA) have provided oversight. In FY2004, Congress designated the EPA IG to serve as the IG for the CSB, with the responsibility to audit and evaluate the CSB's programs and operations.

waste-processing plant chemical release that might have sickened more than 200 people.

Given the CSB's persistent weaknesses, the GAO recommended to Congress that the CSB be subject to oversight of the EPA's Inspector General permanently, against the CSB's objection that this compromised its independence from the EPA.

### **Differences in Contexts for the CSB and the NTSB**

The NTSB's achievements had often been held as the yardstick to measure the CSB's performance. The NTSB had established a track record of high quality and independent analyses of transport accidents. Its investigation output had been high, averaging more than 1,000 (and reaching as high as 3,500) cases each year. The GAO had noted that the NTSB investigated 250 times as many cases as the CSB each year<sup>9</sup>, with a budget that was 8 times bigger.<sup>10</sup> Notwithstanding the similarities in organization structure, mandate and powers, there were important differences in the contexts of the two agencies' work that might partly explain the differences in results.

The bulk of NTSB's work is in commercial aviation safety. Early on, the industry had recognized the importance of air travel safety to instill trust in potential passengers. The outsized publicity of a crash of any airline's plane could potentially shape the public's perception of the risk of flying. Hence, there was a collective interest in accident prevention. This led to a collaborative spirit for plane manufacturers, airlines, unions, universities and government to improve safety. Having been established in 1967, NTSB 'grew up' with the industry and had the time to establish trust and familiarity with its investigation protocols.<sup>xvi</sup>

In contrast, the chemical industry was already well established and had a strong lobby group by the time the CSB was set up, and it was not uniformly receptive of the CSB's investigations.<sup>xvii</sup> Given the agency's name, it was not always clear to the accident facility owner that the CSB had jurisdiction to investigate. For example, in the Imperial Sugar Refinery explosion, the company initially objected to the CSB's investigation on the basis that sugar was not a chemical. Unlike transportation accidents, chemical accidents occurred within the private property of facility owners. Hence, establishing rights of access to the accident site was important and more complicated. Furthermore, while airlines employed a relatively limited range of aircrafts, chemical processes were much more diverse and companies often used proprietary processes and mixes. This added to the complexity of the CSB's investigations.

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<sup>9</sup> The CSB disputed the comparability of these figures, as the majority of the NTSB's aviation investigations were non-fatal incidents, with a heavy reliance on the work of the Federal Aviation Administration (FAA) inspectors.

<sup>10</sup> The GAO noted that for accidents with the NTSB's deployment, it tapped on technical expertise from other stakeholders like the airline, manufacturer, regulators and local officials. Headed by the NTSB's lead investigator, these parties participated in the first phase of investigations, focused on evidence collection. To preserve the NTSB's objectivity, the parties had no role in the subsequent accident analysis phase. These practices were recommended to the CSB by the GAO. However, the CSB objected to them due to concerns that the use of other agencies' work undermined its independence.

### **C. LEADERSHIP CHALLENGE ACCEPTED**

On balance, Moure-Eraso assessed that the CSB's chairmanship was a challenge worth undertaking. He conceded that there would be no 'honeymoon' period and he had to hit the ground running, under pressure to deliver results early in his term. The confirmation process afforded him some time to take stock of the organization and formulate a change management plan. To size up the task at hand, he sought answers to a list of questions, including:

- 'How could the CSB be more effective in using its resources?'
- 'How could a compelling case be made to increase the CSB's funding?'
- 'What operational changes were needed?'
- 'What should the CSB emphasize and what should be de-emphasized?'
- 'What would transformational success look like?'

With those questions in mind, he started calling his contacts who were potential stakeholders in the CSB's success for their views.

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## **PART 2**

### **D. IMPLEMENTATION OF TRANSFORMATION PLAN**

Upon his appointment, Moure-Eraso made a personal vow to work hard at influencing workplace safety in the chemical industry. He envisaged high quality accident investigations with meaningful safety recommendations, to be followed by efforts to get the recommendations adopted by the industry and regulators.<sup>xviii</sup> Given the agency's small budget of \$11 million and staff of under 50 employees, Moure-Eraso wanted to focus the CSB's work on completing ongoing investigations, including the challenging Deepwater Horizon case. Alleviating the backlog frees up resources for the CSB to investigate more accidents in subsequent years. Coupled with planned expansion of the agency's size and capacity, his vision is to "to expand the size and capacity of the CSB so that we are capable of investigating a broader variety of accidents and hazards".<sup>xix</sup>

Within 3 months of assuming the chair, Moure-Eraso had conducted an internal re-organization to improve the CSB's management. He reorganized reporting lines to create clear lines of authority as well as accountability that he found to be virtually non-existent previously. Specifically, consistent with the GAO's earlier recommendation, he created a new position of managing director who would report to the chair and oversee all operations including investigations and human resources. Dr Daniel Horowitz, the CSB's director of Congressional and public affairs, was appointed to the position. Moure-Eraso also saw the need to improve the efficiency of internal processes. For example, the office administration functions were reorganized to speed up the contracting process.

Moure-Eraso wanted to bring a different philosophy to the investigations.<sup>xx</sup> In terms of cases to investigate, he felt that the criteria for launching an investigation should be adjusted, to be less focused on the severity of the accident. Although some accidents might result in fatalities, they 'can be run of the mill accidents where all the things are known'<sup>xxi</sup>. Investigations will not yield useful safety lessons. Moure-Eraso prefers to focus on cases where lessons can be gleaned to help the whole sector make safety improvements. As for the investigation reports, he wanted them to go beyond pinpointing the engineering failure to a broader systemic analysis of the failure. For example, asking 'what indicators could have provided forewarning of the impending engineering failure?'. Furthermore, the reports should not shy away from recommending improvements required of the regulators' rules.

### **E. ...THAT BROKE THE AGENCY?**

"Chairman Moure-Eraso's leadership is making it difficult for the agency to fulfill its mission. Immediate change in the CSB's leadership is necessary...", wrote the Committee on Oversight and Government Reform (House Committee) to President Obama on July 7 2014.<sup>xxii</sup>

In September 2013, the CSB's failure to cooperate with an EPA IG investigation sparked off a wider House Committee investigation. The subsequent House Committee investigation found

serious management deficiencies that went beyond the initiating issue of reprisal against whistleblowers. After the investigation and a hearing to examine waste and mismanagement at the CSB, the House Committee called into question Moure-Eraso's suitability to remain as chair. They found that his leadership created an "abusive, toxic and hostile" work environment that weakened the CSB's effectiveness in investigating accidents. In particular, he was "hostile towards staff with dissenting opinions", causing an exodus of experienced investigators. In 2011 and 2012, 7 investigators quit, including 2 of the 3 investigative supervisors. The team of 11 investigators based in the CSB's main office at the start of Moure-Eraso's term had dwindled to 3 by early 2013.

According to the hearing report<sup>xiii11</sup>, former board members and staff testified to the House Committee that the toxic work environment arose shortly after Moure-Eraso became chair. The new chair rarely interacted with staff or fellow board members. He ran the agency by communicating only with Horowitz and Loeb. Employees' attempts to raise questions with management were not well received, and they feared retaliation for any action perceived as questioning the chair. Former board member Beth Rosenberg described an atmosphere where there was little room for debate or discussion. She said "at the CSB, disagreement is seen as disloyalty. Criticism is not welcome and staff fear retaliation." A case in point was the treatment of then Counsel General Chris Warner. He was asked by Moure-Eraso to resign after he provided inputs to board members who requested his advice over concerns that the chair was making personnel decisions without their approval. Warner refused to resign as he felt that "he had done nothing wrong". 2 years later, Moure-Eraso transferred Warner out of the General Counsel position and replaced him with Loeb. Although this action occurred long after Moure-Eraso had asked him to resign, it was seen as retaliation against Warner for helping board members to oppose Moure-Eraso's agenda.

The tussle between the CSB's first chair, Hill, and his board members over their respective roles was resurrected. Despite both board members Griffon and Rosenberg being former students of Moure-Eraso, their experiences at the board left them critical of his leadership. Griffon assessed that the board's role in overall policy decisions and administrative oversight was eroded over time. Board orders on governance were bypassed or only selectively implemented. The members were excluded from key policy decisions and a board majority request for further analyses to support recommended oil refinery regulations was dismissed by the chairman. Rosenberg also testified that board members were excluded from core policy making functions. She added that there were no opportunities for board members and staff to discuss issues openly. Frustrated with the lack of meaningful influence over the agency's workings, Rosenberg resigned in May 2014, merely 17 months into a 5 year term. Wright and Wark, whose terms ended in September 2011, had similarly negative experiences with Moure-Eraso's leadership.

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<sup>11</sup> Although the House Committee criticism of Moure-Eraso at the hearing was bipartisan, the Democratic minority did not endorse the hearing report prepared by Republican staffers. According to a Bloomberg BNA report ("Release of e-mails may help Moure-Eraso retain his chair" 10 July 2014), the Democratic committee spokeswoman Jennifer Hoffman said that "although Democrats wanted to work with Republicans to remove assertions based on speculation, correct several factual inaccuracies and include additional information to provide balance, Republicans did not want to delay the public release of their report."

Wright described the time as “terrible” given how the chairman framed relationships through politics and Wark said there were constant frustrations.<sup>xxiv</sup>

The hearing report noted that in terms of management of investigations, Moure-Eraso alienated the agency’s investigators by ignoring them. The investigations were micro-managed by Horowitz who treated the senior investigators poorly. Warner said that Horowitz “treated them like they were first-year investigators who did not know what they were doing.” As a result, he added “most of the senior investigators and middle managers and some of our younger investigators have been run off by or have left because they did not want to work with Horowitz or Moure”.

With decreasing investigative resources, remaining investigators were constantly shuffled to different projects. In many cases, the investigations left uncompleted by departing investigators had to be restarted. This adversely delayed investigations. By the end of 2012, 9 of the outstanding investigations were more than 3 years old. One of the senior investigators who left, John Vorderbrueggen, said that the CSB was “just no longer producing timely investigations. It used to be that having an investigation open for two years was unacceptable”. Under Moure-Eraso’s chair, the number of investigations completed each year dropped from 6 in 2010 to 3 each in 2013 and 2014. In 2012, only 2 of the 8 planned investigations were completed. Some witnesses to the House Committee questioned the CSB’s commitment to complete investigations. They felt that the CSB had chosen to focus on the upfront media coverage, over-committing resources to deploy to accident sites, but lacked the follow-through on investigations.

The poor management of investigations exacerbated investigation delays. In April 2010, an explosion at a Tesoro refinery killed 7 workers. A former staff alleged that after the draft investigation report had been completed by one of the CSB’s then lead investigators in early 2011 and peer reviewed, Horowitz rejected it and insisted on an external third party review. The investigator left the CSB in frustration and the investigation had to be restarted from scratch.

With investigation reports and recommendations released years after the accidents, the CSB’s ability to generate safety improvements waned. Commenting on the Tesoro investigation report which was finally released 4 years after the accident, a former investigator noted that the “window was closed on doing anything. Had there been a more timely investigation,...it might have had some impact.” Wright assessed that the public was not being well served by the CSB’s failure to put out timely reports.<sup>xxv</sup> Losing patience over the investigation delays, formerly supportive unions had turned into vocal critics. Anna Fendley, a USW legislative representative said that “the reports aren’t getting done in a timely manner, which makes them almost irrelevant.”<sup>xxvi</sup>

Resulting from the failure of leadership, Rosenberg testified that “the agency is broken, it needs to be rebuilt”.<sup>xxvii</sup>

## F. ...OR A NEWLY ENERGIZED AGENCY?

In June 2010, Moure-Eraso arrived at the CSB to find a dysfunctional organization. The board governance system built up over the years resulted in a situation where the chair had the responsibility but not the authority.<sup>12</sup> There was no division of responsibility among the board members, and there was no clear authority to make key day-to-day decisions. Even trivial ones, including expenditures as low as \$50,000, were voted on. Furthermore, Moure-Eraso found himself in the minority with 3 out of board members appointed by the previous Administration. He faced repeated challenges to decisions that needed to be made.<sup>13</sup>

Making matters worse, there was little support from fellow appointees of the Obama Administration. Over a period of a year, Moure-Eraso tried to work with Griffon on a board order to define roles and responsibilities of board members. However, Griffon ultimately voted against changing the status quo. Both Griffon and Rosenberg preferred to continue the tradition of collective decision making and criticized Moure-Eraso's attempts to push through decisions as circumventing board's governance orders. Moure-Eraso noted that given the technical nature of the CSB's work, if one did not have a strong background in the safety sciences, "you would be pretty much at sea here"<sup>14</sup>. He ventured that in lieu of investigatory work, the members wanted to be more involved in the agency' administration.

Among the professional staff, Moure-Eraso found a lack of accountability. A senior official of the CSB observed that the agency had a culture that was different from typical organizations. Staff roles and goals were not well defined, and each staff behaved as an independent agent. There was 'organizational entropy'. There were employees who refused to recognize the authority of their supervisors. Instead, they sought out sympathetic board members to effectively be their supervisors. A new hire from a uniformed organization experienced culture shock and remarked to the senior official "how can you not have a line of authority?". Horowitz added that the CSB has had a 'culture of discontent' that spanned different past leaders. There were 4 previous COOs and none lasted more than 2 years. To impose organizational discipline, Moure-Eraso insisted on clear lines of authority and appointed a Managing Director to manage and evaluate all staff.

Notwithstanding the meager budget and backlog of cases, members of Congress continued to make requests of the CSB to investigate accidents in their districts. The CSB received 10 Congressional requests. Resources and personnel were redeployed from ongoing investigations to the new sites. Faced with tight resource constraints, Moure-Eraso had to make tough

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<sup>12</sup> The CSB had periods without a chair in the past (e.g. after the terms of Hill and Merritt as chairs). For the board to function, members had developed governance orders to make decisions collectively.

<sup>13</sup> Some board challenges were aided by the CSB's then General Counsel Warner. For example, he influenced the vote on a board order to remove the chair's hiring and firing authorities. The order was drafted in secret without Moure-Eraso's knowledge. He also organized the e-mail vote while the chair and Griffon were away, thus ensuring a majority.

<sup>14</sup> Moure-Eraso's background is in Chemical Engineering, while Rosenberg's is in Anthropology and Griffon's is in Chemistry.

decisions on the directions for certain accident investigations and the deployment of investigators.

Unsurprisingly, the organizational changes were not welcomed by those used to the past system. The revised organizational structure created upheavals among the staff and some refused their lines of authority. In particular, some senior investigators did not wish to report to Horowitz and insisted on reporting only to board members.

The different investigation philosophy espoused by Moure-Eraso raised conflicts with some investigators too. Moure-Eraso maintained that although he encouraged open discussion, “there are some people with very strong opinions and their opinions don’t carry the day”.<sup>xxviii</sup> Echoing this, Horowitz said that when the new chairman took over, there were “differences of philosophy about how the investigations should be done or what they should focus on”.<sup>xxix</sup> A difference was Moure-Eraso’s emphasis on systemic analysis as opposed to the immediate factor of failure. Some investigators were more comfortable with stopping at the identification of the mechanical failure. Moure-Eraso wanted them to go further, into an analysis of the safety process management. Horowitz added that the shift in approach addressed a past shortcoming of the CSB’s investigations. The unions had previously criticized the CSB’s findings as overly myopic, looking only at the low level causes. Some senior investigators also felt that the CSB’s work should focus primarily on the engineering aspect of accidents, and did not agree with the need to make regulatory recommendations. These investigators sought support from board members appointed by the previous Administration who shared their view.

Compounding the staff’s frustrations, the lack of unity within the board adversely affected the staff’s morale and performance. Some staff were particularly affected by the efforts of Griffon and Rosenberg to undermine Moure-Eraso. A group of investigators wrote to the board complaining of the loss of trust between staff and board members, concerned that it would lead to resignations of staff.<sup>xxx</sup> Examples of incidents involving Rosenberg and Griffon included:

- a. They intentionally embarrassed the CSB and staff publicly. Leading up to public meeting on the Chevron refinery explosion investigation, Rosenberg repeatedly assured staff that she supported the draft report and its safety case<sup>15</sup> regulatory recommendations. At the meeting, Rosenberg and Griffon voted against the report, citing external inputs which they had not provided to the staff.
- b. On the draft report of the Tesoro refinery explosion, they described the regulatory recommendation as a ‘cut and paste’ job in a letter to a Congressman. Their concern over the recommendation was not previously raised to staff even though the draft was worked through with the board over the preceding 9 months.

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<sup>15</sup> This is a regulatory regime where, instead of the regulator prescribing specific safety rules for the industry to comply with, the facility owner identifies all major risks and show how these risks are satisfactorily addressed. The company has to make a ‘case’ to the regulator that its facility is acceptably safe before commencing operations. This approach is more commonly used in Europe.

- c. They had not been engaged with the investigation team leads on the drafts. During the report review process, the teams received only superficial evaluative remarks like ‘I am not convinced’.
- d. Griffon requested the Director of the CSB’s Denver office to ‘retard progress’ of their reports, as the reports’ completion make Moure-Eraso look good. He also stated to another investigator that he was delaying approval of the report. Rosenberg separately told staff that as Moure-Eraso might no longer be the chair by September 2014, it could be that no report would be approved until then. In meetings with investigators of the Denver office, Rosenberg stated that she was working to remove Moure-Eraso and was interesting in assuming the chair.

The staff felt aggrieved that while they were working to improve the organization’s performance, the board members placed “political posturing above the safety mission”. They called on the board members to sincerely contribute by “pitching in to reduce the investigative backlog”.

Rosenberg and Griffon’s objection to the recommendation of the safety case regime was central to their criticisms of both the Chevron and Tesoro draft reports. A former investigator also expressed discomfort with Moure-Eraso’s enthusiasm for the safety case, testifying that he seemed very keen to include recommending the safety case regime even if the facts did not support such an approach. Moure-Eraso held a strong conviction that the safety case was a potential game changer in advancing workers’ safety. In the U.S., under the Process Safety Management (PSM) approach, facilities turned operational and were assumed safe until regulators could prove a violation.<sup>xxxix</sup> Moreover, existing safety regulations were obsolete and rule-making in OSHA and EPA were paralyzed. Moure-Eraso said that “you cannot pretend to apply 40 year old regulations to modern industry”. The Chevron and Tesoro investigations showed that “PSM had failed to prevent these accidents”.<sup>xxxix</sup> OSHA’s own top official, David Michaels, acknowledged that the chemical exposure standards were “dangerously out of date and do not protect workers.”<sup>xxxix</sup> The result is that the refinery industry’s risk in the U.S. is higher than that in Europe.<sup>16</sup> Moure-Eraso was anxious to push elements of the safety case regime so that some progress towards safety improvement could be made in the near term. He recognized that the pitch for safety case had been polarizing. Hence, he had been trying to advance elements that could improve the PSM without having to call it safety case.

While pushback from industry was to be expected, there was a surprising lack of support from the unions. In response to the CSB’s Tesoro report’s recommendations for Washington State to implement the safety case regime, Steve Garey, president of the USW local union, said that the recommendations were far-reaching and would be difficult to ever get enacted.<sup>xxxix</sup> The USW was more interested in incremental reforms to the PSM that could realistically be implemented in the near future. Notwithstanding Moure-Eraso’s strong ‘pro-labor’ credentials, some of the unions resented that the CSB did not “fall into line behind the strategies they would like to

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<sup>16</sup> The report of California’s Interagency Working Group on Refinery Safety noted that the insurer Swiss Re found accident-related losses to be 3 times higher at U.S. refineries compared to refineries in other parts of the world.

pursue”.<sup>xxxv</sup> This divergence was reflected in the board’s in-fighting over the safety case, given their different affiliations with the unions. A senior CSB official remarked that “it was no secret that Mark (Griffon) and Beth (Rosenberg) were very close to the USW”.<sup>17</sup>

After the initial years’ resignations, the number of investigators had been boosted to a record high of 21. By March 2015, Moure-Eraso testified that the CSB’s report output was “back on schedule”.<sup>xxxvi</sup> The backlog had been reduced from 22 to 6, close to the historic low. The preceding 9 months saw a record completion of 8 investigation reports. These were achieved despite launching 12 new investigations and the drain of the CSB’s biggest investigation ever, the Deepwater Horizon. Regulatory changes in response to the CSB’s recommendations were also being realized. For example, following the Tesoro report, the State of Washington Division of Occupational Safety and Health (DOSH) requested funding for 6 new PSM inspectors and was considering improvements to its PSM regulations.

Towards the end of his term, Moure-Eraso was keen to rationalize the board governance orders. With the support of a newly appointed board member, Manuel Ehrlich, he managed to modernize and streamline the board orders, modeling it after the NTSB’s. In particular, it clarified the authorities of the chair. Although he had little to gain from the revised orders given his short remaining term, it would allow future chairs to be more effective in steering the organization. His greatest concern was that if the inherent structural flaws<sup>18</sup> continued to hamper future leadership, the CSB could get defunded, to the detriment of workers’ safety. This fear was not unfounded. In the wake of the House Committee’s criticism of the CSB’s performance, two former board members, Wright and William, suggested that the CSB be folded into the NTSB. Jim Frederick, USW’s assistant director for safety and health, lamented that 25 years after the USW pushed for the CSB’s creation, “discussion about eliminating the CSB as an independent agency is a sad state of affairs.”<sup>xxxvii</sup>

With 3 teams of investigators, 2 new board members and a modernized board structure, Moure-Eraso looked forward to leaving behind a “newly energized agency” at the end of his term in June 2015.

## **G. PREMATURE END OF APPOINTMENT**

The Administration did not respond to the House Committee’s July 2014 letter to the President asking that the CSB chair be changed. On March 4 2015, the House Committee on Oversight and Government Reform held another hearing on the CSB, this time to probe the lack of improvements in the CSB over the 9 months since the last hearing. In particular, the House Committee was concerned that Moure-Eraso’s streamlining of board orders reversed many

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<sup>17</sup> Prior to joining the CSB, Rosenberg had undertaken ‘long term project with the United Steelworkers’ on safety systems. Her research partnership with the USW resumed after resigning from the CSB.

<sup>18</sup> These flaws were also recognized by Rosenberg. In her written testimony to the House Committee hearing on 4 March 2015, she noted that “The governance issues that plague the agency now have occurred before, which implies a structural flaw that may be best ameliorated by changing the structure.”

longstanding checks on the power of the chair. Wright said that the new order handed authority over to one person.<sup>xxxviii</sup> The order was deemed to have been passed in a questionable manner, as the motion was not shared with Griffon before the meeting and it was timed just before a newly confirmed board member took office. The hearing was followed by another letter to the President appealing for Moure-Eraso's resignation. This time, the Administration asked Moure-Eraso to step aside. He resigned on March 26 2015, just 3 months short of the completion of his term<sup>19</sup>.

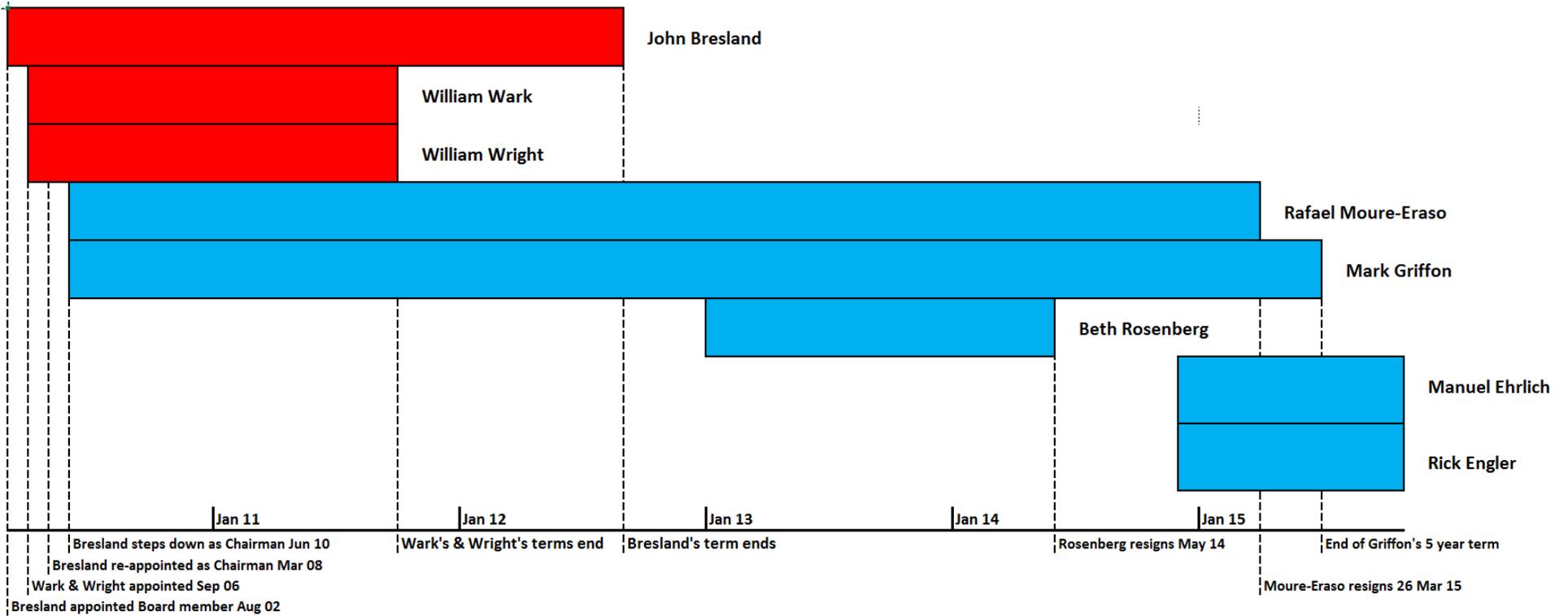
Moure-Eraso was disappointed that in the final analysis, the Administration did not back him on his change agenda for the CSB. He was not ready to close the chapter on his lifelong advocacy for the health and safety of workers. After resigning, his first task at hand was to reflect and report on his time at the CSB.<sup>xxxix</sup> He was satisfied that while some of his decisions were not popular, the core work of the CSB had been accomplished. However, as he reviewed the events of the past 5 years, he could not help but grapple with the following questions:

- a. If he could reverse time, how should he have led the organizational change differently?
- b. How could he have generated greater support for the changes?
- c. Would a different approach have made any difference to the outcome given the bad hand that he was dealt with?

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<sup>19</sup> This leaves Merritt as the only chair who successfully served out the full 5 year term in the CSB's history.

**Exhibit 1: Membership of the CSB Board during Moure-Eraso's Term**



**Exhibit 2: The CSB's Resources (compared to the NTSB) and Investigation Output for  
FY2002-2014**

Fiscal year	The NTSB		The CSB			Chair
	Budget (\$m)	No. of Professional Staff	Budget (\$m)	No. of Professional Staff	No. of Investigation Reports Issued	
2002	68.0	*	7.9	37	4	Carolyn Merritt
2003	73.0	*	7.9	*	6	Carolyn Merritt
2004	73.1	422	8.2	36	4	Carolyn Merritt
2005	76.6	418	9.0	*	4	Carolyn Merritt
2006	75.9	387	9.1	38	2	Carolyn Merritt
2007	79.3	378	9.1	35	4	-
2008	84.4	399	9.3	35	3	John Bresland
2009	91.0	402	10.2	36	3	John Bresland
2010	98.0	383	11.1	39	1	Rafael Moure-Eraso
2011	98.0	405	10.8	38	2	Rafael Moure-Eraso
2012	102.4	418	11.1	39	0	Rafael Moure-Eraso
2013	97.0	412	10.5	38	1	Rafael Moure-Eraso
2014	103.0	402	11.0	35	5	Rafael Moure-Eraso

\* Figures not available from available reports.

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- <sup>i</sup> Sackowitz, Karen. "Obama taps UMass prof for work-safety board". Boston.com, 15 Apr 2010. Web. 12 Apr 2015
- <sup>ii</sup> University of Massachusetts Lowell. "U.S. Senate Confirms UMass Lowell Professor as Chairman of Chemical Safety Board; Will Investigate Oil Spill". Press Release. 29 Jun 2010.
- <sup>iii</sup> "Board members" *About the CSB*. U.S. Chemical Safety Board. Web. 2 Jan. 2015
- <sup>iv</sup> U.S. Government Accountability Office. "Chemical Safety Board: Improvements in Management and Oversight Are Needed". 22 Aug. 2008
- <sup>v</sup> Jim Morris, Chris Hamby. "As critics press for action, chemical safety board investigations languish." The Center for Public Integrity, 17 Apr. 2013. Web. 2 Jan. 2015
- <sup>vi</sup> Ball, Eddy. "Obama to Appoint Former Council Member." The Environmental Factor, National Institute of Environmental Health Sciences. May 2010. Web. 2 Jan. 2015
- <sup>vii</sup> Fatato, Andrew. "US Chemical Safety Board Confirms Dr. Rafael Moure-Eraso as New Chairman, and Mark Griffon as Board Member." Blog/News. Tony Mazzocchi Center. 6 Jul. 2010. Web. 2 Jan. 2015
- <sup>viii</sup> "Clean Air Act Amendments Legislative History – Senate Report No. 101-228" U.S. Chemical Safety Board. Web. 2 Jan. 2015
- <sup>ix</sup> Edward Balleisen, Lori Benneer, David Cheang, Jonathon Free, Megan Hayes, Emily Pechar, and A. Catherine Preston. "Institutional Mechanisms for Investigating the Regulatory Implications of a Major Crisis: The Commission of Inquiry and the Safety Board". Draft. Mar. 2015
- <sup>x</sup> Edward Balleisen, Lori Benneer, David Cheang, Jonathon Free, Megan Hayes, Emily Pechar, and A. Catherine Preston. "Institutional Mechanisms for Investigating the Regulatory Implications of a Major Crisis: The Commission of Inquiry and the Safety Board". Draft. Mar. 2015
- <sup>xi</sup> U.S. Government Accountability Office. "Chemical Safety Board: Improved Policies and Additional Oversight are Needed". Jul. 2000
- <sup>xii</sup> Johnson, Jeff. "Safety Under Siege" Chemical and Engineering News. Volume 92 Issue 35 pp. 40-42, 1 Sep. 2014.
- <sup>xiii</sup> Farley, Mark. "Revealing the CSB's Evolution and Future". Environment Law360. 8 Sep. 2009
- <sup>xiv</sup> Johnson, Jeff. "Safety Under Siege" Chemical and Engineering News. Volume 92 Issue 35 pp. 40-42, 1 Sep. 2014.
- <sup>xv</sup> U.S. Government Accountability Office. "Chemical Safety Board: Improvements in Management and Oversight Are Needed". 22 Aug. 2008
- <sup>xvi</sup> Edward Balleisen, Lori Benneer, David Cheang, Jonathon Free, Megan Hayes, Emily Pechar, and A. Catherine Preston. "Institutional Mechanisms for Investigating the Regulatory Implications of a Major Crisis: The Commission of Inquiry and the Safety Board". Draft. Mar. 2015
- <sup>xvii</sup> Edward Balleisen, Lori Benneer, David Cheang, Jonathon Free, Megan Hayes, Emily Pechar, and A. Catherine Preston. "Institutional Mechanisms for Investigating the Regulatory Implications of a Major Crisis: The Commission of Inquiry and the Safety Board". Draft. Mar. 2015
- <sup>xviii</sup> Moure-Eraso, Rafael. "Five Years of Accomplishments: The CSB as an Agent of Change for Preventing Catastrophic Chemical Incidents (2010- 2015)". Apr. 2015
- <sup>xix</sup> Chemical Safety Board. "CSB Announces Internal Reorganization". Press Release. 16 Sep. 2010
- <sup>xx</sup> Moure-Eraso, Rafael. In-person interview. 20 Mar. 2015.
- <sup>xxi</sup> Corporate Crime Reporter. "Interview with Rafael Moure-Eraso". Vol 29 No. 11. 16 Mar. 2015
- <sup>xxii</sup> Darrell Issa, Lamar Smith, John Mica, Michael Turner, Jason Chaffetz, Paul Gosar. Letter to The President. 7 Jul. 2014
- <sup>xxiii</sup> Committee on Oversight and Government Reform. "Staff Report of 'Whistleblower Reprisal and Management Failures at the U.S. Chemical Safety Board' Hearing". 19 Jun. 2014
- <sup>xxiv</sup> Plautz, Jason. "Bullying, Threats and Chaos at Safety Agency". National Journal. 31 Jul. 2014
- <sup>xxv</sup> Jim Morris, Chris Hamby. "As critics press for action, chemical safety board investigations languish." The Center for Public Integrity, 17 Apr. 2013. Web. 2 Jan. 2015
- <sup>xxvi</sup> Bravender, Robin. "Chemical Safety Board: 'The agency is broken. It needs to be rebuilt' - former CSB member". Greenwire. 20 Jun. 2014
- <sup>xxvii</sup> Hearing before the Committee on Oversight and Government Reform. "Whistleblower Reprisal and Management Failures at the U.S. Chemical Safety Board". 19 Jun. 2014
- <sup>xxviii</sup> Plautz, Jason. "Bullying, Threats and Chaos at Safety Agency". National Journal. 31 Jul. 2014

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- <sup>xxix</sup> Horowitz, Daniel. In-person interview. 20 Mar. 2015
- <sup>xxx</sup> Investigation Supervisors and Team Leads. "Rebuilding Trust". Letter to the CSB Board members. 10 Feb. 2014
- <sup>xxxi</sup> Corporate Crime Reporter. "Rafael Moure-Eraso and the Battle for Worker Safety". Vol 29 No. 11. 16 Mar. 2015
- <sup>xxxii</sup> Johnson, Jeff. "Chemical Safety Board Chairman is Leaving". Chemical & Engineering News. Vol. 93 Issue 10. 9 Mar. 2015.
- <sup>xxxiii</sup> Environmental Leader. "Chemical Exposure Standards 'Dangerously out of Date,' OSHA Says" 13 Oct. 2014
- <sup>xxxiv</sup> Tony Mazzocchi Center. "Union, Lawmakers Express Frustration Over Chemical Board's Draft Tesoro Report". 28 Feb. 2012
- <sup>xxxv</sup> Corporate Crime Reporter. "Interview with Rafael Moure-Eraso". Vol 29 No. 11. 16 Mar. 2015
- <sup>xxxvi</sup> Moure-Eraso, Rafael. "Written Testimony of Dr Rafael Moure-Eraso". Committee on Oversight and Government Reform hearing. 4 Mar. 2015
- <sup>xxxvii</sup> Iafolla, Robert. "Best Remedy for Ailing CSB Is Merger With NTSB, Former Board Members Say". Bloomberg BNA. 12 Mar. 2015
- <sup>xxxviii</sup> Plautz, Jason. "From Bad to Worse at Scandal-Ridden Safety Agency". National Journal. 9 Feb. 2015
- <sup>xxxix</sup> Corporate Crime Reporter. "Rafael Moure-Eraso and the Battle for Worker Safety". Vol 29 No. 11. 16 Mar. 2015