

U.S. Chemical Safety and Hazard Investigations Board

Business Meeting

October 29, 2020

CSB Headquarters Office - Washington, DC

U.S. CHEMICAL SAFETY BOARD MEMBERS PRESENT: KATHERINE

LEMOS, Chairman & CEO

STAFF PRESENT:

Amanda Johnson, Recommendations Specialist

Mark Kaszniak, Senior Recommendations Specialist

Charles Barbee, Director of Recommendations

Stephen Klejst, Executive Director - Investigations and

Recommendations

Harold Griffin, Investigator

1 OPERATOR: Good day, everyone, and welcome to today's
2 Chemical Safety Board public business meeting. At this time,
3 all...at this time, all participants are in a listen-only mode.
4 Later, you will have an opportunity to ask questions during the
5 public comments session. You may register to ask a question at
6 any time by pressing the * and 1 on your touchtone phone. Please
7 note this call may be recorded.

8 It is now my pleasure to turn today's program over to
9 Chairman Lemos. Please go ahead.

10 CHAIR LEMOS: Thank you, Gretchen. Good morning. We will
11 now call to order this business meeting of the U.S. Chemical
12 Safety and Hazard Investigation Board, referred to as the CSB.
13 I'll start by introducing myself, Dr. Katherine Lemos, the
14 Chairman and CEO for the agency.

15 Today, we meet in open session as required by the Government
16 in the Sunshine Act to discuss operations and agency activities.
17 Somebody may not be on mute. Feedback issue. There we go. Okay.
18 I'll continue now.

19 So we meet in open session as required by the Government
20 in the Sunshine Act to discuss operations and agency
21 activities. The CSB is an independent, non-regulatory federal agency
22 that investigates major chemical incidents at fixed facilities. The

23 investigations examine and evaluate a wide range of aspects, to
24 include equipment and system design, regulations, industry
25 standards and guidance, training, operations, and procedures, and
26 human and organizational factors.

27 With the facts, we conduct analysis to determine the
28 probable cause and contributing factors of the event. And may
29 also issue safety recommendations for the purpose of preventing
30 similar incidents in the future.

31 We have a super agenda for today. I'll first provide an
32 overview of our new investigations. We'll then turn to
33 recommendation and open investigation updates. And we'll close
34 out the meeting with your public comments.

35 So, in terms of new investigations, since our last public
36 business meeting on September 2nd, the CSB has launched two
37 chemical incidents. The first was on September 14th to a thermal
38 decomposition event at the Bio-Lab facility in Conyers, Georgia.

39 The company is a manufacturer of pool and spa treatment
40 products. And no injuries were reported. However, Interstate
41 Highway 20 was closed temporarily, due to smoke produced from the
42 event and that is a qualifying criteria.

43 Second was to a fire that occurred at the Evergreen
44 Packaging Mill in Canton, North Carolina. And this incident

45 occurred during a scheduled maintenance event doing repair work
46 to a process unit. Two contractors were fatally injured as a
47 result of the incident. The CSB investigators will be in North
48 Carolina this week to continue their interviews.

49 I'd like now to highlight recent recommendation status
50 changes. In FY21, so which started this month, in October, the
51 board has voted on ten recommendations from the following
52 investigations and studies.

53 AL Solutions fatal dust explosion. There were four
54 recommendations. Public safety at oil and gas storage
55 facilities. There was one recommendation. Gas well blowout and
56 fire at Pryor Trust Well 1H9. We have status update for two
57 recommendations. Kleen Energy natural gas explosion, one
58 recommendation update. Motiva Enterprises sulfuric acid tank
59 explosion, one update. And Veolia Environmental Services
60 flammable vapor explosion and fire, one recommendation status
61 change.

62 I am pleased to turn over the session to our recommendations
63 staff who will discuss some of these actions in more detail.
64 First up is Recommendation Specialist Amanda Johnson. She will
65 review a recommendation that came out of the Kleen Energy natural
66 gas explosion. Please proceed, Ms. Johnson.

67 SPECIALIST JOHNSON: Thank you, Chairman. Just an incident
68 recap. On February 7, 2010, an explosion occurred during the
69 planned cleaning of new piping at Kleen Energy, a combined-cycle
70 natural-gas-fueled power plant. So, it was under construction in
71 Middletown, Connecticut. Immediately prior to the explosion,
72 workers were conducting a gas blow. Natural gas and debris
73 were subsequently vented into a congested area where the gas
74 accumulated and found an ignition source, causing an explosion,
75 which resulted in six fatalities and injured at least 50
76 additional personnel.

77 As part of its investigation, the CSB reviewed the American
78 Society of Mechanical Engineers, or ASME, Voluntary Industry
79 Consensus Standard B311, Power Piping, which addresses the
80 design, material, fabrication, erection, test, inspection,
81 operation, and maintenance of piping systems typically found in
82 the electric power-generating stations, industrial and
83 institutional plants, geothermal heating systems, and central and
84 district heating and cooling systems.

85 The CSB noted in its review that the standard was silent on
86 the use of flammable gas for cleaning purposes and offered no
87 guidance about the technical or safety aspects of pipe cleaning
88 procedures. As a result of these findings, the CSB issued Urgent

89 Recommendation 3 to ASME, which states "to make appropriate
90 changes to the 2010 versions of power piping, ASME B31.1., to
91 require an inherently safer fuel gas piping cleaning methodology
92 in favor of gas blows. At a minimum...at a minimum for the
93 cleaning or flushing methods discussed in B311, Paragraph 122.10
94 require the use of inherently safer alternatives such as air
95 blows and pigging with air as the mode of force in lieu of the
96 use of flammable gas.

97 The CSB has noted that the main purpose of this
98 recommendation was to make those who use Standard B311 aware of
99 safe cleaning practices, such as those provided in National Fire
100 Protection Association or NFPA Standard 56, which is standard for
101 Fire and Explosion Prevention During Cleaning and Purging of
102 Flammable Gas Piping Systems.

103 Ultimately, to satisfy this recommendation, ASME
104 incorporated NFPA 56 by a reference in B311. Section 100.1.4 now
105 states "This code does not provide procedures for flushing,
106 cleaning, startup, operating, or maintenance." Code users are
107 advised, however, that the cleaning and purging of flammable gas
108 systems may be subject to the requirements of NFPA Standard 56.

109 Appendix F also lists NFPA Standard 56 as a mandatory
110 reference standard.

111 Therefore, based on these actions taken by ASME, CSB has
112 closed this recommendation as Closed, Acceptable.

113 CHAIR LEMOS: Sorry about that. I was on mute. Thank you,
114 Ms. Johnson. I do have a few questions for you.

115 SPECIALIST JOHNSON: Sure.

116 CHAIR LEMOS: Immediately prior to the explosion at Kleen
117 Energy, workers were conducting a gas blow, quote-unquote. Can
118 you briefly describe what, exactly, a gas blow is for those of
119 us that are unfamiliar with this process?

120 SPECIALIST JOHNSON: Sure. So...sure, so during a gas blow,
121 natural gas is forced through piping at a high volume and
122 pressure, to remove debris. And then the natural gas and debris
123 are released directly to the atmosphere.

124 At Kleen, the natural gas and debris were vented to the
125 atmosphere in a congested area, near the facility's power
126 generation building. The accumulated natural gas then found an
127 ignition source. And the CSB concluded that the venting of
128 natural gas in this manner was inherently unsafe because of the
129 intrinsic fire and explosion hazards.

130 HILLARY: Thank you, Ms. Johnson. Can we please proceed
131 with the next presentation? I believe it will be Mr. Kaszniak.

132 SENIOR SPECIALIST KASZNIAK: Hello, good morning. Thank
133 you, Hillary. The recommendation I'm going to discuss first
134 is...which was made to the Environmental Technology Council, as a
135 result of CSB's investigation at the Veolia Environmental
136 Services flammable vapor explosion that occurred on May 4th in
137 2009.

138 In this...in this incident, a flammable vapor cloud was
139 released from a solvent recovery process which ignited and
140 exploded at a state-permitted treatment, storage, and disposal
141 hazardous waste facility which was processing waste for
142 industrial and municipal customers of environmental services in
143 West Carrollton, Ohio.

144 As part of this investigation, the CSB reviewed industry
145 standards and found that there were none that provide guidance to
146 treatment, storage, and disposal facilities to operate safely.
147 The CSB reached a similar conclusion in a previous investigation
148 of a 2006 fire at Environmental Quality, another waste facility
149 that was located in Apex, North Carolina.

150 Based on the lack of these industry standards, the CSB made
151 a recommendation to the Environmental Technology Council, which
152 states, "Develop and issue standardized guidance for processing,
153 handling, and storage of hazardous waste, to reduce the

154 likelihood of fires, explosions, and releases of hazardous waste
155 treatment store...and hazardous waste at hazardous waste treatment,
156 storage, and disposal facilities. Include the incident findings,
157 consequences, conclusions, and recommendations from the CSB
158 investigations of the Environmental Quality facility, as well as
159 the Veolia EHS technical solutions facility.”

160 In 2011, the...the Environmental Technology Council submitted
161 the guidelines to the CSB Board and they were reviewed. And the
162 Board concluded that...that...that they were limited in scope and
163 communicated to ETC, that is Environmental Technology Council,
164 that they needed to be revised to include other serious hazards,
165 such as flammables and toxics, before the Board would consider
166 closing this recommendation as Acceptable Action.

167 In February of this year, ETC responded to the CSB that they
168 had revised their guidance documents and...to address the concerns
169 that the Board had...had noted earlier, and that they provided a
170 copy of these revised guidelines to the CSB for review. The ETC
171 also advised the CSB that these guidelines were available on
172 their website, to their members, in the Members Only section of
173 their website for their member companies.

174 So at...upon review of these new guidelines, the CSB
175 determined that they met all the requirements of the CSB

176 recommendation and the Board voted to change status of the
177 recommendation to Closed, Acceptable Action.

178 HILLARY: Thank you for that presentation, Mr. Kaszniak. I
179 believe we may have some questions from our Chairman. Chairman,
180 please proceed with your questions if, hopefully, you can hear
181 me.

182 STEVE: I'll address the questions to Mr. Kaszniak at this
183 point, until we resolve the technical issues with the Chairman's
184 connection.

185 Mr. Kaszniak, please share with us why did the CSB issue a
186 recommendation to the Environmental Technical...Technology Council.

187 SENIOR SPECIALIST KASZNIAK: Yeah, sure, Steve. During this
188 investigation of the incidents at the hazardous waste treatment
189 facilities, the CSB determined that there were no industry
190 standards that applied to the operating of these facilities
191 safely. Requiring individual companies involved in these
192 incidents to develop such programs was an obvious choice. But
193 would have had little impact on the entire industry.

194 So the CSB began searching for an alternative recipient for
195 this recommendation. The agency's research led us to the
196 Environmental Technology Council, which represents about 80% of
197 the companies operating hazardous waste facilities in the United

198 States and whose stated mission is to protect public health and
199 the environment...and the environment, by properly managing and
200 disposing of waste and waste residues. They agreed to develop a
201 training program that could be used by all their member
202 companies.

203 STEVE: Very good, thank you. This certainly helps explain
204 why the ETC was the recipient of the recommendation, given the
205 widespread communication channels that they have to advance our
206 safety advocacy issues. So thank you for that response.

207 Another question. I understand that this is...this
208 recommendation is superseding an earlier recommendation made to
209 the ETC. How did that come about?

210 SENIOR SPECIALIST KASZNIAK: In that case, our initial
211 recommendation was made to the ETC after the 2007 explosion at
212 Environmental...Environmental Quality that resulted in a fire.
213 While ETC was in the process of developing its training to
214 satisfy that recommendation, the Veolia explosion occurred in
215 Ohio in 2009. And rather than issuing ETC a second
216 recommendation to address that explosion, the CSB decided to
217 supersede that first recommendation, to ensure that the lessons
218 learned from both explosions would be covered in the training
219 that was being developed by ETC.

220 STEVE: Thank you. And one final question in...in your
221 presentation. Are there other efforts underway to improve safety
222 at treatment, storage, and disposal facilities for hazardous
223 waste?

224 SENIOR SPECIALIST KASZNIAK: Steve, yes, there are. The...the
225 National Fire Protection Association began working on a standard
226 in 2017 to safeguard against fire and explosion hazards
227 associated with treatment, storage, disposal, generation, and
228 transportation of hazardous waste.

229 Several ETC members are currently serving as members on that
230 committee, charged with developing that standard.

231 STEVE: Well, thank you for those responses. I very much
232 appreciate that. Mr. Kaszniak, we can now move on to the second
233 presentation that we have scheduled for the Motiva Enterprises
234 sulfuric acid tank explosion recommendation change, R12. So, Mr.
235 Kaszniak, please proceed.

236 SENIOR SPECIALIST KASZNIAK: Thank you, Steve. This...this
237 recommendation was issued to the American Petroleum Institute as
238 a result of the Motiva Enterprises sulfuric acid tank explosion,
239 which occurred on July 17th, 2001.

240 In that...in that incident, at the...at the Delaware City
241 refinery of Motiva, a work...contractor work crew had been

242 repainting a catwalk which was located above a...a spent sulfuric
243 acid process tank that contained residual, flammable material.
244 When a spark from their...from their...their hot work took ignited
245 flammable vapors that were released from the...from a hole in the
246 corroded tank.

247 In that...in this situation, one worker was killed and eight
248 others were injured, and the tank released 264,000 gallons of
249 spent sulfuric acid, which quickly overcame a secondary
250 containment, resulted in significant environmental damage when
251 approximately 99,000 gallons of sulfuric acid reached the
252 Delaware River and killed fish and other aquatic life.

253 And as part of the CSB investigation, there was a thorough
254 evaluation of the storage tank design elements and components.
255 And the CSB determined that...that this...inerting system that had
256 been installed on the tank was not properly designed and, due
257 to the holes in the tank, was not working properly. And, as a
258 result, a spark ignited the...a combustible fuel/air mixture that
259 was in the headspace of the tank that likely would not have
260 been present if the inerting system was working properly.

261 So, as part of its investigation, the CSB also examined
262 regulatory and industry consensus standards that applied to the
263

264 inerting of flammable liquids inside storage tanks. And...upon
265 reviewing the applicable API consensus standards, the CSB
266 determined that...they lacked important safety information. As a
267 result, the...Board issued a recommendation to API to incorporate
268 this information in future revisions of their standards and
269 recommendation practices.

270 The recommendation text actually reads, "Ensure that API-
271 recommended practices address the inerting of flammable storage
272 tanks such as spent hydrogen sulfide tanks, to include the
273 following. Number one, circumstances where inert...inerting is
274 recommended. And number two, design of inerting systems such as
275 proper sizing of inerting equipment, appropriate inerting medium,
276 and instrumentation, including alarms."

277 The... In February of 2020, of this year, the API responded
278 to the CSB that it had completed this recommendation by updating
279 four of its standards and recommended practices to address the
280 concerns raised in the CSB recommendation pertaining to inerting
281 practices.

282 Basically, they revised Standard API 653, entitled Tank
283 Inspection, Repair, Alteration, and Reconstruction, to include
284 better safe working practices and welding safety practices with
285 regard to inerting and design criteria for tanks. They revised

286 API Standard 2000, which is entitled, "Venting Atmospheric and
287 Low-Pressure Storage Tanks," to discuss inerting practices and
288 provide design criteria.

289 They revised Standard 2015, which is, "Requirements for Safe
290 Entry in Cleaning Petroleum Storage Tanks," to discuss inerting
291 in the context of vapor freeing, degreasing, cleaning, and
292 inspecting the storage tanks. And finally, they revised
293 Recommended Practice 2009, "Safe Welding, Cutting, and Hot Work
294 Procedures in Petroleum and Petrochemical Industries," to discuss
295 inerting while purging and while doing hot work, and added an
296 appendix to discuss inerting of vessels.

297 Based on all these changes, the CSB Board voted to close
298 this recommendation as an Acceptable Action.

299 CHAIR LEMOS: So thank you so much, Specialist Kaszniak. A
300 few questions for you. Can...can you briefly explain... I have
301 learned a lot about this lately, but can you tell me what is
302 inerting and why it's important?

303 SENIOR SPECIALIST KASZNIAK: Sure, Dr. Lemos. Inerting
304 system is a process that replaces the air that is normally
305 present in an...in the open headspace above the liquids being
306 stored or moved in vessels, tanks, and pipelines, with an inert
307 gas, such as nitrogen.

308 As many of these liquids may be flammable, reactive, or may
309 degrade in the presence of air, this practice helps to prevent
310 fires and explosions, stop undesired chemical reactions, keep
311 moisture away from product, and ensure safety while maintenance
312 tasks are being performed.

313 CHAIR LEMOS: Wow, that...that seems really important. And I
314 appreciate the detailed description.

315 Another question. You know, we issued...the CSB issued the
316 recommendation to API in 2002. Do...do you have any thoughts as to
317 why it took API so long to implement the recommendations that we
318 requested?

319 SENIOR SPECIALIST KASZNIAK: Yes, Dr. Lemos. This
320 recommendation applies to several API standards and recommended
321 practices, all of which needed to be changed. These standards
322 and practices are on various staggered revision cycles that range
323 from three to five years. And API made changes...they changed
324 initial changes during the normal review cycle, issued their
325 updated revisions and then communicated these efforts to the CSB.

326 The CSB reviewed what API had done initially and determined
327 that, while the changes they made were good, they did not
328 meet the intent listed in the CSB recommendation. So this
prompted

329 API to make additional changes during the next staggered,
330 scheduled revision cycle for these standards.

331 STEVE: We may be having some technical difficulties again..

332 CHAIR LEMOS: Thank you...

333 STEVE: Oh, there we go. Thank you, Chairman.

334 CHAIR LEMOS: Sorry about that. Thank you...thank you, Mr.

335 Kaszniak. And I...I do understand and appreciate the...the efforts

336 of all of those folks who contributed to the standards-making

337 process. Having been a part of that in the past, it is...it

338 requires a lot of effort and a lot of putting all the right minds

339 together to get it right. And...and we appreciate that.

340 So now we have Director of Recommendations, Mr. Charles

341 Barbee, to speak about several recommendations from the Pryor

342 Trust gas well blowout and fire. So, please proceed, Director

343 Barbee.

344 DIRECTOR BARBEE: Thank you, Chairman Lemos. What I'll do

345 is I'll go over briefly the...the background of the incident. And

346 then...and I apologize for doing it, but I will read the

347 recommendations verbatim so you know what those recommendation

348 recipients received. And then we'll talk about how they...how they

349 were...the status changed.

350 So on January 22nd, 2018, a blowout and rig fire occurred at
351 Pryor Trust Gas Well Number 1H9, located in Pittsburg County,
352 Oklahoma. The fire resulted in the fatalities of five workers
353 who were inside the drillers' cabin on the rig floor. The
354 blowout occurred approximately three-and-a-half hours after
355 removing drill pipe, or "tripping," of the well. The cause of
356 the blowout and rig fire was the failure of both the primary
357 barrier, which is a hydrostatic pressure produced by the drilling
358 mud, and the secondary barrier, which is human detection of the
359 influx and activation of the blowout preventer. These barriers
360 were intended to be in place to prevent a blowout.

361 As a part of the investigation, the U.S. Chemical Safety
362 Board examined the well drilling practices and procedures of
363 Patterson-UTI Drilling and the CSB...the CSB identified issues with
364 Patterson-UTI's rig tripping procedures, alarm philosophy, well
365 control practices, flow checks, and the effectiveness of the
366 company's safety management system.

367 Consequently, the Board issued five recommendations to
368 Patterson-UTI. As I said before about this investigation, it is
369 one of my favorites. I mean a lot of things came out of it. We
370 issued 19 recommendations and, as I said, five of those went to
371 Patterson-UTI. And the last time we...we had a public meeting, we

372 actually addressed three of those, which are Closed, Acceptable,
373 which is...is fantastic.

374 There are two remaining recommendations and I will read them
375 both. One is Recommendation 8. The other one is Recommendation
376 11.

377 Recommendation 8, we asked them...we asked Patterson-UTII to
378 determine an alarm philosophy and alarm rationalization for rig
379 operations. Based on that philosophy and rationalization, specify
380 necessary alarms, at a minimum, for (1) drilling, (2) tripping,
381 (3) circulating, and (4) rig floor activities where no drill pipe
382 is in the well. And additionally, we asked them to develop a
383 policy implementing the alarm philosophy and rationalization.

384 Recommendation 11 is a little bit more detailed. We asked
385 them to update the Patterson metrics program to track leading and
386 lagging indicators to measure the effectiveness of the overall
387 safety management system. Specifically focus on measuring the
388 effectiveness of the following safety management system
389 components:

390 (a) The effectiveness of the flow check policy, including
391 the frequency that flow checks are performed when required by
392 Patterson policy;

393 (b) The frequency that flow checks are documented and
394 approved as recommended in Recommendation 10;

395 (c) The effectiveness of the management of change program,
396 for both equipment and procedural changes, including real-time
397 procedural changes;

398 (d) The frequency that alarms are set at the required set
399 points;

400 (e) The frequency that drilling rig alarm horns or the
401 entire alarm system is turned off; and

402 (f) The frequency that trip sheets are filled out properly.

403 We've been communicating very, very well with Patterson-UTI
404 and they have agreed to implement two recommendations and they
405 laid out a...a detailed timetable of how that would play out. And,
406 as a result, the Board voted to change the status of both of them
407 to Open, Acceptable Response or Alternate Response.

408 Thank you.

409 CHAIR LEMOS: Thank you, Director Barbee. As you have
410 mentioned, we have made, you know, five recommendations to
411 Patterson-UTI and they have gone above and beyond, I would say,
412 of...of, you know, those recipients of recommendations. They
413 really have done a great job. And I know they've made
414 significant progress on these two.

415 So can you tell me why this recommendation is so important?
416 Or why these two recommendations are so important?

417 DIRECTOR BARBEE: Absolutely. One of them deals with this
418 thing that we called nuisance alarms in the...in the past. And...and
419 that's sort of a misnomer. I mean all...all alarms are important.
420 But can you imagine sitting in a drilling booth and just having
421 hundreds of alarms coming at you? And it may not have anything to
422 do at all with the operation that you're currently working on.

423 As a result, our investigators, when they...they went through
424 and saw this particular issue, they did ask that an alarm
425 rationalization and an alarm philosophy be developed. And there
426 are a couple of standards out there that...that have already done
427 that. And we're asking them to mirror that.

428 And this...what that does is it...for the alarms on the
429 operation that that particular drill is working on, is focused on
430 those particular issues and not have to deal with something that
431 may not be either as significant or have anything to do with what
432 that person's doing.

433 As far as the leading and lagging indicators, when you have
434 a safety management system, it really pays to...to determine how
435 successful it is and these are the...the indicators that would do
436 that for you.

437 So, like I said, both very, very important and the
438 recommendation recipient, Patterson-UTI, has agreed to
439 [implement these recommendations].

440 CHAIR LEMOS: Thank you so much, Director Barbee. Another
441 question. You know, as responsive as Patterson-UTI has been, and
442 in implementing even parts of these recommendations that they are
443 able to at this time, why have the two recommendations not yet
444 been fully implemented?

445 DIRECTOR BARBEE: Ah. Well, with regards to the alarm
446 philosophy and alarm rationalization, they're actually working
447 with the company that provides that technology to them. And so
448 they're...they're trying to make sure that the...the technology
449 matches their operations. And they're actually...they're
450 interactive very, very well with them.

451 So until...until there's a final product from them, they can't
452 actually implement. And then again, like I say, once they
453 implement it, that's when the policy kicks in to...to make sure
454 that they're doing it. So that's for that piece.

455 For Recommendation 11, it's just...it's a really, really
456 significant change. And so they've made substantial progress in
457 monitoring the Patterson metrics for tracking the effectiveness
458 of the flow checks, management of change, and the completion of

459 the drill sheets...or trip sheets, I'm sorry. But they still need
460 to establish the monitoring and metrics pertaining to the alarm
461 frequencies. And that...that sort of ties back to that other
462 recommendation.

463 So, like I say, in addition to the...in addition to it being
464 very, very significant, it's also...it's sort of waiting on that...
465 The technology's there, but they're just...they're finishing
466 the...the details. So they're...they're waiting on those details.

467 CHAIR LEMOS: Thank you so much, Director Barbee. I know
468 you also have another topic to discuss today, which is regarding
469 the public safety at oil and gas storage facilities. And if you
470 can...if you can talk about that, that would be wonderful. That's
471 Recommendation 3.

472 STEVE: Okay, Chairman, if it's...if it meets with your
473 approval, if we could move to the investigation section and then
474 when Director Barbee resumes conversation with us, to revert back
475 to his presentation?

476 CHAIR LEMOS: Absolutely. So we are going to be... And
477 Director Barbee is doing the AL Solutions as well, right?

478 STEVE: Yes. He actually... I'm not sure when he may have
479 lost communication. So we may need to repeat the second
480 presentation.

481 CHAIR LEMOS: Got it, okay. If someone can call him because
482 he's not reading [the text] message, just to let him know to
483 hang up.

484 I'll move on to the open investigations. Again, we
485 apologize, everybody on the phone. Communications these days is
486 at a high premium in demand and it's... I'm...I'm super pleased that
487 it worked really well last time and this time, we're working
488 through some challenges.

489 But moving on to our open investigations, I am pleased to
490 announce that we have a factual update that we are releasing
491 today on the TPC accident in Port Neches [inaudible] Director
492 Klejst who will introduce the product, as well as the presenter,
493 which is Presenter Griffin.

494 DIRECTOR KLEJST: Thank you, Chairman. The Office of
495 Investigations completed the factual update that was prepared in
496 connection with the incident that took place at the TPC Group
497 facility in Port Neches, Texas, in November of 2019. This
498 incident involved a release of hydrocarbon that resulted in a
499 fire event that then led to multiple explosions at the facility.

500 With us today is the investigator in charge, Harold Griffin,
501 and Mr. Griffin will provide you with a summary of the key facts
502 of the investigation, as we have it developed at this point. At

503 the completion of his presentation, he will be prepared to answer
504 any questions you may have on the factual update.

505 Mr. Griffin, if you can please begin with your presentation.

506 INVESTIGATOR GRIFFIN: Thank you, Director Klejst. A quick
507 recap. On November 27th, 2019, just before 1:00 a.m., a major loss
508 of containment event occurred at the Port Neches operations
509 facility in Port Neches, Texas. The release produced a flammable
510 vapor cloud that engulfed the facility's main process area known
511 as the South Unit. A short time later, the vapor cloud ignited,
512 causing an explosion that significantly damaged the facility and
513 injured three personnel working at the facility. Outside of the
514 facility, the explosion damaged nearby homes and buildings and
515 several people were treated for minor injuries.

516 Multiple fires ensued within the plant, triggering
517 additional explosions throughout the day. Flammable...flammable
518 vapors continued to release from damaged equipment and the fires
519 burned for over a month.

520 The facility produced a chemical known as butadiene, which
521 is mainly used to manufacture synthetic rubber. Butadiene is a
522 highly flammable and highly reactive chemical. One of the
523 undesirable reactions is the formation of a solid material known

524 as popcorn polymer, which can form when oxygen reacts with
525 butadiene.

526 The danger with popcorn polymer is that it grows at an
527 extremely high rate, exponentially, in fact, and is capable of
528 producing a great deal of pressure inside process equipment and
529 piping. Popcorn polymer usually forms in process areas that
530 contain a high butadiene content. It can also form in process
531 areas containing little to no flow, also known as dead legs.

532 The CSB has learned that there was a history of popcorn
533 polymer formation within this unit. And the CSB has also learned
534 that a significant dead leg existed in the unit for over 80 days
535 leading up to the incident.

536 The CSB is continuing to conduct its investigation of this
537 incident and at the conclusion of the investigation, the CSB will
538 publish a final investigation report discussing the facts,
539 conditions, and circumstances of the event, the cause or probable
540 causes, and may issue safety recommendations to prevent the
541 recurrence of similar incidents. Thank you.

542 CHAIR LEMOS: Thank you, Investigator Griffin. I do have a
543 few questions. As you notice, I like to ask questions. The
544 first one is... Is popcorn polymer problematic throughout the
545 industry?

546 INVESTIGATOR GRIFFIN: Yes, Chairman, in the factual update
547 that will be released today we present examples of past events,
548 where the buildup of popcorn polymer has ruptured equipment,
549 leading to the losses of containment. In fact, the potential for
550 pop...for the buildup of popcorn polymer exists at any facility
551 with equipment containing a high concentration of butadiene.

552 CHAIR LEMOS: And so what are the next steps of this
553 investigation? It seems like you've really uncovered a lot,
554 which is exciting and...and encouraging. Can you tell me what the
555 next steps are for the investigation?

556 INVESTIGATOR GRIFFIN: Well, the investigation team will
557 perform additional interviews as necessary. We'll continue to
558 examine documents and review industry standards and guidance
559 documents, and finalize our causal analysis. We're currently
560 drafting the final investigation report and recommendations,
561 which we are planning to publish in 2021.

562 CHAIR LEMOS: Much appreciated. I mean that's... I'm super
563 excited to get the factual update out. And before I go on to the
564 rest of the open investigations, I want to circle back to see if
565 we can hear Chuck. Chuck, I believe where we all dropped off the
566 phone call was at your second presentation regarding the public
567 safety at oil and gas storage facilities. If we can hear you, I

568 know that's number two and three and you were talking so
569 wonderfully, although we couldn't hear you.

570 So if we can hear you now, it would be a great time to go
571 over the public safety at oil and gas storage facilities
572 Recommendation 3.

573 DIRECTOR BARBEE: Thank you, Chairman Lemos. Can you hear
574 me?

575 CHAIR LEMOS: Yes, yes, sir.

576 DIRECTOR BARBEE: Okay, alright. I will tell you I gave a
577 tremendous presentation before. This will only sort of... It
578 won't be quite as good, I don't imagine. But I will do my best.

579 CHAIR LEMOS: I think since you practiced it, it'll probably
580 be even better.

581 DIRECTOR BARBEE: Alright. So, like before, what I'll do is
582 I'll go into the background. October 31st, 2009, two teenagers,
583 aged 16 and 18, were fatally injured when a petroleum storage
584 tank exploded in an oilfield near Carnes, Mississippi. Six
585 months after that, a group of young adults and teenagers were
586 exploring a similar tank site in Weleetka, Oklahoma, when an
587 explosion and fire fatally injured one of those individuals.
588 Then two weeks later, a 25-year-old man and 24-year-old woman

589 were on top of an oil tank in rural New London, Texas, when the
590 tank exploded, killing the woman and seriously injuring the man.

591 Now, as a result of these, in April 2010, the U.S. Chemical
592 Safety Board...and hazard...or...initiated a safety hazard study into
593 the causes of these tragic incidents. All three incidents
594 involved rural, unmanned oil and gas storage sites and lacked
595 fencing and signs and other things.

596 One of the...One of the big issues is that the CSB identified
597 26 similar incidents between 1983 and 2010. Of...These incidents
598 resulted in 44 fatalities and 25 injuries as a part of this
599 safety study. Interestingly enough, all of the victims were 25
600 years of age or less.

601 So, as a result of the study, the CSB issued six
602 recommendations, one to EPA, one to API, one to NFPA, and then
603 three to some of the states. They involved Mississippi, Texas,
604 and Oklahoma.

605 Specifically, for the State of Oklahoma, the recommendation
606 states amend state oil and gas regulations to...

607 a) Protect storage tanks at explosion...exploration and
608 production sites from public access by requiring sufficient
609 security measures, such as full fencing with a locked gate, hatch

610 locks on manned...tank manways, and barriers securely attached to
611 tank external ladders and stairways.

612 b) Require hazards signs or placards on or near tanks that
613 identify the fire and explosion hazards using words and symbols
614 recognizable by the general public.

615 c) Require the use of inherently safer tank design features
616 such as flame arrestors, pressure vacuum vents, floating roofs,
617 vapor recovery systems or an equivalent alternative, to prevent
618 the ignition of a flammable atmosphere inside the tank.

619 Now, we've had several communications back and forth with
620 the Oklahoma Corporation Commission since we issued the
621 recommendation in 2011.

622 One thing we'd like to note is that while the OCC apparently
623 cannot implement new regulations on their own without legislative
624 approval, they do have the authority to propose those changes and
625 that's what we're asking them to do, propose them and then
626 implement them.

627 And unfortunately, to date, they...they just haven't taken
628 action in that direction. So, as a result, recommendation staff,
629 we recommended and the Board voted to change the status of this
630 recommendation to Open, Unacceptable Response or No Response
631 Received. Thank you.

632 CHAIR LEMOS: Wow, that is a... I mean this seems really
633 important to protect the public and...especially with the.. I mean
634 the statistics regarding the number of folks and the age of the
635 folks is...is...you know, this is something we really need to work
636 with the states to address.

637 So you may have already gone over this, but can you just
638 reiterate what hazards do oil and gas sites pose to members of
639 the public?

640 DIRECTOR BARBEE: Absolutely. These sites typically contain
641 aboveground storage tanks and oil and water separators that
642 periodically discharge flammable or toxic vapors, in particular
643 hydrogen sulfide. The tanks also have hatches which allow access
644 to the tanks for inspection and gauging purposes. Introduction
645 of any ignition source, like perhaps...like smoking or even just a
646 static spark, could produce a fire explosion.

647 Security at many of these sites is minimal. They lack
648 fencing. The hatches aren't secured. Things like that. And the
649 hazards are not really well-known in members of the public who
650 may access these sites. And as we've seen, they have accessed
651 these sites. That would be why.

652 CHAIR LEMOS: Got it. And so why did the CSB issue this
653 recommendation to the State of Oklahoma, seeing as the events
654 occurred in various states that you discussed in the study?

655 DIRECTOR BARBEE: Well, interestingly enough, 27% of these
656 incidents occurred in the State of Oklahoma, resulting in 12
657 fatalities and two injuries. Oklahoma is one of only five states
658 that has over a million people who live near oil and gas sites.
659 About half the state's population lives within one mile of a
660 site. So that would be why.

661 CHAIR LEMOS: That is...that is so relevant. And I appreciate
662 you providing those facts for us because one would wonder why
663 we're singling out that particular state. And that makes it, you
664 know, utterly clear.

665 Now, I know that you also presented super well on...on this
666 next one. But I'm going to ask you to redo it and...and this has
667 to do with AL Solutions. It was a fatal dust explosion. And
668 perhaps you can, you know, tell us about that again.

669 DIRECTOR BARBEE: Absolutely, my pleasure. On December 9th,
670 2010, a metal dust explosion and fire occurred at AL Solutions,
671 Inc., their facility in New Cumberland, West Virginia. This
672 resulted in three employee fatalities and one contractor injury.
673 And ultimately caused the shutdown of the plant.

674 The CSB, we found during our investigation that AL Solutions
675 did not follow the requirements of the prevailing national
676 consensus standard, which is the National Fire Protection
677 Association, or NFPA, Standard 484. This is the standard for
678 combustible dust metals. And you...you would follow this standard
679 in order to control combustible dust metals at your site.

680 CSB found that AL Solutions did not sufficiently train
681 employees in combustible dust hazards either.

682 So, after the incident, AL Solutions constructed two new
683 manufacturing facilities in Burgettstown, Pennsylvania. So, the
684 CSB issued two recommendations to AL Solutions corporate, as well
685 as two specifically to Burgettstown, Pennsylvania, facility, in
686 order to prevent similar incidents at the new facility.

687 Now, what I'll do is I'll read the...read those
688 recommendations verbatim. So in this particular case, we only
689 issued four recommendations and all four of them went to AL
690 Solutions. So the first one, R-1, says for all new and existing
691 equipment and operations at AL Solutions facilities that process
692 combustible metal dusts or powders, apply the following NFPA 484-
693 2012, Standard for Combustible Metals. And in this particular
694 case, we're specifically targeting Chapter 12, Titanium; Chapter
695 13, Zirconium; Chapter 15, Fire Prevention, Fire Protection, and

696 Emergency Response; and Chapter 16, Combustible Metal Recycling
697 Facilities.

698 Recommendation 2 to AL Solutions Inc. was to develop
699 training materials that address combustible dust hazards and
700 plant-specific metal dust hazards and then train all employees
701 and contractors. We wanted them to require periodic or annual
702 refresher training for all employees and contractors.

703 And then specific to the AL Solutions Burkettstown facility,
704 Recommendation 3 said, "prohibit the use of sprinkler systems and
705 water deluge systems at all buildings that process or store
706 combustible metals."

707 And Recommendation 4 said, "conduct a process hazard
708 analysis as defined in NFPA 484-2012, Section 12.2.5, and submit
709 a copy to the local fire department or the enforcing authority
710 for the fire code."

711 We had several communications back and forth and it...and in
712 the end, they...the just were not responsive. And so,
713 unfortunately, we proposed, and the Board voted, to close all
714 four of these recommendations as, "Unacceptable Action or No
715 Response Received." Thank you.

716 CHAIR LEMOS: Thank you, Director Barbee. And...and this
717 sounds unusual from my experience of, you know, closing all four

718 recommendations, especially to one particular recipient of...as
719 Closed Unacceptable.

720 Can you help outline for us the interactions that you've had
721 with AL Solutions, with regards to our recommendations?

722 DIRECTOR BARBEE: Absolutely. We...we issued the
723 recommendations initially in July of 2014. We sent out the
724 initial notification like we always do, to the CEO. And then we
725 typically receive a response that says who the point of contact
726 is, as well as what they intend to do.

727 So we got a response and they basically said they did it.
728 So then we send a follow-up letter that says, okay, could you
729 maybe provide some supporting documentation? So then we were
730 directed to an attorney who said, "You know, we had to deal with
731 OSHA violations. And so we have all this information." And we
732 received very similar information from that attorney three or
733 four different times. And eventually he just stopped
734 communicating with us.

735 CHAIR LEMOS: Okay, so...so AL Solutions let us know that they
736 have completed the recommendation actions. And so this is really
737 helpful because there are other recipients that may be on the
738 line that...that want to understand all the lengths that we go

739 through to try to help the recipients in our closure of these
740 acceptably.

741 So if they've already done the work, to close it, we still
742 need some proof of action. And I personally did review the...the
743 documentation from the attorney and from OSHA. But that wouldn't
744 be documentation that...that, you know, indicates that these things
745 have been completed. And...and from my understanding of the
746 request that you outlined, this is...this is not a...a unreasonable
747 request.

748 But at this point, for...for either AL Solutions or other
749 industry or recipients in the future, is there anything that the
750 company can do that would allow the CSB to reevaluate these
751 recommendations, perhaps for a better outcome?

752 DIRECTOR BARBEE: That is an excellent question, Chairman
753 Lemos. I've actually wanted to communicate something like this
754 for a very long time.

755 A Closed Unacceptable status is not a permanent thing,
756 provided you reinitiate contact with us and actually provide the
757 information that we ask for. We typically communicate with some
758 of our...our federal regulators and...and we...we tell them the same
759 thing. And this is an opportunity to [reiterate that] to all the
760 recipients.

761 Yes, if you go back and you provide the information that we
762 asked for... Or, let's say you didn't implement it originally and
763 you...you come back and you decided, hey, I'd really...I really think
764 that's a good idea and I want to...I want to do that. Just
765 reestablish communication with us and we'll open up a dialog.
766 We'll review the information. And if it meets the intent of that
767 recommendation, we will absolutely propose a status change that
768 is more favorable.

769 Unfortunately, if it winds up staying in the Closed
770 Unacceptable category, should a similar incident arise, we tend
771 to talk about these things again because they are still very
772 valid. However, it's always nice to come out and say, "Hey, this
773 person actually implemented this recommendation and here's how
774 successful it was." Thank you, ma'am.

775 CHAIR LEMOS: Excellent. So I have a...another question for
776 you, Director Barbee, on this. I believe we have a Board Order
777 that explains the process. And I get a lot of questions, you
778 know, about what is the process? How can we close it out? How
779 long does it take? And I know that a Board Order may not capture
780 all the complexity in our interaction, depending on the nature of
781 the request. Some things like policy changes naturally take much

782 longer amount of time. Some things like reinforcing training may
783 be a shorter timeline.

784 But...but do you think, you know, referring our audience and
785 our stakeholders to that Board Order would provide them the type
786 of information they might be looking for when they ask me those
787 questions?

788 DIRECTOR BARBEE: Oh, absolutely. And it is posted on our
789 website. And it does go through the things that we're required
790 to do in our evaluation, as well as the various status changes
791 and what you have to do or...or the criteria of each of those. So
792 we are policy followers in the government. And so we...we do tend
793 to follow our policy and it lays it out very, very well.

794 CHAIR LEMOS: Excellent. So I don't know that you know the
795 Board number offhand and I...I know this is a pop-up question. But
796 our Board Orders for all of those online are publicly available
797 on our website and you can see...see all of that and this guidance.
798 So, again, I don't know that you know offhand exactly which Board
799 Order number. You do know? Okay.

800 DIRECTOR BARBEE: Well, of course, I know. That would be my
801 Board Order. That would be Board Order 22. That covers the
802 recommendations program.

803 CHAIR LEMOS: Thank you, Director Barbee.

804 DIRECTOR BARBEE: Yes, ma'am.

805 CHAIR LEMOS: That...that's great. So anybody who would like
806 to look at that guidance, again, I can't tell you how many times
807 I've been asked that in the last five months. And that can help.
808 So there...there is opportunity for industry or other participants,
809 such as AL Solutions, to, you know, come back into good graces
810 with regards to the recommendations, which is...which is super.

811 So, thank you, Investigator Griffin. You provided us an
812 overview of the factual that will be released today on the
813 website. And it has a lot of beautiful pictures. I wish we
814 could have shown today, although you did a really good job
815 describing the popcorn polymer and I learned a lot about that.
816 So, I really appreciate that.

817 I want to emphasize that we have a super-busy first quarter.
818 FY21, as you know, has started in October for us government
819 folks. In addition to this new factual report, we plan to close
820 and release several reports. And the first two anticipated are
821 the Kuraray and Aghorn investigations. And, obviously, there are
822 more in the queue. Many have been asking about other ones and
823 we...you know, because investigation is the nature of the
824 investigation, we don't have specific dates. But I can tell you

825 that the first two we anticipate, because we're very close to
826 being finished, are Kuraray and Aghorn.

827 Now, as a reminder from last month's public meeting, we will
828 review the final report findings and recommendations for any
829 closed investigations through a public board meeting. And we'll
830 schedule that so that...so that all can understand the facts and
831 the findings and how we came to our conclusion.

832 So with that, I would like to open the floor up for public
833 comments related to the CSB's activities. If you are on the
834 phone and wish to make a public comment, please follow the
835 operator's cues, Gretchen's cues, and the operator will unmute
836 your line. And you may also submit a public comment by email to
837 meeting@csb.gov and all of these public comments will be included
838 in the official record, whether they are received via
839 meeting@csb.gov, or if you speak today.

840 I would ask that you please present your comments within
841 three minutes to provide folks enough time. And so, let's go to
842 the phone now to see if we have any public comments.

843 OPERATOR: At this time, if you would like to make a public
844 comment, please press the * and 1 on your touchtone phone. You
845 may remove yourself from the queue at any time by pressing the #

846 key. Once again, that is * and 1 to make a public comment. We
847 will pause for a moment, to allow comments to queue.

848 CHAIR LEMOS: Gretchen, can you...can the audience still hear
849 me? This is Dr. Lemos.

850 OPERATOR: Yes, they should be able to hear you.

851 CHAIR LEMOS: Excellent. So anybody who would like to
852 speak, we request that you state your full name and any
853 association that you might have with an organization so that we
854 can do a better job at tracking it.

855 OPERATOR: Alright, we'll take our first public comment from
856 Steve Sallman, United Steelworkers. Your line is open. Please
857 go ahead.

858 [NO AUDIBLE RESPONSE]

859 OPERATOR: Your line is open. Please go ahead.

860 STEVE SALLMAN: Yes, thank you. I was on mute. I
861 apologize. Thank you for the opportunity to speak today. I
862 wanted to thank the CSB and especially the team who responded to
863 the double contractor fatality at the Evergreen Packaging mill in
864 Canton, North Carolina. It is a USW-represented facility. And
865 although we don't represent the workers, we believe there are a
866 lot of opportunities to learn and improve.

867 And, as you know, there have been a lot of pulp mill
868 fatalities and incidents. So we hope this will not only improve
869 things for the industry, but also for all people who are exposed
870 to the hazards in those pulp mills.

871 We also ask that, you know, that the CSB looks back to the
872 Pixel Energy...or excuse me, Pixelle paper mill in Jay, Maine, if
873 there's any similarities with what's going on at Evergreen
874 Packaging and such, with digesters, tanks, and such.

875 And then I also wanted to flag and appreciate the work
876 that's been done around management of change that I heard on the
877 phone today. I just wanted to bring attention that any
878 management of change should involve employees and their
879 representatives.

880 And I also appreciated hearing about alarm fatigue. And I
881 would flag that we learned a lot from the BP Texas City refinery
882 and when it comes to alarm fatigue.

883 So I think there's a lot of things that could be shared from
884 those learnings.

885 And then I'll finish with my question is... Will the CSB
886 tentatively schedule the public meetings for 2021 and be putting
887 those out before the end of the calendar year? And I thank you
888 for the time.

889 CHAIR LEMOS: Thank you so much, Steve. Really appreciate
890 you listening to the call and all of those very positive
891 comments.

892 I will say that the public meetings are...per CFR are every
893 quarter, and they're regularly scheduled. I don't know that
894 they're...unless we changed the CFR, that would not change. From
895 my understanding. Is that correct, Director Klejst?

896 DIRECTOR KLEJST: Yes, that's...that is correct.

897 CHAIR LEMOS: Yeah, excellent. So...so we anticipate
898 continuing to have them. We've had some...some discussions, just
899 to let you know, about...because we'll be having public meetings or
900 Board meetings for the investigation closures, how many meetings
901 would be appropriate to have for the...this sort of meeting.. I
902 think it still warrants it if we continue to, you know, talk
903 about our...our status and our...making progress on recommendations.

904 I learn an immense amount from these recommendation reviews.
905 I think they're super important, not just closing an
906 investigation. So I imagine we would continue to still do that.
907 But there's a... You know, there's also a certain number of
908 meetings that we're going to...going to have, to close out
909 investigations.

910 Thank you so much for your question. I really appreciate
911 it.

912 STEVE SALLMAN: You're welcome. We just wanted to make sure
913 that we got plenty of time, advance notice to be able to schedule
914 to attend the public meetings, was...was the point of the question.

915 OPERATOR: We'll take our next public comment from Alexa
916 [inaudible]. Your line is...or from the House of Representatives.
917 Your line is open. Please go ahead.

918 ALEXA: Hi, I'm Alexa. Sorry, I just wanted to ask a
919 clarifying question. Because I see that the CSB has 13 open
920 investigations right now, as of August 2020. And only the TPC
921 Group explosion was discussed on this call. And I know you
922 mentioned that Aghorn and the Kuraray would...the reports would be
923 coming out soon. But I was just wondering if there was a
924 discussion of the other ten incidents that are open. Or if that
925 will be for a later meeting. Sorry. I know we all like cut out
926 for a bit and I didn't know if maybe I just missed something.

927 CHAIR LEMOS: No, you didn't. So all of the status for our
928 open recommendations...I mean, sorry, open investigations are on
929 the webpage. If there's anything public we can say about them,
930 it's when we update a factual or close a recommendation. And so

931 there's nothing new to report. So that's...that's why we didn't
932 include that in the discussion today.

933 As you may know, we have been extremely assertive about our
934 hiring, and Director Klejst has done a great job with his team
935 in backfilling a lot of our open investigator positions. So, I
936 feel like we're well on our way to really make a lot of progress
937 in FY21. A lot of these investigations, they changed hands and
938 you need to bring somebody else up to speed.

939 So we're...we're very enthusiastic and supportive of that...you
940 know, of the...of those products and the mission products really
941 coming out. And with all the transparency that...that we have to
942 offer, not just through a public meeting, but all the
943 transparency through online materials and supporting documents.

944 Does that answer your...

945 ALEXA: Thank you. Yeah, I appreciate it.

946 CHAIR LEMOS: Thank you for calling.

947 OPERATOR: We'll take our...we'll take our next public comment
948 from Michael Walls from American Chemistry. Your line is open.
949 Please go ahead.

950 MICHAEL WALLS: Thank you very much. Dr. Lemos, thanks to
951 you and to the staff for the updates on the recommendation
952 status, as well as your ongoing investigations.

953 One question and then one quick comment. The question goes
954 to the...the Board's reporting regulation that was made final or
955 went into effect in March of this year. I was wondering if, at
956 some...either at some future public meeting or in the context of
957 the information the Board provides on the website, you expect to
958 provide some public data and information on the reports you are
959 receiving, at least on their number and nature, and you know, an
960 understanding of how the Board is assessing those reports,
961 compared to its past practice.

962 The very quick comment is simply to note that on the Board's
963 website landing page, on the lower left-hand corner, there is
964 typically a link to current investigations. And the TPC
965 explosion appears at the...at the bottom there. When you actually
966 click on the TPC link, it takes you to the information related to
967 the Pryor Trust gas well incident. So I'd just note that. I
968 know the Board's very interested in ensuring easy access to the
969 data and information it has. And so I just wanted to point that
970 out.

971 Thank you again very much for you...for your...for all your work
972 and that of the staff. Our industry, of course, continues to
973 very much support the work of the CSB. Thank you.

974 CHAIR LEMOS: Thank you so much, Michael. Really appreciate
975 your pointing out the...the link issue. Obviously, we're excited
976 about getting the TPC factual out today and so that's helpful.

977 In terms of the incident reporting rule, we've had a lot of
978 questions about this and we do intend, according to the current
979 regulation, to provide a yearly update as of the month that it
980 went into effect. We are pulling together and summarizing in the
981 comments and questions for clarifications that will result
982 in...could likely result in some additional guidance. We don't
983 have a timeframe on that yet, but we're...we're really... I feel
984 like we're...we're coming close to, you know, summarizing most of
985 the common themes.

986 So we are working internally to do that. We're working also
987 with some incident reporting specialists on our databases. And
988 so we look forward to reporting just...you know, outcomes in a
989 future call. And appreciate your interest in this matter.

990 MICHAEL WALLS: Thank you very much.

991 OPERATOR: Once again, that is * and 1 to make a public
992 comment. It appears that we have no more further comments at
993 this time. I will now turn the program back over to Katherine.

994 CHAIR LEMOS: Thank you so much, Gretchen. And thanks to
995 those of you who provided a comment and all the other folks who

996 may be listening. Thanks for your patience today with some of
997 our technical challenges. And we do look forward to, in the
998 future, your being able to see us and our materials and pictures
999 as we describe some of these things. And, as you know, we want
1000 to get that right as well. And that's...that's really critical.

1001 So, in closing, thanks to everyone for attending today's
1002 meeting. I want to thank my incredible staff, the Directors, and
1003 all the technical team and supervisors that are on the line today
1004 and that worked to not just to pull these products together but
1005 to help present it in a way that we could do the radio style
1006 version. Thank you, Director Barbee, for your double...double-
1007 double presentation.

1008 I mean all of these things are so critical and important to
1009 our mission. I'm really happy to be able to highlight all the
1010 different elements of investigations. Sometimes people only
1011 focus on just the probable cause. And the entire lifecycle of
1012 the investigative process is...is critical and is in our mandate.

1013 So I urge you to continue monitoring our website. And if
1014 you haven't already done so, to sign up for CSB news alerts. And
1015 this concludes our first business meeting for FY21. Our next
1016 business meeting will be in January. I don't have the date for

1017 that yet but I can imagine it will be close to the end of
1018 January, for planning purposes.

1019 All of us share a strong interest in preventing chemical
1020 incidents in the future and we need to work together as a
1021 community to do so. And I appreciate all of you as our
1022 community, in helping us to make the chemical industry safer.

1023 So thank you for your attendance and with that, this meeting
1024 is adjourned.

1025