

FILE NAME: Brand Insulations (BIN)

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February 11, 1972

ATTEN: BRAND

M. Corbeil
J. Mulvihill
R. Norman
N. Waverley
L. Pauly

FLUOR

I. Davis
D. McCage
D. Lowery
M. Kisby
P. Danner
T. Winkle

MOBIL

S. Ketterer
J. Good
R. Willits

START - 9:19

Don McCage started off the meeting by saying the first topic for discussion would be the schedule.

Mel Corbeil said that the preliminary schedule looked like it was awfully steep.

I. Davis added that all the meetings Brand and Fluor had, both Brand and Fluor knew the schedule would be up and down and Brand was aware of this when they bid the contract.

Mel Corbeil said he was aware of this but not such a drastic increase as these charts.

I. Davis said he believed Brand was making a federal issue out of this.

Mel Corbeil said it was not a federal issue but he wanted to let Fluor know right where Brand was and not like so many other jobs that everybody starts screaming at the end. Brand was only trying to let everyone involved know that this tentative schedule might be a problem.

I. Davis said that he realized Brand's position and that many things come into consideration such as weather, hydro, human failure, material late, elements and nature. He then stated that the end date was in May, 1973.

Mel Corbeil stated that he could live with May, 1973, but when Brand would get in trouble is when Fluor would compress the schedule.

I. Davis said that Fluor would do everything not to compress the schedule too badly as to force a manpower situation.

Mel Corbeil said Brand would man the job.

I. Davis said he realized that there were saturation limits and Fluor would not ask Brand to exceed these limits.

Mel Corbeil again stated that Brand just wanted to let Fluor know where they stood so Fluor couldn't say why didn't you tell us sooner.

S. Ketter was then asked if he had any questions. He said no.

I. Davis said he would only ask Brand to man the job to the saturation limits and not beyond. He said he would be delighted to see Brand and the painter walk off the job the same day.

Mel Corbeil then asked if Fluor had considered leaving the welds open on pipe racks etc.

I. Davis said he didn't think this was the best way.

Mel Corbeil said maybe it is not the best way but it would expedite the job tremendously.

Don McCage then stated that Fluor had all the factors for the welds being left open.

Mel Corbeil asked if they would just consider it.

Jerry Mulvihill said it would bring the end date up.

I. Davis said Fluor and Mobil would consider it.

Mel Corbeil again stated that he knew the schedule was tentative.

I. Davis asked if the Union was going to have a problem furnishing men. This is what he had heard through the grape-vine. He also stated that there were alternatives to this situation.

Mel Corbeil said there were alternatives and Brand would use them.

Don McCage then asked if there was anymore on scheduling. No replies.

Don McCage then said the next topic was the Occupation Hazard Law, OSHA.

Mel Corbeil said that there were brand new laws that have come into effect since January 1, 1972. Monitoring the air and such.

I. Davis said it was a 1971 revision and it still was the same act.

Mel Corbeil added that this would have to be interpreted by a lawyer.

I. Davis said that this was one reference and he thought if they went back to the boiler plates we could find another reference that perhaps would be a little more specific.

I. Davis then stated a "Contractor should comply strictly with all Local, State and Federal Laws, Orders and Regulations applicable with its operations in the performance of the work hereunder, including without limitations all applicable statutory and government safety regulations".

Mel Corbeil then stated that Brand was doing everything under those laws to date of contract signed.

I. Davis said you signed this piece of paper right here and that is the piece of paper that says we got a contract.

Mel Corbeil said that he was sure Brand was interpreting this differently.

I. Davis said to read Paragraph No. 8 and let your lawyers do what they want. I. Davis then asked for a letter from Brand rescinding the previous letter that Brand had sent them. He threatened if he didn't get this rescission he would send a letter back and he would not accept this letter at all.

Don McCage then said that we have a few problems out here but one of the problems is selling 4-D-8. Don said that Fluor would not buy the vessel and Brand cannot do any better on it with this spec. He then asked for some discussion on the matter.

Mel Corbeil asked why it wasn't acceptable. Was it because it didn't have the insulation value, because of looks or what?

I. Davis then said he would leave this up to Quality Control.

P. Danner then said that it wasn't actually weatherproof. He said the head was unquestionably loose. P. Danner then explained that three gores had been taken off for inspection. He felt that these gores could be pulled tighter.

Lou Pauly explained that if everything was taken off and reinsulated and remetaled there would be no difference. At this time he went to the blackboard and explained that by pulling the gores tighter, the only thing being accomplished was compression of material. Lou also explained that Fluor and Phillips Cetschaw had people walking all over and told P. Danner that he had admitted Fluor people were on this head.

P. Danner said he had admitted Fluor people were up there.

Lou Pauly explained that Brand had tried to make adjustments on this head, but it was acceptable to no one. He also explained that taking .020 metal and putting it over 8 lb. blanket was like putting the metal over a pillow.

Mel Corbeil then said he didn't feel that putting .032 metal on would do that much better of a job. He explained that Brand had to have a rigid type of insulation to lay on.

P. Danner then explained that Fluor had made comparisons with .032 metal on the Mobil Job and other jobs in the area. He also said that Krez's sheet metal man took it upon himself to use .032 metal instead of .020.

Lou Pauly asked P. Danner if he was talking about a 25 foot head just like the one on 4-D-8.

P. Danner said it was not a 25 foot head.

Lou Pauly then brought up the fact that this head was only one of many and especially on 4-D-4 where the insulation is 6 inches thick. We are only trying to inform Fluor of a future problem.

D. Lowery then said that they would not accept the head on 4-D-8 as it stood. He also said that they want this corrected before Fluor goes any further.

Mel Corbeil said that it would be worse on 6 inch thick insulation. He said that if anyone stepped on it there was no way that wrinkles would not occur.

D. Lowery then said that Brand would have to keep everyone off of these heads.

P. Danner said he felt Brand's argument was that the metal was the cause of all the troubles.

Mel Corbeil said no, it was the material underneath. M. Corbeil felt that if a firm block was underneath, Brand would not have this problem. He said he felt that the spec was wrong for that size diameter vessel. He also said that the insulation value was still there, but apparently it did not satisfy the eye.

Don McCage said, "Lets put it this way." In the specs you have the option to use Cal-Sil on the heads. Brand is saying the spec is all right and it is not a design issue.

Mel Corbeil said the option is about 4 times the cost. He said he would not take the Cal-Sil option when he has the option to use blanket.

Don McCage asked if he wouldn't use the Cal-Sil when Brand was having so much trouble with this blanket.

Mel Corbeil said the labor was the difference between putting blanket on compared to putting Cal-Sil on.

Don McCage asked how many hours had been spent trying to straighten out this head. He also said, your people have been up on this how many times?

Mal Corbeil then asked if Fluor thought Brand should just arbitrarily use Cal-Sil instead of blanket.

Don McCage said, you do have the option.

Mal Corbeil said, yes, we do have the option. M. Corbeil still contended that the insulation value was still the only thing there that did not look satisfactory to Fluor.

Don McCage said it was not satisfactory to Fluor on a weatherproofing basis. He said it was not only looks, it didn't matter what it looked like.

Mal Corbeil suggested going back to the original spec of mastic.

Don McCage said that both companies agreed to use aluminum instead of mastic.

I. Davis said he did not care which option was used as long as the final product was acceptable.

Mal Corbeil asked what Fluor was looking for, a Cadillac?

I. Davis said they were looking for something acceptable.

Mal Corbeil reminded Fluor that the top was stepped on.

P. Danner said he observed that on some vessels, custom gores were made at particular points on heads tight quarters and such. He wondered if this method could not have been employed on this vessel.

Lou Pauly said the vessel was done the only way it could be done.

P. Danner asked if a large hat piece could not have been made for the top of 4-D-8 and then gore off of that.

Lou Pauly said, absolutely not! He then went on to explain how gores are made and that is, the circumference is measured and when a rule lifts 3/16 of an inch off the circumference that determines the size of the gore. He also stated that any apprentice sheet metal man would know this. Lou Pauly also explained that there are two angles you have to figure, not one.

P. Danner then stated that special gores were made in some cases.

Lou Pauly again stated that this was on 5-D-8 under a platform and he wished to hell he would have made them lift the platform.

I. Davis then said, "Let's talk about the current problem."

Lou Pauly then asked Don McCage if Brand could mastic the head.

Don McCage said no.

Lou Pauly then said, in other words, you are giving us the alternative to use Cal-Sil but we can not use the alternative to use mastic.

Don McCage said there was no alternative to use mastic.

Mel Corbeil said the original spec called for mastic. Brand had arbitrarily told Fluor that they would do the heads in metal instead of mastic at no extra cost. But we did not say that if somebody stepped on these heads it would not compress the material and you would get a shitty looking job. If these heads had mastic on them the only thing that would happen would be the bond on the mastic would be broken.

Don McPhill said that he and Lou Pauly went on top of 4-D-8 one day and pressed in on the metal and at the points pressed in, the base insulation was dry underneath. The metal, however, did not come back out to its original shape. He also said it was weatherproof except where people had been pushing in on the metal.

Lou Pauly then asked if they knew it was not weatherproof or were they just assuming it was not weatherproof.

P. Danner then said that there were voids in the metal and he felt that it was a safe assumption that it would not be weatherproof. He also said that in some spots the gores did not follow the same contour of the head underneath.

Mel Corbeil said this took place because of the blanket being stepped on underneath. He also said on some jobs where traffic is going to be on a head they put a walkway of Cal-Sil, but never go to 8 lb. blanket, especially on 3 inch thick. One inch thick might be another story.

P. Danner admitted to traffic on the insulation. He said Fluor, Phillips Getschaw and Brand people were on this head.

Mel Corbeil said he didn't feel the spec was adequate for what Fluor was looking for.

Don McCage then asked what Brand, as an insulation company, did on other jobs to put on an adequate head.

Mel Corbeil said either a 15 lb. mineral wool block or Cal-Sil. He felt that the 8 lb. blanket was not enough for the monolithic surface that Fluor was looking for.

Don McCage said, then what you are saying is that you have the option to go to Cal-Sil on the heads, but Brand does not want to exercise the option.

Mel Corbeil said that is right.

P. Danner asked how many cases there were where you would use the standing rib instead of gores.

Lou Pauly explained again that this head could not be done in this manner.

T. Davis said he had been listening with interest all this time, but "Mr. Brand", what are you going to do?

Mel Corbeil said we were told at the last meeting Brand had with Fluor that the spec was "Gospel".

T. Davis said that it was.

Mel Corbeil said that the spec was followed to the letter of the law.

Lou Pauly then compared 4-D-8 to 4-D-6 saying that the only difference is that 4-D-6 was horizontal and the voids were not as noticeable. Lou also said that 4-D-8 was done to spec.

P. Danner then asked why 4-D-6 was done with .032 metal.

Lou Pauly explained to him that it was the spec and told him when you do a tank body with .032, you do not make the heads in .020.

Ralph Willits asked if Brand ever did any other industrial work in the area.

Mel Corbeil answered yes. Union Oil and Northern Pet.

Ralph Willits said it wasn't very apparent.

No Comment.

Mel Corbeil said that aluminum heads were fine on small diameter vessels but on larger diameter vessels you are better off with a bonded type roof. At the time this thing came up it was just a flat change to aluminum heads. Mel also stated that he had informed Lou Pauly any time in the future he sees a problem with the spec to let Fluor know immediately and recommend a change. Mel said that we go

along and follow the spec and all of a sudden it is not acceptable.

Ralph Willits then stated that he felt it was workmanship which Brand has a total disregard for.

Mel Corbeil said this is not so. He said if it was quality workmanship, Brand would go back to the Union and make them re-do this head on their own time.

D. Lowery said that we had to get this accepted before we go any further.

Jerry Mulvihill said we should go to the mastic.

Mel Corbeil then recommended heavier density blanket be used on larger diameter heads, such as 15 lb. mineral wool block.

P. Danner asked if it had the same insulation value.

Mel Corbeil said it did.

Don McCage asked if a mastic head would require a cement first.

Jerry Mulvihill said it would.

I. Davis said what are we going to do.

D. Lowery felt Brand should try and do better with this head.

I. Davis said if his Quality Control won't accept it, they won't accept it.

Mel Corbeil said that Brand was going to start doing things differently, that Brand was not going to just arbitrarily change things, just for the change, anytime Fluor wanted them changed.

I. Davis said it should have been brought to Fluor's attention.

Mel Corbeil said he didn't think it was going to be a problem. Now we know better and Brand is telling Fluor of the problem. We did this head to spec in good faith. Brand isn't trying to do a cheap job. Brand hasn't done anything out here cheap. We're only in the first phase of a big refinery.

I. Davis said that's why we should straighten it out now. He asked D. Lowery if he and Brand would get together and try to straighten this matter out.

Ralph Willits then said that Brand's attitude so far on this job was to take it or leave it. He also stated that Brand has made no attempt to fix this head.

Lou Pauly said, "I beg your pardon. We've spent 16 hours trying to work on it. Nobody accepts it or offers any suggestions." Lou also felt that the people looking at this tank really didn't know what they were looking for.

Mel Corbeil said that Mobil bought a Chevie and they want a Cadillac. The only thing Brand goes by is the specs and we've lived up to the specs to the letter of the law.

Don McCage then brought up the next subject which was the damage to 58-F-401.

I. Davis then said that he felt that the damage to the tank, from all physical evidence, was a combination of faulty material and poor workmanship. He based this conclusion on the fact that the only place that the tank failed was at the wing seal. I. Davis felt the wing seal failed.

Lou Pauly said that he felt if the clip met the spec, and the clip failed, then the spec failed. Lou then asked if the clip met the spec.

Don McCage said the clip met the spec.

I. Davis asked if Brand knew why only one tank failed.

Mel Corbeil felt it failed because it was an act of God.

I. Davis said the other tanks were fine.

Jerry Mulvihill felt that this tank sits out by itself. Possibly it took the brunt of the storm. He also felt that this tank actually guards most of the other tanks.

I. Davis said they had proof that the winds only read 55 M.P.H. It would be different if the winds were over 100 M.P.H., but they were not.

Mel Corbeil said they might not have been where the wind velocities were taken, but could have been at the tank itself. He also stated that this area was the tornado belt and everything should be backed up.

I. Davis said the whole plant had to be designed for 100 M.P.H. winds.

Mel Corbeil said that the original spec hadn't called for stitching screws and Brand had recommended this, and after much trouble and discussion they were finally approved.

I. Davis said all physical evidence leads him to believe that some sort of flexing action started and opened up the clip. He asked who the manufacturer of the clip was.

Mel Corbeil said Childers.

I. Davis asked if the clip was up to snuff, and if the clip was crimped severely. He also asked if Childer's clip was as sturdy as Gerrard's.

Mel Corbeil said he didn't feel it was as sturdy as Gerrard's, but Childer's clip still met the spec. He asked if I. Davis felt these clips were intentionally bent over.

I. Davis said no, he did not feel that way.

Mel Corbeil asked if the Builder's Risk covered this situation.

I. Davis said, based on the evidence, he would say it doesn't.

Mel Corbeil said that from now on Brand would use Gerrard clips on large diameter tanks.

I. Davis asked if the clip had to be pulled in the middle.

Don Pauly said it did.

Mel Corbeil said there would have to be a tension comparison between Gerrard and Childers' clips.

D. Lowery said he had taken a tour of some other plants in the area and the only difference he observed was pop rivets instead of screws, crimped clip instead of wing type, Gerrard clip instead of Childers. He also said the pop rivets were on 6" o.c.

Mel Corbeil said he never had seen anything like this happen before.

I. Davis said that it only takes one clip to fail and it is like a chain reaction.

Mel Corbeil said he would now have to check with Brand's insurance.

I. Davis said he felt Brand should take a good look at the men.

Mel Corbeil asked if I. Davis felt the band was pulled too tight.

I. Davis said he had no reason to believe that. He suggested that Brand check all the clips on all the tanks.

Mel Corbeil said, "I presume that everything we discussed here today is Brand's fault?"

No Comment.

Ralph Willits said that the winds were only 8 lb. per square foot and that is not nearly what the design calls for. The design calls for 32 lb. per square foot.

Robert Norman said that the wind is funny. He has seen one trailer next to another trailer and only one blown over. You can't really say that the wind was 55 M.P.H. at that tank.

P. Danner asked if the Gerrard clip was the only suggestion Brand had.

Mel Corbeil said he would suggest moving the bands closer.

Ralph Willits asked about Insulock.

Don McCage said this was Brand's design. He asked if this design would withstand the wind velocity.

Mel Corbeil said it would.

Don McCage asked if Brand was aware of 14.85" growth in tanks.

Lou Pauly said he was and everything was o.k.

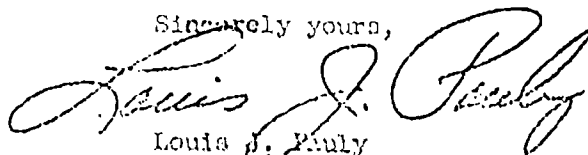
Mel Corbeil cited the OSHA Laws and said that there are new mineral wool products out now and with all the possible law suits, that both Mobil and Fluor should really be looking in this direction. He also said England has already gotten this mineral wool pipe covering on the market.

I. Davis said Fluor would be happy to look at some of these products in the near future.

Meeting Adjourned - 10:28

Donald McCage

Sincerely yours,



Louis J. Pauly
Field Superintendent

cc: D. McCage