

UNITED STATES OF AMERICA
NATIONAL TRANSPORTATION SAFETY BOARD

In the Matter of: INTERVIEW OF JIM BAILEY	Docket No.	
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THIS INTERVIEW WAS HELD IN NEW SMYRNA, TENNESSEE ON
AUGUST 30, 2001.

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A P P E A R A N C E S

PRESENT FOR THE INTERVIEW:

- FRANK McGILL
- CLINT THAYER
- LYLE K. STREETER
- STEPHEN CARBONE
- DAVID W. HOFFSTETTER
- BRUCE ROBBINS
- TODD GUNTHER
- JOHN P. FALCONE

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INTERVIEW OF JIM BAILEY

BY FRANK MCGILL

AUGUST 30, 2001

Q Could you give us a quick background of your aviation training and positions. Nothing elaborate, just -

A I have approximately twenty years of aviation experience, beginning with just under six years in the U.S. Air Force. I worked as a line maintenance mechanic, a crew chief on F-4s and F-16s, also performed inspection. Held a seven level in the Air Force which gave me inspection privileges on the aircraft. Honorably discharged from the Air Force. Came back home to Tennessee to attend MTSU, joined the Tennessee Army National Guard very shortly and I'm still there presently as a helicopter mechanic.

Received my Bachelor of Science in May of 1990 - the degree in Aviation Maintenance Management.

Started a job for John Tune Aviation Corporation in September of 1990. It's a small general aviation and rotary wind repair station. Held the position of shop foreman/inspector.

Later the new management came in and took over. That corporation was basically dissolved and found a job with a company in Nashville.

It was a regional repair station, just a little bit

1 smaller than the place here, probably about two hundred
2 employees and started as an inspector there. I basically
3 held several different positions throughout that eight and
4 a half years. Stayed with the company and worked as an
5 inspector, a lead mechanic, designated inspector, project
6 coordinator, project manager and when I left I was chief
7 inspector.

8 Came here in April of 2000 and I've been here since
9 then.

10 Q What are your responsibilities here. What are your
11 duties? What do you do here?

12 A The basic responsibility is for the overall operation
13 of the Quality Assurance Department. In that department
14 I'm responsible for the inspection and the inspectors, the
15 training, non-destructive testing and we have technical
16 services that maintain and compile the records of the
17 aircraft check.

18 The other responsibilities would include calibrated
19 tooling and equipment for the repair station, manuals -
20 making sure that all maintenance manuals ADs, FARs are
21 current and available for the repair station employees.
22 Basically to supply leadership and direction to the
23 inspectors.

24 Q Is there a specific position, Director of Safety or

1 the safety person that's specific to -

2 A Yes, we do. We have a Safety Administrator.

3 Q Who is that Safety Administrator?

4 A That is John Ackwood.

5 Q What other duties does he have?

6 A Primarily he is involved with the training for any
7 type of equipment in the hangar that's used. He is
8 involved with -- training, hazardous waste. He actually
9 is - has several different areas that he is responsible
10 for.

11 Q Why do you have that position?

12 A Sometimes I've see that position combined with
13 training. However, I think the company had John, I think
14 originally, maybe for the hazardous waste. He had a
15 pretty extensive background in the military in that field
16 and he more or less started assuming some of the safety
17 duties and it seemed like it fit pretty well. Very pro-
18 active in trying to prevent any type of accidents or
19 making sure equipment -

20 Q Is there a mandatory requirement for that position
21 like there is for the airline?

22 A No, I don't know of a requirement for a repair
23 station to hold that position.

24 Q You were not here when the last race-up talk - yes,

1 you were - what was the date that you came?

2 A I came here in April 2000. I did actually get
3 involved with at the end of the race-up inspection, I had
4 some correspondence with FAA.

5 Q Can you generally summarize about what the findings
6 were of the race-up?

7 A From my review of the findings, nothing really sticks
8 out as a major problem. I think there were no findings in
9 several areas. Nothing that drew any attention to - I
10 would say as an industry standard for repair stations.
11 I've gone through race-ups before and seemed fairly
12 normal, I guess I would say.

13 Q I notice that one of the findings, you can just kind
14 of glance here, I know you don't have this out in front of
15 you, but one of the findings was, it had talked about
16 finding parts belonging to Emery in the storage bins and
17 they were not properly tagged. Do you remember anything
18 in particular about this finding and what was done about
19 it?

20 A As a matter of fact I do. I remember this because -
21 if I'm not mistaken, there were approximately six hundred
22 and fifty parts that were in the storage area down there
23 and the response to this was that they had recently gone
24 through to move the parts, you know, I guess to put these

1 parts on racks and to better have them available for when
2 they were being signed out to the aircraft. I think that
3 the response was that they had found four tags that had
4 been either fallen off or torn off during the movement of
5 the parts and that those parts were later tagged. The
6 paperwork was pulled up and that was the end of it.

7 Q How do you do that today, what would prevent another
8 operator from having the same thing?

9 A Well, when I came in April of 2000, they had a parts
10 representative down there that was keeping the inventory
11 and tracking parts coming in and going out our repair
12 station for Emery and any other customer would - is
13 basically set up the same way.

14 You would have a location for the parts, the parts
15 would be received with the appropriate documentation and
16 placed into that area.

17 Q Okay. I notice also that one of the findings at
18 Emery involved the installation of the upgrade of the
19 parameters for a flight data recorder. The finding was
20 that the supervision was improperly done by a repairman.

21 Can you briefly, or are you familiar with this?

22 A Yes.

23 Q What actually happened there.

24 A With the flight data recorder installation you have

1 basically one -- card that spells out the modification
2 that they want accomplished. Then you have supporting
3 documentation for this for all the modifications that were
4 accomplished.

5 Throughout this modification, it was monitored by the
6 repairman that they mention there and also by several
7 other NAMP rated mechanics that were involved with it.

8 I think the question of the repairman signing for the
9 work was that he signed as a supervisor when he held a
10 repairman certificate for electrical and avionics
11 installation.

12 Through that installation there were some structural
13 modifications also accomplished and they didn't feel that
14 he was rated to perform that work.

15 Later on, when I came in, that was one of the open
16 findings. I went back and he actually signed the --
17 performing the work then, for which he was appropriately
18 rated.

19 I think, at the time, the repair station - the
20 position here was that although he was a repairman for
21 avionics and electrical, his training and previous
22 experience had involved structural repairs. He wasn't
23 rated as a repairman for those, although he has
24 supervised, and actually performed work of that nature.

1 We did go back and correct that and he signed as the
2 mechanic and an NAMP mechanic signed as a lead supervisor
3 of the job that had been involved also.

4 That was the end of the finding.

5 Q So is that corrected. If I brought an airplane in
6 today for a modification - upgrade for parameters would
7 you - have you got it broken apart where structures does
8 one part and an avionic guy does the other?

9 Do you do this internally? Explain -

10 A Actually the work scope was provided by the customer.
11 We have tried to find ways to break these things out into
12 different crafts or skills so that you do have the
13 structural items completed under a different area.

14 Sometimes we can't - we don't really have the control
15 over doing that so actually the repairman's certificate
16 has been modified since then. The gentleman in question
17 does hold the rating for accomplishing that now.

18 Q Okay. Not that there was a finding here but I was
19 just curious. Another question had been asked by Todd
20 about the malfunction defect report.

21 A Yes, Service Difficulty Reports.

22 Q MRRs or whatever you want to call that. Can you kind
23 of explain how TTS handles those type of -

24 A There's actually two sides to this. There's the

1 repair station that the FARs cover how the repair station
2 would handle this and then if the repair station is doing
3 maintenance for an operator we follow the operator's
4 procedures for this.

5 When I came in in April of 2000, there were some
6 questions on this that the PMI at the time here, in the
7 Nashville -- we were actually sending all of the completed
8 SDRs to his office and they asked that, you know, if we
9 were reporting this to Emery also, and we were. They had
10 requested that we not, that they actually didn't need that
11 information there.

12 In the Emery Procedures Manual it says that all SDRs
13 would be reported through them and they would make a
14 decision as to whether they were actually reportable or
15 not.

16 Q So Emery would be then the one that would be
17 reporting the maintenance reports to the FAA?

18 A Yes.

19 Q - to produce an SDR?

20 A Yes. If it were a safety of flying or imminent
21 danger type situation we had an understanding with our
22 FSDO that we would contact them immediately and also the
23 operator.

24 Q How would you - just for your own - I'm not trying to

1 ask you anything here other than - how would you verify
2 that what you did find you submitted it to an operator
3 that that operator, in fact, would then submit it to the
4 FAA?

5 A I actually would have no means of following up on
6 that. Q You had one finding right here that had to do
7 with the --traceability?

8 A Yes.

9 Q The finding right here by the FAA had to do with JA8
10 type form but - first off, if you could just address this
11 a little bit and then follow that up by telling me how
12 parts are traced, how are they received, how are they
13 inspected, how do they get to an airport?

14 A Okay. The part in question there is a part that was
15 sent in here as a new surplus part from a - actually held
16 a 145 Repair Station, located in Germany and to the best
17 of my knowledge, based on the bi-lateral contracts that we
18 hold with some of the European and other countries that
19 the FAA had had questions as to whether this part actually
20 met the requirements for being acceptable for use on a
21 type certificate aircraft.

22 We actually, I think, to resolve that issue went back
23 and performed a conformity inspection on that part and
24 returned the part to service, based on holding - being a

1 145 Repair Station.

2 Just generally speaking, as far as receiving
3 inspections - just to say that basically, from other
4 repair stations, other operators I've dealt with, the
5 procedures that we have and are approved inspection
6 procedures manual. Parts receiving is pretty much
7 industry standard. I think most of this comes from
8 guidance and advisory circular 20-62, which outlines the
9 quality, identification, eligibility for aeronautic parts.

10 The part basically - we have an area where the part
11 is off-loaded. It comes in, initial inspection -
12 preliminary inspection is to check the shipping container
13 for damage. We make sure that there is nothing obvious
14 there. We have a person that actually - a clerk that
15 receives the package. He takes the Waybill or the
16 shipping information and matches that up with, that the
17 repair station actually has a requirement for that part
18 through a purchase order system.

19 Once this is accomplished, the part or parts is
20 inventoried, to make sure that it has the correct amount.
21 If there's no discrepancies in this process it's passed
22 along to the receiving inspector.

23 The receiving inspector for TTS also was authorized
24 by Emery and other operators, it depends on the program

1 but we would - basically at this point you're looking for
2 traceability certification for that part. If it's a new
3 part you're looking for traceability back to the
4 manufacturer of the part. If it's a TSL article, you're
5 also - if it came from a vendor, such as a 145 Repair
6 Station as an overhaul or repaired component, you're
7 looking for serviceability documents such as an 8130-3,
8 looking for - you may possibly have a tear-down in the
9 work order maintenance release or a serviceability tag
10 with it.

11 At this point the inspector does a visual inspection
12 of the part. If it meets the requirements for the
13 certification, he's looking for any type of obvious
14 defects with the part that might render the part unusable
15 or to be repairable. If the part doesn't pass the
16 receiving inspection we have a quarantine cage where the
17 part is actually physically removed from that process at
18 the time. We also have a procedure in the Inspection
19 Procedures Manual that a rejection tag - rejection
20 paperwork is actually filled out with the details of why
21 the part could not be used.

22 Often times, if we can receive the correct
23 certification for the part it can be released later.
24 Sometimes we've had to ship parts back to vendors that

1 they could not supply certification.

2 If the part goes through the receiving inspection, it
3 gets posted to the applicable job that it was ordered for
4 and its basically put into a holding cage for the customer
5 until the mechanic comes up and actually needs possession
6 of the part.

7 Q What is an 8130-3 really mean?

8 A 8130-3 is -

9 Q What does it mean to you? Forget the real technical
10 stuff. Just generally - if a component comes in with this
11 tag 8130-3, what does that mean? What will that tell you,
12 generally?

13 A It could actually tell you a couple of different
14 things. It could tell you it's a new part that has been
15 sent in. It can also indicate a repair, overhaul -

16 Q In this case we're interested in overhaul flight
17 controls.

18 A It would indicate that another repair station has
19 overhauled with component. They've basically performed,
20 to the manufacturer's specifications for overhaul of this
21 component.

22 Q Now, if you have that, why should you have a problem
23 with that component?

24 A When a part comes in with an 8130, in all reality,

1 the part is in a serviceable condition to be installed on
2 the aircraft. However, I guess, through our experiences
3 with parts and other repair stations and vendors that we
4 receive these parts from, often times we've found some
5 serious problems with the parts being shipped in here.

6 We've had flight controls come in with the wrong i-
7 bolts attached. We've had improper repairs, parts that
8 did not seem like they were put through the overhaul
9 process completely.

10 Q That's where I'm driving at. If everybody is looking
11 at the same overhaul manual, step-by-step to do something,
12 shouldn't the end result no matter -

13 A Be a serviceable part to be installed. It should be
14 but, like I said, it's more from experiences. We have the
15 receiving inspector that normally does this function. He
16 sometimes catches stuff like that and we can identify it
17 there at the receiving stage.

18 However, we have had parts that were received with
19 the proper documentation and go all the way out to the
20 aircraft before a problem was noticed, a flag was raised
21 to, of course, the operator.

22 Our own FSDOs initiated a subs report against one
23 part. Q Have you ever found certain other vendors that
24 supply problem components and you would pass this

1 information to the operator?

2 A Yes, we have. A lot of times the actual tech reps
3 that are here on site were involved at the time because -
4 by the time you get the part out to the aircraft, often
5 times it was - even at the expense of the operator to have
6 to correct this stuff, it was at that point deemed, I
7 guess, necessary to pay our company to fix the defect with
8 those parts and go ahead and install them rather than try
9 to take the part back to the repair station that had
10 overhauled the part.

11 Q So you created a non-routine that they have to proof
12 - A That's right, yes. From the period I've been here I
13 would say it's a pretty substantial cost if you go back
14 and research it. I'm sure it was.

15 Q Have you had problems with components that were
16 overhauled from another repair facility that - coming from
17 Emery airplanes.

18 A Not another repair facility.

19 Q Yes, where Emery - say another 145 - have you ever
20 had any problems in that area. Have they chose some bad
21 or not as good as 145 overhaul facilities.

22 A That's a little difficult to answer that in a way -

23 Q Have you contacted - hey we're having trouble with
24 this particular vendor that you're using -- and so forth?

1 A I'm not - to tell you the truth I don't know what
2 Emery actually followed up with. Yes we have contacted
3 them, I've spoke to Quality Control and Quality Assurance
4 at Emery with the problems that we have or have had in the
5 past.

6 It's really difficult to say, you know, the process
7 that they go through to pick their vendors and what
8 actually happened to follow this up. I know one vendor
9 sent their Quality Assurance Manager up here and he seemed
10 very concerned about the product that came out of his
11 shop. They seemed to, I guess, make some type of
12 retribution over this but - I couldn't tell you.

13 I'm sure there are a lot of other companies just not
14 sure what happened with it later.

15 Q Would you be familiar at all with the 145 that did
16 the repair on 79U, which is called CCI? Have you ever had
17 problems with that particular vendor that you can recall?

18 A I can't recall that particular vendor. I know that
19 when I came here I know that flight controls had been an
20 on-going problem. We'd received numerous flight controls
21 in here from different vendors that really had major
22 issues, as far as bearings, having bearings that were
23 seized up that you absolutely would have to replace before
24 you could install on an aircraft.

1 Q Would you happen to know - would the Overhaul Manual
2 that required that bearing to been replaced or just looked
3 at then the same bearing put back in and still come up
4 with a serviceable --

5 A I couldn't tell you exactly. I would think they
6 would inspect that bearing for serviceability.

7 Q Do certain operators request, do you think, or have
8 you been where they request to replace that bearing -

9 A Oh yes, I've worked at another facility with a
10 components -

11 Q How standard those bearings are replaced or
12 overhauled - A Sure, unless normally in that instance
13 unless the customer made a request maybe that - to inspect
14 the parts for serviceability. There was something in
15 there that didn't actually require that we replace them.
16 We would follow the work scope like that.

17 But yes, normal operation would have you replace
18 them.

19 Q What kind of training does your people receive from
20 Emery for inspections, parts, etc.?

21 A We've had several different classes, I guess, related
22 to inspection. They come down and teach - they go through
23 their manuals as far as policies and procedures, required
24 inspection items, worthiness for lease. They teach a

1 class concerning CPCP on the aircraft, engine run and
2 taxi.

3 Q Is this done annually or - how often?

4 A I know the engine run and taxi is a two year
5 recurrent training issue. Air worthiness and --, if I'm
6 not mistaken that authority was given to our chief
7 inspector to perform that training on behalf of Emery.
8 I'm sure I've see a memo or a letter authorizing him to do
9 that.

10 I think the CPCP training was a one time program that
11 they came down and did the training for.

12 Q What kind of training does TTS supply for its people?

13 A We actually have quite a bit of variety of training.
14 A new employee that comes in will receive indoctrination
15 training which we call Repair Station 101. It's basically
16 an overview of the FARs that apply to the repair station.
17

18 It covers the TTS forms and any of the tags that we
19 use for the aircraft. It goes through the organization of
20 the Company, Company policies and procedures. This is
21 accomplished - actually there's two blocks of this
22 particular training.

23 The first block is accomplished and the new hire is
24 sent out to the aircraft or back to work and they finish

1 this up about a week later. It gives them time to compile
2 any questions, you know, once they actually were working
3 on the floor they may come back and ask about a particular
4 tag that they came across and it's just a follow-up, also
5 to discuss some of our customers and customer forms.

6 Pretty comprehensive class.

7 Q How long is that class?

8 A The Repair Station 101 is probably three - I want to
9 think three days for the first block and maybe the second
10 block is maybe like a day or so.

11 Q What about systems training, airplane training,
12 engine training and so forth?

13 A We actually, for different aircraft, models that we
14 have we have contracted people that were qualified
15 instructors to come in and teach DCA, DC-10, we've had
16 727. Basically these are normally forty hour courses.
17 They cover the airframe systems, operation of the
18 aircraft. I'm thinking that we've probably had a couple
19 of hundred, couple hundred people through these classes
20 over the last three years.

21 We also have OJT training which is when an employee
22 comes in he's actually on a sixty day probationary period
23 that has to do with the person being hired with his
24 qualifications from previous employers or wherever he came

1 from, we put everyone in a probationary period where he's
2 working under direct supervision of a lead and he's
3 evaluated, I think it's about every ten days, an
4 evaluation form is turned in to say how he's progressing
5 through that period.

6 It gives us a chance to evaluate someone and to make
7 sure that what they say the qualifications they have when
8 they came in here, whether or not they meet those
9 qualifications and whether we have them assigned properly.

10 Q How do you go about choosing people, selecting
11 people? What is the process of hiring someone to come to
12 work here? A We actually - the hiring process is
13 obviously based on qualifications. We're looking for
14 people that have obviously the aircraft that we're working
15 within the repair station, within the industry everyone
16 looks for the most qualified person, for whatever the
17 amount of pay is based upon -- region. We've sent folks
18 to job fairs to find aviation related personnel and
19 recruit them. We have people that are x military, which
20 may or may not have an AMP certificate but have experience
21 on aircraft. Once we bring those people in we actually
22 have a program where the company helps the person receive
23 their authorizations.

24 The company also - which is different from any other

1 repair station I've seen is that they will help pay the
2 expenses of getting this person and airframe and power
3 plant license.

4 Q How about a rough estimate of how many non-
5 certificated mechanics do you have?

6 A How many non-certificated. This is primarily going
7 to be structural mechanics, the folks that have work the
8 sheet metal structural side. An idea currently maybe
9 fifteen to twenty that would not have a license.

10 Q Do they ever get a license in the sheet metal - those
11 specialized skills, do they normally - does some of them
12 go ahead and get licenses or is it possible to work an
13 entire career without a license?

14 A Actually it is possible to work a career in that area
15 without ever receiving a license but we do try to and we
16 have, in the past, helped these folks receive
17 authorizations because they actually had the training and
18 skill - practical skills needed to get that.

19 It's really up to the person, it's nothing against
20 some of them because they're actually very qualified and
21 skilled mechanics but they have opted to stay in that one
22 -

23 Q Just for the sake of being able to talk about
24 certification, about how many total mechanics do you have

1 at work?

2 A Right now?

3 Q At this time -

4 A I can tell you I reviewed, I was just looking to see
5 what the employee count was at the time. We actually had
6 about eighty-three airframe and power plant mechanics. We
7 had several folks with just an airframe and a couple of
8 people with just power plant. We break it out and supply
9 this report to the FAA each month to basically say what we
10 have.

11 The non-certificated or the structural folks, I'm
12 thinking maybe thirty-five or forty at the time.

13 Q Do you have working association with the
14 representatives from the different customers that
15 represent those airplanes? Do you have in your QC area -

16 A Yes, normally when a company comes in they will send
17 us someone, or a group, to come in and audit the facility.
18 I take the group through the repair station, introduce
19 some of them to the appropriate directors and managers
20 that I feel like they need to know. I keep in contact
21 with the people. Usually the director of quality
22 assurance or possibly the chief inspector of the operator
23 that has an aircraft here.

24 Q This is going to sound a little strange but I didn't

1 have a lot of time to prepare much here but I just went
2 into the 145 of regulations. I grabbed a couple of them
3 here and if you don't know I understand because I'm not
4 trying to - I don't have Regs in front of me either. I've
5 just made some notes.

6 One of them was 145-39 it deals with personnel and
7 management where you have to show capabilities of un-
8 certificated persons by either a practical test or an
9 employment record.

10 I was just curious how you - how does TTS, to comply
11 to 149-35. You can glance at it right here but it's - how
12 do you do that?

13 A Actually I've heard of some repair stations that
14 apply practical tests, probably for the sheet metal or
15 structural technicians that work there.

16 I think primarily, I can't speak for that time period
17 but - it seems pretty common that you're basically going
18 on previous records. Human Resources would contact the
19 person that they were interested in hiring and bring this
20 person in and they would go through their records and
21 discuss their previous history.

22 Q That kind of picks up that next - 145-43, you've got
23 personnel records right there. Do you have this -
24 maintain current roster of management of technical

1 supervisor. You've got employment summaries for all of
2 these people?

3 A Yes, I maintain that in the current status at all
4 times. To the degree of the hiring, I was just going to
5 say to follow-up, the individual - the department manager
6 would later talk to that person about their
7 qualifications.

8 If that person were hired, like I say we have a
9 probationary period for sixty days that they're going to
10 be evaluated to find out if their skill level matches what
11 they said when they came in. It keeps the repair station
12 - it keeps you from having someone out there that maybe
13 had turned in a lot of qualifications but truly couldn't
14 perform to that.

15 The roster of supervisory inspection personnel is
16 basically maintained in my office to identify the
17 inspectors, their authorizations for the repair station
18 and also any of the supervisory and managers that up to
19 Dave Hoffstetler.

20 Q 145-57 is performance standards. It states that you
21 must maintain a current condition, all manufacturers
22 service manuals, instructions, service bulletins that
23 relate to the articles -

24 A Yes.

1 Q How do you go about maintaining the currency of all
2 of these manuals? Do you have your own manuals and then
3 you have manuals from the operators - how do you keep
4 track of what is what?

5 A Yes, we actually do. The repair station has its own
6 manuals that we maintain. The Chief Inspector is named in
7 the roster of supervisory inspection personnel as having
8 that responsibility.

9 The manuals, we have revision services from the
10 manufacturers and he calls, I would say quarterly just to
11 check and see what the revision status is.

12 We maintain a log of all manuals that we maintain by
13 the repair station in his office with the appropriate
14 revision status and the location of the manuals. The
15 customers also supply, different customers supply their
16 own maintenance tapes and we also have a means that the
17 Chief Inspector, working with the records department or
18 technical data department of the operator. They send him
19 any updates or revisions and he makes sure that those are.

20 Q In my inspection here, whatever it was a month or so
21 ago, in the Emery's approved manual that they use for
22 their maintenance they have all of these different -
23 there's a Douglas Aircraft 1670, SRNs overhaul manual,
24 PCs, temporary revisions for the 60 series, temporary for

1 the IPC overhaul and so forth. Then we pick up the
2 previous operators the United 6077 microfilm there, IPC
3 for - we've got different wiring -

4 A Right.

5 Q I go back to the point now, this 145-57 states that
6 you would have current manuals for the person that's going
7 to work on maintaining this aircraft.

8 How do you know that this particular manual they gave
9 you is going to be current?

10 A How do I know that the manual that was provided to me
11 by the operator is current?

12 Q Yes. If I give you revision such and such, do you
13 cross check it or do you just take that - would a mechanic
14 go out and pull all the manual that is instructed on his
15 task card? A Yes, he would. Other than - when you start
16 talking about the manuals that we are provided by an
17 operator and we're performing work for them under 145.2,
18 the operator obviously has the responsibility of providing
19 us with current manuals.

20 This is also going to be stated in their approved
21 operations, in their procedures manual that they will
22 state how they update and keep manuals current.

23 I don't know of a way that we would go back to cross
24 check them or that we should go back and cross check them.

1 Q Okay. What is the process of supervision for non-
2 licensed mechanics?

3 A What is the process for non-licensed?

4 Q Yes. How are they supervised?

5 A You always have an appropriately rated person that
6 supervises their work. For the repair station, every non-
7 routine that's completed, that is written from a routine
8 card, we have an inspector, a certificated inspector that
9 is always buying back their work.

10 Not only is there a supervisor, properly
11 certificated, the inspector is also looking at their work.
12 It seems to maintain a good balance.

13 Q Are non-certificated mechanics, is there much of a
14 turn-over? Is it average or -

15 A The non-certificated mechanics for sheet metal?

16 Q Just any of the non-certificated that you have here
17 and if there's a difference in the sheet metal, explain
18 it?

19 A No, not really. It's just non-certificated - really
20 I've not really seen any difference in the turn-over, per
21 se.

22 We seem to have a good core group of the non-
23 certificated folks that do our structural repairs. No I
24 couldn't say that we've had a big turnover.

1 Q From your years of experience, in general, do you see
2 any - do you see any big difference in the amount of
3 training given to mechanics that work for an airline
4 versus mechanics from a 145?

5 A No, to tell you the truth I couldn't say that there
6 is a big difference in that. My past experience with
7 different airlines is that the person comes into their
8 organization, receives indoctrination training on the
9 policies and procedures, basically the same thing that we
10 do. They learn the company forms and tags for the
11 maintenance procedures. Generally they attend a
12 familiarization course that may be taught in-house for the
13 aircraft they're - that the operator is using at the time
14 and the RII and airworthiness for leases, we do the same
15 training here.

16 The safety related training, at this repair station I
17 can say that actually follow the best program I've seen,
18 as far as a pro-active role to making sure that everyone
19 receives this training.

20 I would say that truly I've not seen a big difference
21 in the repair station or the airline, as far as the
22 training.

23 Q After the accident there was Emery conducted a Fleet
24 Campaign Directive about the bolts and connections of the

1 control tabs elevators. What involvement did you have
2 here at TTS with that? What did you learn from it? Have
3 they gotten back with you -

4 A As far as the Fleet Campaign Directive -

5 Q Yes.

6 A -- and the findings.

7 Q What was learned, what was the findings and how did
8 you participate in that and -

9 A Actually, I have not heard what the findings were.
10 Once we actually accomplished the FCD, I think on an
11 aircraft that was here at the time. To the best of my
12 knowledge, we didn't find anything wrong with it. We took
13 the fairings back off and looked it over and no problems
14 there.

15 The only thing I know about the Fleet Campaign
16 Directive is originally it looked like they issued one
17 that said, I think the first Fleet Campaign Directive came
18 out in February of 2000. No, I'm sorry, February of 2001,
19 it went through but it actually didn't tell you which
20 direction - wasn't very clear as to how the bolt - how
21 they wanted the bolt to be installed.

22 I think approximately a month later, they re-issued
23 that Fleet Campaign Directive with a - still had the
24 original revision a month later. There was a diagram

1 showing you exactly the orientation they wanted the bolt
2 to be.

3 Q If you had other operators find something in their
4 maintenance that they find is wrong and they issue out
5 Fleet Campaign Directives, wouldn't they normally get back
6 to the person that's doing the work. I haven't been able
7 to quite understand why they issue these things and they
8 haven't followed it up with the person who is actually
9 doing the work like that.

10 A Normally I would say that you would - I'll just say
11 that other airlines I've been involved with on this level,
12 once they issue something like that and the repair station
13 is involved with it, they would come back and say, we
14 found this and we want to let you guys know that - and
15 possibly, especially if it had anything to do with whether
16 the repair station had worked on that aircraft that they
17 found it on.

18 Normally, yes I would say they would follow up and
19 give you the results.

20 Q That's why I was asking you earlier if you had a
21 relationship with other people with Emery that had to do
22 with quality control of things or did it relate strictly
23 to the representatives that are located here or - are
24 there other safety areas here that I'm missing that you

1 have communication with?

2 A To tell you the truth, I guess the communications
3 between myself and the Chief Inspector here and their
4 Quality Control and Quality Assurance Department sometimes
5 was a little bit difficult. I guess trying to reach
6 someone or to get them to respond to something, a problem
7 or a question we had, as far as how they wanted to do
8 this. Ultimately it's their aircraft and they're the
9 operator.

10 Sometimes we were asked to perform an inspector or
11 return something to service that we were not rated to do
12 and had to explain why we couldn't do that.

13 Q Is that your role to explain that?

14 A Yes.

15 Q How many times has this occurred?

16 A A couple of times I know. An engine that they had
17 removed -

18 Q We're talking about Emery now?

19 A Yes. They had sent an engine here that we don't have
20 the capability to return that engine to service and they
21 had to contract Wood Group to come down to do that.

22 It seemed like it was getting pushed along to the
23 point where I basically had to say that we just - you
24 know, that's it. We can't do it. We don't have the

1 capabilities for that.

2 I think sometimes maybe there's a little bit of a
3 mis-conception between operators and repair stations as to
4 what they - I think they're looking at taking an engine
5 off - a serviceable engine off and being able to transfer
6 that engine to another aircraft. We can't do that without
7 the appropriate paperwork and everything that follows that
8 engine when we had not received that.

9 Q Do you have a DER working here?

10 A Yes, we do.

11 Q Does that person receive a lot of work?

12 A Actually he does. Based on probably one of the
13 biggest things, I guess, would be corrosion. The
14 corrosion findings and repairs often times exceed the SRM
15 limits and he's called in to provide the approved data for
16 us to repair that.

17 Q The work scope packages -- the one that I received,
18 looking at on this particular accident and we were up to
19 about like revision 5 of that. Can you just explain the
20 process of the initial work scope and changes to and how
21 that might change something - how the work is performed on
22 an airplane?

23 A Actually, the process for the Emery Work Scope is
24 that they would send representatives to the company. They

1 would bring in the original work skill and different
2 managers from maintenance and QA and anyone else that was
3 going to be involved with this, with planning also, would
4 sit down and we would basically go item by item through
5 the work scope. Exactly what they had to - we could
6 discuss any item at the time and it seemed like, as the
7 aircraft came into service here for the maintenance, that
8 the work scope seemed to continually expand.

9 I think that's based on the problem of finding things
10 and pointing it out to the reps here that maybe a Fleet
11 Campaign Directive couldn't be accomplished because there
12 were differences in the different series of aircraft.
13 Different locations for bulk-heads and that type stuff.

14 By contacting Emery they would maybe revise an FCD or
15 send us additional information. Sometimes that resulted
16 in actually quite a few revisions.

17 Q Let's take it from just the changes, the maintenances
18 changes, how about quality issues. Do you run across -
19 have you had since your time here, have you see quality
20 issues that have arisen between - from the Emery
21 airplanes?

22 A We have - yes. One of the examples, I'll give it
23 from a work scope that we had received documentation to
24 install the wireless smoke detector modifications and

1 Emery had provided us the information to perform this
2 installation and it has you installing the smoke detectors
3 in the lower part compartment of the plane.

4 Basically it seems, I would say a simple
5 installation, based on the station number where they want
6 these located. After we had performed several of these
7 installations, it was - Emery had found out, I guess
8 through - I don't know if this was a line check or someone
9 had pointed this out, but the smoke detectors were
10 actually supposed to be divided into groups in each lower
11 cargo bay, maybe four in the back, three in the C
12 compartment.

13 The problem was, when they wrote the documentation,
14 they didn't take into account where the bulkhead was
15 actually located or whether a bulkhead was installed and
16 they seemed very upset that we installed the smoke
17 detectors in the location that they had asked us to and
18 the bulkheads were never mentioned.

19 Q Is this done with an EO that's created by Emery?

20 A Yes.

21 Q So, they had to issue another document to go back and
22 I guess they probably had to go back and review the fleet,
23 just to check and see which ones had bulkheads and which
24 one didn't, what the location was.

1 I know we ended up having to move bulkheads around to
2 make these match, exactly what they wanted.

3 Something like that - like I say, we were following
4 the paperwork we had. There was nothing mentioned that a
5 certain pit had to have this many smoke detectors in it.

6 Q Then I'll ask again the same question. When
7 something like this happens, and it's possible. I can see
8 where stuff like this happens, do you have a follow-up
9 system that you get back with the operator and you all
10 have some sort of a safety catch in here that can say,
11 okay, we got caught here but this is what we need to do
12 now to -

13 A No, actually not. I couldn't - once it was
14 identified that there was a problem with it, they pretty
15 much took the corrective action, I guess that they decided
16 they needed to take, and I think we helped reconfigure
17 some of the aircraft for them and never really heard much
18 about it at that point afterwards.

19 Q I'd like to, just real quickly, go back - I know you
20 were not here but do you have any information about the
21 time it was determined that left and right hand elevator
22 dampeners were reversed.

23 What do you know about that and what was done about
24 that and what have you done to not allow that to happen in

1 the future or whatever.

2 A Right. The elevators were sent in, as I recall, with
3 the dampers mis-matched from side to side and from what I
4 understand, and what I've seen of the paperwork they came
5 in with serviceable paperwork, stating that they were
6 ready for installation.

7 I don't know, you know, without having to re-inspect
8 another repair station's work, if someone probably would
9 not get that involved.

10 Obviously, you know now, if we had two elevators come
11 in, you know, it's a flag. But at the time, when that
12 came in it wasn't noticed and when this was installed,
13 also from what I understand, that the full functional
14 check, operational check of the elevators was accomplished
15 on the ground with no defects reported and I'm not - I
16 couldn't tell you the - whether or not that would have
17 effected that form of function but from what I've heard it
18 did not.

19 The aircraft test flew and left from here with no
20 discrepancies on it. I think it was discovered by Emery
21 maintenance or one of the pilots had reported difficulty
22 with the elevators in flight. Emery had trouble shot - I
23 assume that they trouble shot that system and found those
24 dampers mis-matched and removed and reinstalled them in

1 the correct locations.

2 They called to let us know what they had found and
3 I'm sure they were looking for an explanation for that and
4 immediately a TTS uses a maintenance inspection alert to
5 identify problems like this. This maintenance inspection
6 alert is issued to all the inspectors and maintenance
7 personnel will have access to it to keep that for
8 happening again.

9 That's really all I know of it.

10 Q Can you recall if there's been any other type, since
11 you've been here, anything else - a similar type of
12 component or something that could have been sent in that
13 you had problems with. Anything that you can think of
14 that comes into the facility.

15 A Like I say, the flight controls is probably one of
16 the biggest issues. We've had problems with, I would say,
17 quality issues with one of the ailerons having - the
18 trailing edge was actually bent. We had to go back and
19 repair that. It wasn't from shipping damage or anything
20 that we could see from that.

21 We have had some Emery parts that actually were sent
22 here, were moved from another aircraft and obviously
23 that's permissible under their program. However, when we
24 received the parts here occasionally it was brought to my

1 attention that the part actually required repairs before
2 it was put on the aircraft and so you'd have a receiving
3 inspector that's hinging in the middle here between should
4 I say something because it's the customer's part that they
5 sent us to put on their own airplane. Often times we end
6 up having to take the part to the shop and do the repairs.

7 Q I've got another question or two and I'm about
8 finished.

9 Generally, it seems like because of the because of
10 the -- required overhaul of these flight controls, do you
11 take the flight controls off the airplane you're going to
12 do.

13 A Yes.

14 Q And then, depending upon the work scope you send them
15 where the customer wants those to be sent?

16 A Yes.

17 Q To be overhauled?

18 A Right. We -

19 Q And then you receive, from the customer, another set
20 of flight controls to reinstall on this airplane?

21 A Yes, sometimes, well actually I think most times.

22 The flight controls that we sent out were not the flight
23 controls we received back.

24 I guess due to turn time on the flight controls and -

1 Q How long does it take to overhaul a set of -
2 A Overhaul a set of flight controls, I'm going to guess
3 somewhere between thirty and forty-five days.
4 Q I now notice that you all have the capability, or
5 should be close to having the capability to doing that
6 overhaul yourself, the flight controls, is that correct?
7 A Yes, it is.
8 Q So you wouldn't have to send them out anymore?
9 A Right.
10 Q You'll do them here?
11 A Yes.
12 Q Would that be - sounds like that would be a good
13 advantage?
14 A It would because you actually - I personally feel
15 like it's the best, if you can, the flight controls that
16 come off the airplane and to overhaul them and put them
17 back on that same airplane. I think, you know, that
18 probably creates some of the problems with different
19 modifications that have occurred to the aircraft over the
20 years.
21 That will be a big advantage.
22 Q And 79U, you had a problem of the elevators being
23 separated from the control tags?
24 A Right.

1 Q So if you had it broke down differently again -

2 A I think normally they would come in built up as an
3 assembly. In this case - not sure as far as Willis
4 Aeronautical and actually how the flight controls came in
5 here but I know they were separated.

6 Q Is there tear down reports sent on flight controls
7 back to the operator to track in their reliability
8 program?

9 A I couldn't tell you first hand whether or not they
10 have that but sometimes we would get the tear down with
11 the flight controls that came in and sometimes not.

12 MR. MCGILL: I don't have any more. It is now 12:30.
13 Can we - Clint, let's just pick up with you.

14 BY MR. THAYER:

15 Q The only one question I had was on the manuals. Do
16 you know, or are you the right person to know whether you
17 were on distribution for the manuals directly from Boeing,
18 McDonald Douglas/Boeing besides the ones you get from
19 Emery or do you get everything?

20 A Yes, I'm sure we do have a revision service.

21 Q So AOLs and service bulletins come directly to you?

22 A Yes.

23 Q That's all I have.

24 MR. STREETER: I have no questions.

1 MR. HOFFSTETLER: I have no questions.

2 BY MR. ROBBINS:

3 Q How do you determine who is qualified here to become
4 an inspector?

5 A How do we determine for the repair section or -

6 Q For the repair section.

7 A Well, that determination primarily would be made,
8 based on their experience level, their knowledge of
9 aircraft systems. Obviously an inspector has an important
10 role in understanding the entire aircraft as opposed to
11 say an avionics system only.

12 We're looking for - we actually have with the
13 Inspection Department right now, we have fifteen people,
14 including myself, and the average years of experience is
15 somewhere around thirty-two years in aviation. We're
16 looking for someone that from previous experience has
17 worked as an inspector in the past and if we hired someone
18 in we would have to assign them with someone to oversee
19 exactly what they were doing, make sure they understood
20 the procedures that we have in place at the repair
21 station.

22 Q Does Emery, they make designated inspectors of your
23 inspectors, correct? Some of your inspectors were
24 designated as inspectors for Emery, correct?

1 A Yes.

2 Q All the inspectors were designated or some?

3 A If you're speaking of the time period that the
4 aircraft was in maintenance here, I'm reasonably sure that
5 all of the inspectors that were here at the time were
6 designated by Emery.

7 Q Okay.

8 A Honestly, I couldn't answer that without going back
9 and looking but we go through a process that they attain
10 the Emery training and then they're authorized in writing
11 by Emery.

12 Q Does Emery inspect their training records to see if
13 they're qualified?

14 A Yes.

15 Q What other audits or inspections did Emery provide or
16 performing at Tennessee Tech?

17 A There are audits or inspections - they had
18 accomplished an initial audit I think when they first
19 starting bringing the aircraft into the facility. I have
20 a copy of it upstairs. Then, I think, it was probably
21 approximately a year ago they came in and performed a case
22 audit.

23 Q did you ever have an issue that you couldn't resolve
24 to your satisfaction with DQA or DQC of Emery?

1 A Nothing, no - there's nothing that stands up that
2 there was an issue that we couldn't resolve. Sometimes it
3 took longer than I would expect or would prefer but no, I
4 don't think there's anything that was ever left without
5 closure.

6 Q Okay. Are you familiar with the OM from Douglas or
7 Boeing on aircraft maintenance -- document? The
8 inspection document from Boeing?

9 A From Boeing, yes.

10 Q Do you know what it says about flight controls on the
11 - how it uses flight controls - Boeing's recommendation
12 for flight controls?

13 A No, I could not.

14 Q Do you know if the flight controls are called out by
15 Boeing to be overhauled, --

16 A Yes, I know - I'll say this and try to qualify this.
17 The paperwork we receive from Emery is an approved
18 inspection program and I'm sure that's based on Boeing or
19 Douglas recommendations.

20 Q But you haven't seen a Douglas document that says
21 that it's on condition or over-hauled or -

22 A No, I have personally not.

23 Q When did you get the overhauled flight controls added
24 to your capability list?

1 A When did we have it added?

2 Q Yes.

3 A We actually have the ability to overhaul the flight
4 controls based our limited airframe ratings.

5 Q Have you always had the facilities to overhaul flight
6 controls?

7 A Yes. We haven't always had the facility. We
8 actually - there's another facility approximately a mile
9 and a half from here that was set up as - specifically to
10 overhaul the flight controls.

11 Q And approximately when did that become operational at
12 the facility off site?

13 A I'm thinking that was in August of 2000.

14 Q That's all.

15 MR. GUNTHER:

16 Q Jim, I've just got a couple questions for you.

17 You talked about auditing and case auditing. You
18 received audits prior to the accident with 79U. Did you
19 get an audit or was there any response from Emery after
20 the accident to come look at your facility?

21 A They performed, yes they - I'm trying to remember the
22 time frame, exactly, but they came to the facility and - I
23 want to say June or July of 2000 and that when they
24 actually performed the case audit.

1 Q They performed the case audit at that point?
2 A Yes.
3 Q You talked also - we talked about the fleet
4 directive. You said that you were aware of it but you
5 really hadn't received anything or seen anything. Is that
6 because it just wasn't in your line of communication or
7 what you do, or was that because you never received
8 anything regarding the results of that fleet campaign
9 directive afterwards?
10 A As far as the fleet campaign for inspection of the
11 bolts?
12 Q Yes.
13 A No, I've not received anything or actually - I
14 haven't also - To be honest I wouldn't be sure if I were
15 in the line of communication for that. I think I should
16 be from providing a substantial maintenance.
17 Q Now your title is Quality Control?
18 A Director of Quality Assurance.
19 Q Quality Assurance. Who does quality control on your
20 property?
21 A We don't have a designated QC.
22 Q Just QA?
23 A Yes.
24 Q You talked about training also and Bruce had

1 mentioned the fact that some of your inspectors were
2 designated inspectors for Emery.

3 Is there a paperwork process, in other words is there
4 an FAA requirement that you have to qualify with that or
5 is that something that they have designated your
6 inspectors, through writing, to be inspectors on behalf of
7 Emery?

8 A Actually Emery has to approve the inspector. We have
9 inspectors designated as such for the repair station but
10 Emery has the final - they come and review records, make
11 sure that the person has - I think they require three
12 years of experience on the particular airframe, DC-8, and
13 that they had worked as an inspector.

14 If an inspector is already doing that or holding that
15 job for the repair station, that carries some weight with
16 it but Emery has the final say so as to whether someone is
17 designated to inspect for them or not.

18 Q In regards to training of those individuals, is there
19 training then provided by Emery for that specific
20 inspector or is that through TTS and this is just a
21 paperwork process? A No they actually would
22 provide the training.

23 Q And when you talked about training before, you talked
24 about new hires and how they go through indoctrination

1 etc., what do you do for recurrent? Do you have a yearly
2 recurrent for some of those individuals, the inspectors
3 and the mechanics or how does that work?

4 A We do have recurrent training, as far as the repair
5 station itself has -- taxi qualified personnel and we re-
6 qualify once a year. I was trying to think if there were
7 other.

8 Q What about some of your structural people or sheet
9 metal?

10 A There's no requirement for any type of recurrent
11 training but it is - but they are involved in on-the-job
12 training, OJT. As they accomplish a task, maybe that they
13 don't really have a lot of experience with, something
14 that's different they'll accomplish in OJT training form
15 and submit that into their training records.

16 Q Frank was hitting on courtesy manuals. Is there any
17 one document anywhere that's either posted for inspectors
18 or the mechanics, their own shop board, that tells them
19 either by a monthly basis etc., or whatever which
20 revisions to every manual you have and how is it current
21 or the only way they would find that out is either by
22 questioning somebody or anything else.

23 Do you have any type of bulletin system or anything
24 that allows them to know the currency of the specific

1 manuals and paperwork that you're using?

2 A As far as the maintenance manuals and that goes, no,
3 we don't necessarily have any type of bulletin or anything
4 that we post for that.

5 The mechanic will go into the technical library and
6 find the manual - we have temporary revisions now for most
7 of the information related to Douglas or DC-8s.

8 I don't know of a posted revision status.

9 Q Kind of like the librarian or whoever acts in that
10 position. Do they have a log of revisions, do they have a
11 listing of those revisions that they can refer to?

12 A The Chief Inspector maintains the log of revisions
13 and I don't know for a fact that the person that maintains
14 the tech library has that log downstairs. I would be
15 afraid to answer that either way.

16 Q You talk about communications and you cited some
17 specific instances with communication problems. Was that
18 a personality problem or was it just the fact that you
19 just couldn't get your message across to somebody or what
20 exactly was happening.

A Of course, I can look back now and see some of the things
that were going on, but I - it was more just that it was very
difficult to get a response sometimes. Whether I sent a voice
mail message, e-mail, this type thing. They would respond,

but sometimes it would be days - you know, a couple of days. Often times I had to call back and leave another message or respond in a different way.

MR. GUNTHER: Nothing further.

MR. MCGILL: Well, Jim, I think that's it. We've got to switch. Okay.

C E R T I F I C A T E

This is to certify that the attached proceedings
before the National Transportation Safety Board

INTERVIEW OF JIM BAILEY

Date: AUGUST 30, 2001

Place: NEW SMYRNA, TENNESSEE

were held according to the record, and that this is the
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