Appendix I

Hazardous Materials Group Factual

FedEx Express DG Program Overview& Misc Notes

FedEx Dangerous Goods Program

Package Acceptance
FedEx requires virtually all DG (Dangerous Good) shipments to be offered in accordance with the IATA/ICAO regulations. The only exceptions to this rule are shipments offered in accordance with the small quantity provisions of Title 49 CFR, 173.4, Title 49 CFR Consumer Commodity and shipments under DOT Exemptions which do not recognize ICAO/IATA.

In addition to the standard requirements for most DG, FedEx Express is more restrictive than the minimum regulations. FedEx Express transports DG packages for all types of industry. Although we do transport most DG, they first must be within the type and quantity authorized for air transportation in accordance with the IATA regulations. For this reason, the average DG package quantity is less than 4 liters. There are some commodities that we do not accept i.e., hazardous waste, toxic inhalation hazard and acids capable of igniting organic materials without external ignition sources. One example where FedEx Express goes above the regulations is FX 12, which became effective 1/1/01. This requires shippers of DG to use only shipper declarations that are "typed" or generated from a computer.

The following groups support the FedEx Express DG program-
- Corporate Safety / DGADMIN (Administers the DG program as well as offers approximately eighty five DG Seminars per year, to shippers of DG.)
- Corporate Safety Specialists (one per district)
- Regional DG Instructors
- District DG Analysts
- Customer Support DG Hotline (to assist customers with questions about how to prepare DG Shipments.)

Training
DG Awareness Training
All employees with any responsibility of package acceptance or handling are trained in DG package recognition and handling as well as awareness in detecting of DG by the presence of indications in markings or documentation verbiage. This training is provided annually. The training lasts approximately four hours.

DG Specialist Training
All package locations that accept DG packages must have individuals trained as DG Specialists. Additionally, all locations where packages are sorted or transloaded must also have DG Specialists trained. DG Specialists receive 40 hours of training the initial time they undergo DG Specialist training with annual recurrent training. FedEx Express currently has approximately 8,700 employees trained as DG Specialists.

Transport and On-Going Inspection
DG packages are tentatively accepted at customer locations as well as offered at FedEx Express World Service Centers. Packages accepted at customer locations are tentatively

accepted and transported by road to the local FedEx terminal where a DG Specialist inspects for compliance. If all markings, labels, and shipper declaration is correct, the package is then documented on a 390 B or 390BR Pilot Notification form.

Forms
390 B & BR- Notification to Pilot form which includes specific shipment details as and location loaded required by part 175. (copies of each departing flight are maintained at the ramp where flight was launched from)
390 C & CR- Combination shipper declaration and notification to pilot form used for higher volume customers. FedEx therefore does not need to duplicate the shipment details as previously provided by the shipper. (same record retention as above)

390A Form- This form is not required by the regulations but is a form which illustrates all positions on an aircraft. It also includes the hazard class compatibility grid. The form includes totals for radioactive material transport indexes (T.T.) and dry ice. This is necessary due to the "quantity limits" as restricted by Title 49 CFR or the aircraft type. This form is used in combination to the 390B series forms. (same record retention as above)

Dangerous Goods Separation Pouch- Completed for all hazard classes loaded within a ULD (unit load device or aircraft container) and bulk compartment. Includes truck placarding information, total T.I. and dry ice. Also indicates whether ULD must be loaded as "accessible" to crew members or may be loaded inaccessible. (same record retention as above)

FDR (Flight Dispatch Report) DG Screen/ Data
After the September, 1996 Newburgh, NY FedEx Express incident, FedEx developed an on-line DG Summary screen. This screen is used to record all hazard classes and also includes quantity summary details of the hazard classes. This is not required by the regulations but conversations with emergency responders determined that total amount of materials by hazard class is very beneficial. Some agencies have stated that the summary is more important than individual shipment details, UNLESS a vehicle or aircraft has only one commodity on board.

In the event of an accident, any FedEx Express employee may access their FedEx computer terminal (worldwide) and access the FDR DG data or print the screen information when necessary. This screen was accessed and printed during the FedEx Express 7/26/02 accident at TLH.

AUTO DG Project
After implementing the FDR DG Screen data, which was our short-term solution, a multi disciplined task group was formed to develop a DG electronic entry and reporting system which will be used to provide electronic manifesting and immediate access to aircraft or vehicle contents and eliminate our 390 type forms. The project's current implementation date is approximately February 2003. Once implemented, the DG shipment data will be entered using a relational database with UN numbers as the reference. The DG data will

then be electronically attached to the FedEx Express tracking number. Printing the manifest will result in approximately one page for every sixteen to twenty shipments where currently, each page reflects one shipment. The printout will also be computer generated, eliminating issues associated with hand written legibility problems.

DG Loading
Even though the regulations allow certain quantities of passenger authorized DG packages to be loaded inaccessible, FedEx Express chooses to load all class 1, 2.1, 3, 4, 5, & 8 materials as "accessible." Classes 2.2, 6, 7 & 9 are loaded inaccessible and usually in an aft loaded location.

Accessible DG Position- All accessible DG classes are loaded in the accessible DG ULD. This ULD is usually position 1 but may be a different location as long as in-access is possible. The accessible DG ULD has a halon fire suppression coupler installed in the front top of the container. A hose connected to a halon fire extinguisher is connected after the Ramp Agent has briefed a FedEx crewmember and closed the container, prior to departure. No other air operator uses the supplemental fire suppression system similar to FedEx.
Note- Activation of the halon fire suppression system within the DG accessible ULD, is dependent on aircraft type. Initiation of the fire suppression is from the cockpit on the 727 aircraft and located just forward of the smoke curtain or bulkhead on all other aircraft types operated. The halon extinguishers for the DG ULD's are above and beyond the standard fire suppression on board each aircraft.

August 15, 2002

NTSB
Attn Jim Henderson
490 L'Enfant Plaza, SW
Washington, DC 20594
(202) 314-6000

The following is in response to questions received from you via email on August 9th, 2002. The original questions posed by the NTSB have been included verbatim to ensure clarity. My response is identified preceded by "FedEx/ Pat Oppenheimer response".

1. What time were you talking to the emergency response and giving them information over the phone on the corrosives, the RAM, and other haz mat?

FedEx/ Pat Oppenheimer response:
To the best of my recollection, the time was approximately 05:45 central time. The questions were asked via Wes Hollington (FedEx Ramp Agent at FedEx Tallahassee ramp office) who was in "radio" communication with Doug Evitt (FedEx Ramp Agent) at crash scene with Fire Department. The questions were not in reference to what was on board (Flight Dispatch Report (FDR) DG Information was already at scene.[1]) The only questions I recall were (paraphrased from recall) 1. "There are 800 lbs of corrosives on board, is the corrosive water soluble?" I replied "There is no way to know for sure but most corrosives are water soluble. Not even the UN # would provide this information." 2. "What hazard does a 1.4S present." I replied "A 1.4S presents no projectile hazard but would typically have no further hazard than itself being flammable. Other 1.4S materials are typically consumer type materials like flares that do not present an explosive hazard beyond the inside of the package."

2. How did you get that information? Bob C. said he was trying to get some information and was told that someone had to go to your terminal to get the information. Were you that person or did someone get it for you?

FedEx/ Pat Oppenheimer response:
I did not access the aircraft load information but was provided information based on the questions from the crash scene. (see answer to #1 for more details to source of FDR DG data to scene)

[1] Interviews with FedEx Ramp Agents Mike Mitchell and Well Hollington by Jim Henderson NTSB, Pat Oppenheimer FedEx Express, Mark Gentile TSA and David Caywood ALPA on July 29th, 2002, confirmed that the FDR DG Information was hand carried by Mike Mitchell to the scene of the crash. This took place at approximately 6:10 am Eastern time after waiting for an escort at the Tallahassee Fire Department station for at approximately five minutes, he ran to the scene.

3. That leads to the question - How is the information filed, where, and who has access to it?

FedEx/ Pat Oppenheimer response to "how filed and where":
When an FDR (Flight Dispatch Report) is closed out, (required to be closed out within 30 minutes after the aircraft push back from a gate), the FDR report automatically prints out at both the origin and the destination ramp. The inbound/ destination ramp agent reviews the information for preparing for their inbound aircraft. The printed copy is filed at the origin location for 30 days in the "Flight Records Folder." It is also accessible via on line for 30 days.

FedEx/ Pat Oppenheimer response to "who has access to the information":
Any FedEx employee with "on line" access has access to this information. Our Global Operations Center, which operates 24 hrs a day, 7 days a week have access. Additionally, any FedEx ramp must have a minimum of two Ramp Agents on duty any time aircraft activity exists. In addition to the above, numerous other groups including our SAFETY / DGADMIN department have immediate access.
Note- The automated DG Manifest application being developed (AutoDG) will provide identical information access as the FDR DG data.

4. How is that access controlled? Is there someone there at 5 am (actually around the clock) that has the ability to access the information and provide assistance to emergency response?

FedEx/ Pat Oppenheimer response:
See number 3

5. What information will be on the AUTO DG program when it starts in or around February 2003? I know it will have the UN numbers, but will it also have the proper shipping name? - what about primary components for NOS materials? [A little insight into this question: Emergency response is trained to use the ERG for the initial response phase (arrival, ID general hazards, and protect themselves and the public) but need more detail for subsequent activities. HM classes train responders to use at least 3 sources of info on each specific haz mat involved before recommending actions.]

FedEx/ Pat Oppenheimer response:
AutoDG includes all elements as required for current shipper notification forms. This will replace the "390 B" type forms that FedEx currently uses for this purpose. Fields which will be included are "Number of packages, UN#, Proper Shipping Name (including technical name when required), hazard class number, packing group (when applicable), quantity/ volume, emergency response phone number for the shipper, location or position where loaded on the aircraft and all other requirements of 175.33 in Title 49 CFR including the provisions for radioactive material.

Current emergency response procedures concern me as the response protocols are based on one UN# or full load or tanker type responses. Responding to an emergency where you may have twenty, thirty or more UN#'s, is impractical to reference. Nor is the hazard the same when comparing a mixed small package load of UN#'s, there is normally more of a hazard associated with the fuel and other combustible (nonregulated) cargo than the individual small amounts of DG being transported. A response to a tanker or even an aircraft with 10,000 kilos of one commodity requires a different response than a mixed load of packages.

FedEx took a different approach in developing our transitional "on line" application. Discussions with emergency responders validated that they were more interested in types of hazard classes and total quantities when initially responding to an incident/ accident. Although current regulations do not require totals or summaries of hazard classes, FedEx believed this was the most appropriate for our "transitional" on line application. Auto DG will include the shipment details as well as summary information.

Sincerely,

Patrick N. Oppenheimer
Corporate Safety Manager
DGADMIN/ ADFWP
[redacted]

August 15, 2002

NTSB
Attn Jim Henderson
490 L'Enfant Plaza, SW
Washington, DC 20594
(202) 314-6000

The following is in response to questions received from your email referencing the discovery that the Tempo Aerospace shipment appeared not to be manifested on the TLH FedEx 1478 Flight.

We conducted research including interviews of personnel and checking on package bar code scans. This is what we currently know:

1. The shipment was offered marked, labeled and fully documented as flammable liquid.
2. The origin station properly processed the shipment and completed a 390B manifest form (notification to pilot). A copy of the shipper declaration and 390B was faxed to us from the origin station and ramp after we requested it.
3. The TLH FedEx 1478 flight "records file" did not reflect a 390B for the shipment. While we don't have the benefit of whether the actual flight manifest included it, the lack of inclusion in the class 3 weights on the FDR DG suggest there was not a 390B manifest provided to the crew.
4. Being an international shipment, Customs in Memphis had to release or clear the shipment prior to being available for loading on a destination flight.
5. Package tracking (bar code) scans reveal the shipment was placed in a baggage cart for transit to the DG building in Memphis.
6. Scans reflect the baggage cart reaching the DG building at about 1:40 AM. This was approximately the same time the TLH DG container was closed out preparing it for the outbound departure.
7. The initial weighing of the TLH DG container indicated the container was too heavy for its intended position on the aircraft. The TLH DG container was taken back to the DG building and one of the three heavy corrosive batteries was removed. The 390B manifest along with the FDR DG information, accurately details only two of the three corrosives being loaded.
8. We did not have a package scan on the Tempo Aerospace shipment after being placed in the baggage cart, which traveled to the DG building. All other packages within the baggage cart reflected package scans for their respective flights.
9. The individual, who is responsible for the TLH DG container, is a very conscientious employee who is known to score perfectly in previous DG audits. He recalls the TLH DG container well and did not see the Tempo shipment.

In summary, although it appears that the shipment was correctly loaded in the DG container, we do not know why the flight records file did not include a copy of the 390B

form. The 390B forms were correct for all other shipments including the one corrosive that was removed due to weight of the DG container.

Sincerely,

Patrick N. Oppenheimer
Corporate Safety Manager
DGADMIN/ ADFWP
[redacted]

August 29, 2002

NTSB
Attn Jim Henderson
490 L'Enfant Plaza, SW
Washington, DC 20594
(202) 314-6000

The following is in response to the NTSB inquiry about the 390B forms, which were faxed to the FedEx TLH Ramp the morning of flight 1478's crash on July 26th, 2002.

The "390A and 390B forms" were faxed to the FedEx TLH Ramp Office at the following times:

- 7:11 CST (8:11 TLH time) from Memphis GOC (Global Operations Command) fax 901-368-1468 which prints the time that the fax was "initiated", therefore it may have taken up to 15 minutes before the fax was complete. This first attempt was too light to read. The legibility issues were consistent across all documents including sections of the documents that are not completed but preprinted. TLH Ramp responded copies were too light. The fax machine used at GOC was then placed out of order and signage placed on machine.
- 7:46- 7:58 CST (8:46 – 8:58 TLH time) from Memphis GOC fax 901-224-8278 which prints time on each page that is faxed. This set of documents was much clearer but an isolated few were reported to be difficult to read.
- 08:30 – 09:15 CST (09:30 – 10:15 TLH time) from GOC, various fax numbers. Although previous fax set was clearer, additional attempts were made to enhance readability.
- 9:55 – 10:55 CST (10:55 – 11:55 TLH time) documents were scanned which took the approximately one hour. They were then sent as an attachment via email. The scanned images were close in appearance to original documents. However, it took approximately one hour to scan them and then close to 30 minutes to print the images once accessed.
- 11:07 CST (12:07 TLH time) sent scanned images to multiple individuals email addresses to individuals who were at FedEx TLH Ramp facility.

Note- upon notification of the crash, the HUB Control Room pulled the flight file and Hub management hand carried the files to MEM Global Operations Control (GOC.)

The following are the original questions you asked in an earlier communication. I have repeated them as you indicated on the phone that your questions also applied to the current documentation system.

(original applicable questions and numbers as they were asked)
3. That leads to the question - How is the information filed, where, and

who has access to it?

FedEx/ Pat Oppenheimer response to "how filed and where":
The current 390 A and 390 B type forms are filled with the "flight records" and maintained for 30 days. The flight records file is maintained in the HUB Control room for our CSSD (Hub) locations and in the Ramp Office at locations other than CSSD locations.

FedEx/ Pat Oppenheimer response to "who has access to the information":
Access to the files are any Ramp Agent or Management.

4. How is that access controlled? Is there someone there at 5 am (actually around the clock) that has the ability to access the information and provide assistance to emergency response? Hub locations are 24/7 operations. Ramp Operations are required to monitor flights that are dispatched for a minimum of 20 minutes once airborn. At which time, responsible personnel are allowed to depart. A responsible person is always on call 24/7 to respond to the ramp if necessary.

As stated in the earlier note, our automated manifest program, (AutoDG), will provide 24/7 access from any FedEx terminal and eliminate the current physical locate and pull the file protocol.

Sincerely,

Patrick N. Oppenheimer
Corporate Safety Manager
DGADMIN/ ADFWP
[redacted]

NATIONAL TRANSPORTATION SAFETY BOARD
Office of Railroad, Pipeline, and Hazardous Materials Investigations

ORAL INTERVIEW

Person Conducting Interview:		**Place of Interview:**	**Date:**
Name	James E. Henderson	Washington, DC	10/23/02
Code	RPH-30	to	
Title	Haz. Mat. Accident Inv.	Memphis, TN	

Type of Interview:

_X_ Telephone __ Personal

Location of Interview: (Check one)

_X_ Office __ Field

Name of Person Interviewed:

Pat Oppenheimer

Title:

DG Manager

Name and Address of Firm:

Fed Ex
Memphis, TN

Type of Operation:

Air Carrier

(Statements are paraphrased)

1. **How many people are in each category of FedEx's DG program?**

- Corporate Safety / DGADMIN – **10 safety specialists**
- Corporate Safety Specialists - **50 corporate safety specialists**
- Regional DG Instructors – **18 instructors**
- District DG Analysts – **50 analysts**
- Customer Support DG Hotline – **20 personnel**

2. **What is the difference between the 390 A, B, C, CR, and U forms and their use?**

A. The 390A is basically a cover sheet that has information about the DG on the flight. There is 1 per flight.

B. Each shipment has one of the following a 390B, 390BR, 390C, 390CR, or 390U. One copy of the appropriate form for each shipment is on the package and is used to identify the package during transfers, and one copy is provided to the pilot with the form 390A . The forms are as follows:

The 390B is a individual Notification to the Pilot of the haz mat on board the aircraft. This form must have a separate shipper declaration form attached. This form is used for all hazardous materials except radioactive materials.

The 390C is a combination form that includes both a Notification to the Pilot of the haz mat and a shipper declaration. It is provided to and used by FedEx's high volume customers. This form is used for all hazardous materials except radioactive materials.

The 390BR and 390CR forms serve identical functions as the 390B and 390C forms, respectively, except they are designed for use with radioactive materials shipments.

The 390U form serves identical functions as a 390C or 390CR form. It is an intermediary or "migration" form for the transition to the AutoDG, FedEx's planned electronic system. Several high volume customers are using this form.

The AutoDG will eliminate all the individual shipment forms (390 C, CR, B, BR, &U). The 390A will also eventually be replaced.

3. Which forms are carried on the airplane?

All the forms listed above.

4. Which forms are in the DG separation pouch?

All the individual shipment forms listed above. The flight crew holds onto the 390A.

5. Are there separate pouches for each container and compartment?

There is a separation pouch for each ULD or compartment.

- **If multiple pouches, where are they kept? - on the container and within the compartment, or just on the wall behind the cockpit?**

The pouches are kept on the bulkhead wall just outside the cockpit. They are placed within a DG document pouch attached permanently to the aircraft.

6. When did the FDR DG screen come on line? (month/ year)

About July 1998.

7. Is the info on the FDR DG screen taken from the one of the forms? 390A, B, or C - or some other source? What?

It is manually transferred from each 390 B/C....

8. Will the AUTO DG have all the info required in the shipping description? Proper shipping name, hazard class, UN no, packing group, quantity, exemptions?

Yes.

What about 24 hr emergency contact info? -

Yes.

9. How did the Tempo Aerospace (Toronto) shipment get on the airplane without being shown on the flight documents?

I sent you that information on August 15, 2002. I will send another copy.

Henderson James

From: Henderson James
Sent: Friday, November 08, 2002 3:51 PM
To: 'pnoppenheimer[redacted]
Cc: 'caywood@r[redacted]
Subject: FW: ALPA Comment and Review

Pat - I got the following comments from Mr. Caywood, the Haz Mat team's ALPA rep. Some of it seems to differ from information that I received from you. Specifically #3, 4, 5 and 6. As a pilot, Mr. Caywood has extensive experience with aircraft and cargo, while you have a direct knowledge of the company's program, therefore, I am sure these issues can be resolved and properly documented. As I mentioned earlier, I need to document each substantive change to the report. Thanks!

Jim H.

-----Original Message-----
From: caywood[redacted]
Sent: Thursday, November 07, 2002 3:37 PM
To: [redacted]
Subject: ALPA Comment and Review

James E. Henderson
Hazardous Materials Group Chairman

Sorry for the delay in responding. I have gone over the draft and find only a few issues. I will use large case letters for the draft and small case to represent my suggested changes. Any thing after is merely an explanation to you and is not intended as copy for the final copy. They are as follows:

1. Page 1 line 5:DANGEROUS GOODS (FDR DG) SCREEN from the trash can AND DROVE???..

Reason for this is the truth of the matter is as important as the issue at hand. This is a wide spread practice that is all but tolerated and needs to change. We,FedEx, were lucky and I am trying to take ?luck? out of the equation.

2. Page 17 line 17: needs to end in a period not a comma.

3. Page 18,Line 20: needs to read DOCUMENT POUCH ATTACHED PERMANENTLY inside the cockpit on the cockpit door.

4. Page 20, line 6: ACCESSIBLE ULD on domestic flights only. On international flight dg ulds are rarely
used and instead dgs are loaded on a simple pallet and are placed at or near the front of the aircraft.

Reason:It is hard to imagine that all of the protection and containment that comes with a Haz can on domestic flights is non existent on long international flights!!!!!

5. Page 20 line 9: WHEN THE DG ULD IS PLACED IN THE AIRPLANE, a dg specialist BRIEFS
ONE OF ????

Reason: A ramp agent may be DG qualified (meaning a DG Specialist) but per FedEx policy a ramp agent can never do the task of a DG Specialist and the task of a ramp agent UNLESS THE PLANE IS EMPTY. No exceptions.

6. Page 22, Line 5: PROJECT?S CURRENT IMPLEMENTATION DATE was febuary 2003, but has

000015

been postponed again. The current date of implementation is todate unknown.

James, That?s about it f rom ALPA. My biggest concern is the fact that just as tomorrow never comes, neither does AUTO DG. I called Oppenhimer?s office yesterday and confirmed that no one knows when the rescheduled launch date is. The reason for this I was told is that not enough programmers were assigned to the task. This was the same reason given two postponements ago!

James it was good working with you. Call me anytime. My cell phone is the preferred means as it works all over the country, just like me. It is [redacted]

David E. Caywood, Jr.
Flight Crew Member
Dangerous Goods Specialist
ALPA

Henderson James

From: Pat Oppenheimer [redacted]
Sent: Friday, November 08, 2002 4:50 PM
To: Henderson James
Cc: [redacted] Alan Ray
Subject: Re: FW: ALPA Comment and Review

#1 Not sure what Mr Caywood was saying: Is the issue that the printout was not believed to be needed and placed in the garbage can? (true statement) Or that he drove it to the site?(actually drove it to the fire station, awaiting escort and then "ran" it to the site.) It appears other statements from Mr Caywood are placing some analysis in the field notes when we were specifically told not to.

Yes, that's where they obtained the document. It's also true they could have accessed the system in less than 30 seconds and printed an additional copy. Not that you asked, but we have submitted a policy change to the weight and balance manual to indicate the FDR DG is "posted" until the aircraft has been unloaded. Truth was that the printing of the document takes place on every single departure.

#3- I have checked with Aircraft Engineering and they have advised that the crew's DG paperwork pouch was changed a few years ago to the "inside of the cockpit door" (regardless of aircraft type).

#4- I agree that international flights may not have a dedicated DG ULD but instead a pallet. The reasoning behind this is that the volume of DG on the international lane segments varies and to engineer a halon hose hook up for unlimited scenarios is impractical. Note- Fire Extinguishers beyond the standard aircraft support equipment are located at the smoke curtain.

#5- AutoDG has the funding and support from Executive Management. It is true as of last friday (11/1) a presentation was made to the Sr VP's of our company at which time it was announced that the implementation had slipped to the first quarter (testing in Feb 03) of 2003. One of the reasons was that one of the key programmers had a heart attack. This does equate to lack of programming resources in order to have made the most recent target date. This project continues to have the support up to and including our CEO.

While optimism should not be part of the field notes, nor should pessimism.

I'd be happy to provide any additional details needed.

Henderson James

From: Henderson James
Sent: Wednesday, November 13, 2002 11:35 AM
To: 'pnoppenheime[redacted]; 'caywood[redacted]
Subject: RE: FW: ALPA Comment and Review

I believe that Dave's concern with #1 was to include that the standard individuals at Tallahassee FedEx terminal stated they had tossed the FDR DG in the trash and that, after the accident, it was retrieved from there. I will add both this and ensure that the report states FedEx's ability to retrieve copies of this screen from their terminal.

Pat - Let me know when the policy change for posting the FDR DR until the aircraft is unloaded is implemented and in use.

#3 I will change the position of the DG pouch to the interior door of the cockpit.

#4 I will indicate that the use of the ULD is only for domestic flights. I may add a footnote that international flights do not use a ULD and that haz mat is frequently carried on pallets.

Is it true that these pallets are carried in the first cargo positions - or in accessessable cargo positions?

#5 - PAT - You missed Dave's #5 comment. When the haz mat ULD is placed on an aircraft, are only DG specialists allowed to brief the flight crew. Should the report be changed from ramp agent to DG specialist? If there is a company policy to this effect, please provide a copy.

#6 - I will change the planned implementation date of the AUTO DG to the end of March 2002.

Pat - Bob Trainor (my boss) had a question on the draft.

Do we know what the hazardous materials were in the seat belt pretentioners? Do they carry a compressed gas, a gas generator, an explosive actuator, or something else?

Jim H.

Henderson James

From: Pat Oppenheimer [redacted]
Sent: Sunday, November 17, 2002 7:42 PM
To: Henderson James
Cc: 'caywood@[redacted]
Subject: Re: FW: ALPA Comment and Review

#1 I have requested the tech writers adv on the status of the change on posting the FDR DG file. Will adv when I know more.
#4 When accessible DG's are transported on pallets, they are loaded either in the most forward position or along the left side of the aircraft with crew access. (note- the pallets would be built up with the freight offset from the left side and along the aft side of "each" pallet, with an 18" isleway to provide crew access) No pallets or containers may be place in front of an pallet containing accessible DG.
#5, yes this is correct. A DG Specialist must brief the crew about the contents of the ADG. It may be a ramp agent, but may not be one as well.
In reference to the seat belt pretensioners, I am not sure of the contents for the items on 1478. In my experience, these have been small explosive charges but there may be the compressed gas types as well. I know for air bag modules the compressed gas types are just as common.