



**National Transportation Safety Board**

Office of Railroad, Pipeline and Hazardous Materials Investigations  
Human Performance and Survival Factors Division  
Washington, DC. 20594

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Survival Factors<sup>1</sup> Factual Report – Addendum # 7

Photograph Descriptions<sup>2</sup>

July 29, 2008

*Failure of Dixie Pipeline Company Pressurized Underground Transmission Pipeline, and Subsequent Liquid Propane Release and Fire, near Carmichael, MS, on November 1, 2007*

NTSB Accident Number: DCA 08 MP 001

Compiled by:       // s //       Date   July 29, 2008  

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Investigator / Survival Factors – Working Group Chairperson

Supervisory review:       // s //       Date   July 30, 2008  

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<sup>1</sup> The scope of the Survival Factors Factual Report [in pipeline accident investigations] exclusively addresses the emergency preparedness and response, and injury causation aspects of the investigation.

<sup>2</sup> This document, assembled in ref. to Survival Factors Factual Report - § 5.4.2, serves essentially as a transmittal (cover sheet) of photo-documentation compiled by the Survival Factors investigation, the photographs of which are individually submitted to, and catalogued in (by individual Photo Number), the NTSB Docket Management System.

Report Content Synopsis

As support to the Survival Factors Factual Report of the Investigation, this transmittal provides a narrative description of photographs as compiled by the Survival Factors investigation.

Photograph Source Identification:

- A. Survival Factors – Group Chairperson
- B. Clarke County Sheriff Department (note – ignore ‘date-stamp’ on images; incorrect data)
- C. Mississippi Department of Public Safety<sup>3</sup>
- D. Clarke County – Fire Marshal / Fire Investigator<sup>4</sup> (note – ignore ‘date-stamp’ on images)
- E. Dixie / Enterprise Products<sup>5</sup>

<u>Photo #</u>	<u>Source / Date<sup>6</sup></u>	<u>Description</u>
1.	C / 1	Aerial view approaching the accident [pipeline rupture] site, facing approximately southwest, of the extensive flame resulting from the residue [propane] product ‘controlled burn-off’ process, showing also the degree of heavy smoke emanating from the accident site, and fire damaged terrain proximate to the accident site, the area of which was still smoldering.
2.	C / 1	Aerial view of the pipeline rupture site and fire damaged area proximate to the accident site, facing approximately south, showing flame resulting from residue product ‘controlled burn-off’, showing also in the background [above image center], the small pond located near the pipeline rupture site, with a segment of the adjacent cluster of six residential dwellings [located to the right of the pond], as destroyed by fire, located in the 4100 and 4200 block of County Road 621 (which are somewhat hidden in the fire damaged trees).
3.	C / 1	Aerial view of the pipeline rupture site and fire damaged area proximate to the accident site, facing approximately northeast, showing flame resulting from residue product ‘controlled burn-off’, showing also in the foreground [image center] the cluster of six residential dwellings, as destroyed by fire, located in the 4100 and 4200 block of County Road 621 (which are scattered amongst the fire damaged trees).
4.	B / 1	Dixie Pipeline right-of-way, from County Road 621 intersection with the Pipeline right-of-way, facing northeast toward the rupture site, showing pipeline milepost / public awareness marker, and flame resulting from residue product ‘controlled burn-off’ in the background [image center] at the accident site, and debris of one of the cluster of six residential dwellings (a semi-permanently constructed, fixed in-place, manufactured [mobile] home), as destroyed by fire, located in the 4200 block of County Road 621 [to the right of image center].

<sup>3</sup> technical support to the Investigation, as contributed via Clarke County Sheriff Department.

<sup>4</sup> see footnote 3

<sup>5</sup> as contributed by either entity; ref. Survival Factors Factual Report, § 1.3

<sup>6</sup> date of photo image: 1 = November 1, 2 = November 2, and U = unknown or unable to identify.

5. C / 1 Debris of one of the cluster of six residential dwellings (a semi-permanently constructed, fixed in-place, manufactured [mobile] home), as destroyed by fire, located in the 4100 block of County Road 621<sup>7</sup>, and flame in the background [seen through the trees, at image center] resulting from residue product ‘controlled burn-off’ at the accident site.
6. C / 1 Debris of fire damaged [roadside] mail boxes, with fire scorched trees and foliage (in the background), located proximate to the cluster of six residential dwellings (which were destroyed by fire) in the 4100 and 4200 block of County Road 621.
7. B / 1 Debris of fire damaged automobiles, with fire scorched trees and foliage (in the background), located proximate to the cluster of six residential dwellings (which were destroyed by fire) in the 4100 and 4200 block of County Road 621.
8. B / 1 Several of the structures among the cluster of five residential dwellings located in the 4300 block of County Road 621, in which several of these dwellings were reported to have received some heat damage (from the approaching fire), and/or some structural damage in the event<sup>8</sup>.
9. B / 1 View along the alignment of County Road 621, facing north, toward the “bend in the roadway”, and [a view of] the area of the residential dwelling (destroyed by fire) located at 4195 County Road 621, from the perspective as described by a witness to the event, who indicated that he was visiting his great aunt at her residence in the 4300 block of County Road 621<sup>9</sup>.
10. A / 2 Fire damage to the open terrain proximate to the pipeline rupture site, as viewed along the pipeline right-of-way from southwest of the rupture site, facing approximately northeast, showing the trench and flame (resulting from residue product ‘controlled burn-off’ process) in the distance [image center].
11. A / 2 Trench, presumably created as a result of the reported rupture, which exposed the ruptured pipeline, facing approximately northeast, recorded prior to excavation enlargement of the trench (to accommodate evidentiary specimen recovery)<sup>10</sup>.
12. A / 2 Detail of the southwest end of the length of exposed ruptured pipeline in the trench, showing also flame (resulting from residue product ‘controlled burn-off’), facing approximately north, recorded prior to excavation enlargement of the trench (to accommodate evidentiary specimen recovery).
13. A / 2 Detail of the northeast end of the length of exposed ruptured pipeline in the trench, showing also flame (resulting from residue product ‘controlled burn-off’), facing approximately north, recorded prior to excavation enlargement of the trench (to accommodate evidentiary specimen recovery).

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<sup>7</sup> ref. Survival Factors Factual Report, § 4.2.1, and § 5.2.

<sup>8</sup> see footnote 7

<sup>9</sup> ref. Survival Factors Factual Report, Addendum 2 (Witness Interview – Notes), Interview # 1.

<sup>10</sup> ref. Survival Factors Factual Report, § 5.1.1

14. A / 2 Debris of one of the cluster of six residential dwellings (a conventional wood-frame structure), as destroyed by fire, located at 4195 County Road 621, where one of the two fatalities occurred<sup>11</sup>.
15. D / 2 Debris of one of the cluster of six residential dwellings (a semi-permanently constructed, fixed in-place, manufactured [mobile] home)<sup>12</sup>, as destroyed by fire, located at 4207 County Road 621, proximate to where one of the two fatalities occurred<sup>13</sup>.
16. D / 2 Evidentiary artifact, consisting of a short length fragment of two ‘twisted-together’ electrical power feed wires [located immediately adjacent to the 2 inch numeral of the tape measure], which are still in place in an electrically powered hot water heater (recorded prior to evidentiary specimen recovery by the Investigation)<sup>14</sup>.
17. A / 2 Debris of one of the cluster of six residential dwellings (a semi-permanently constructed, fixed in-place, manufactured [mobile] home), as destroyed by fire, located in the 4200 block of County Road 621<sup>15</sup>.
18. B / U Enlarged trench containing the exposed length of ruptured pipeline, facing approximately northeast, subsequent to excavation enlargement of the trench (to accommodate evidentiary specimen recovery)<sup>16</sup>.
19. E / U Aerial image from directly above the accident site, depicting the overall topographical area that sustained fire damage during the event, which comprised an estimated 71.4 acres<sup>17</sup>; north is to the right side of the image, which shows (as basic landmarks) the small pond [at image center] which is located to the south of the pipeline rupture site [which is to the immediate right of image center], the Dixie pipeline right-of-way [a diagonal line passing from upper center left, downward to the right of image center, continuing downward to a clearing at lower right], the Hunt Crude Oil pipeline right-of-way [a diagonal line passing from lower center left, extending upward to the right of image center where it intersects with the Dixie pipeline right-of-way, and continuing upward to a clearing at upper right], and County Road 621 [a vertical line passing from upper center, extending downward a short distance to where it intersects with the Dixie pipeline right-of-way, and continuing downward to an area about  $\frac{1}{3}$  of the distance from image top, where it curves left, and continues horizontally left into a clearing at center left].

-- End of Report --

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<sup>11</sup> see footnote 7.

<sup>12</sup> the large metal element shown [in a horizontal orientation across image center] is the remains of the roof component of the structure, which has collapsed upon debris comprising the balance of the residential dwelling.

<sup>13</sup> see footnote 7.

<sup>14</sup> ref. Survival Factors Factual Report, § 5.2.2, and as addressed in [NTSB] Materials Laboratory Factual Report Number 08-003, dated January 16, 2008.

<sup>15</sup> see footnote 7.

<sup>16</sup> see footnote 10.

<sup>17</sup> ref. Survival Factors Factual Report, § 4.1, § 5.1.2, and § 6.6.2.