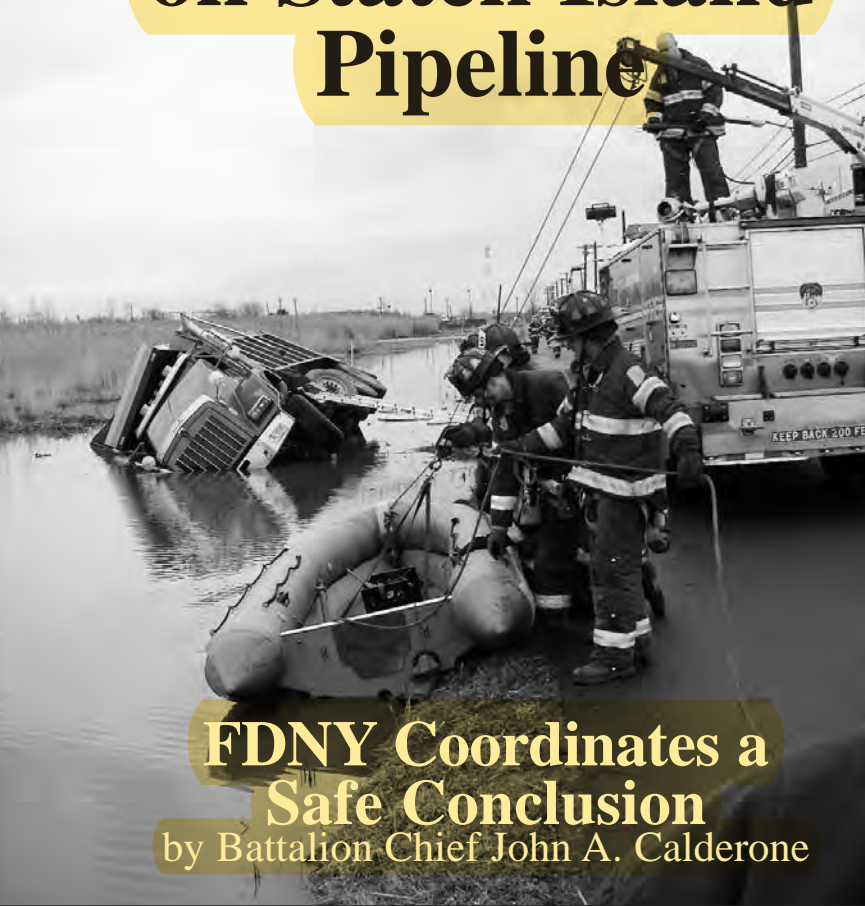


# Dump Truck Lands on Staten Island Pipeline



## FDNY Coordinates a Safe Conclusion

by Battalion Chief John A. Calderone

Who could imagine the FDNY responding to a call for a dump truck landing on a natural gas pipeline? That is precisely the scenario faced by FDNY members after the Staten Island Central Office received a telephone call at 0758 hours on January 14, 2008, for an overturned truck at the former GATX facility at 500 Western Avenue, located in a remote corner of the Island. This is a 700-acre facility that originally was opened in 1928 by Gulf Oil Corporation as a tank farm, known as Gulfport. In 1990, the facility was acquired by GATX.

At the height of its operation, there were approximately 100 fuel storage tanks, administrative and support structures, a wharf to accommodate ocean-going tankers, a network of roadways, distribution piping, a yard hydrant system and the facility's own fire department, which operated two apparatus. The facility was shut down and demolished over a period of several years, starting in 2000. Subsequently, the site was purchased by International Speedway Corporation to develop a NASCAR racetrack. As part of that purchase, it was necessary to remediate soil that had become contaminated over the years when the property was used as a fuel storage facility. Although plans for the racetrack were dropped, the site remediation was continuing.

Initially, Engine 158 and Ladder 86 were dispatched. When these units arrived at 0805 hours, they immediately requested that Battalion 22 be assigned. At 0822 hours, Lieutenant Gary Van Pelt, Ladder 86, provided a preliminary report, indicating an overturned dump truck carrying contaminated soil was partially sub-

merged in a marsh and resting on a natural gas pipeline. Based on this report, Battalion Chief John Calderone, Battalion 22, while still responding, requested that Rescue 5, Haz-Mat 1 and Haz-Mat Engine 165 be assigned. The Rescue Battalion and Haz-Mat Battalion also were assigned at this time.

Arriving at the scene, Chief Calderone performed an initial size-up. The incident was located approximately 2500 feet south of the main plant entrance on Western Avenue. The truck, carrying a load of contaminated soil, was in the process of leaving the facility. Based on tire tracks, the right wheels of the dump truck had left the roadway and the truck traveled for approximately 100 feet, tilted on an angle, along an embankment before its left wheels left the roadway. It then entered the water, a moat adjacent to the main plant entrance road, and traveled approximately 50 feet before coming to rest on its side, with some of its load spilled into the water.

There were numerous markers in front of and behind the truck, as well as along its east side, that indicated the presence of multiple pipelines. The closest two pipelines, the ones that eventually were determined as compromised by the truck, were both 12 inches in diameter and carrying natural gas at 700 psi. These were operated by Spectra Energy.

The next pipeline, to the east of the truck, was a 12-inch petroleum pipeline operated by IMTT. The fourth pipeline, also operated by Spectra Energy, was a 30-inch, 700-psi natural gas pipeline that supplied a large area of the Northeast. The last two mentioned pipelines were both 14-inch petroleum pipelines operated by Colonial Pipeline.

There was immediate concern about these pipelines and confusion over how deep they were buried. Plant personnel were telling FDNY units that the pipelines beneath the truck were 36 inches down, but when questioned, could not say down from what. FDNY members received various answers that included from the roadway surface, from the top of the water (which obviously varied) and beneath the dirt (which was beneath the water). It became obvious that the Fire Department would have to determine the depth. Tactical Support Unit 2 was special-called at 0824 hours to the scene for use of their boat.

At this point, Deputy Chief Roger Sakowich, Division 8, arrived at 0840 hours. After being briefed, he assumed command. Chief Calderone was designated as Operations.

The nearest hydrants in either direction were located quite a distance from the incident. Additional engine companies and two



Tactical Support Unit 2 was special-called to the scene for use of their boat so that FDNY could determine the depth of the affected pipelines.

all photos by FFs Mike Hansen, Ladder 79, and Ed Franklin, Engine 156



Markers indicated the presence of multiple pipelines.

satellites were special-called at 0900 hours and assigned as North and South Water Supply Task Forces to supply water from these distant hydrants. It was necessary to have traffic stopped on a recently rebuilt freight railroad that ran through the facility because the supply line from the South Water Supply Task Force had to be laid across the track.

Due to the magnitude of this incident and the large number of outside agencies involved, the 10-75 Chief, Battalion Chief Richard Callery, Battalion 21, was designated as the Liaison Officer. In this position, he had the difficult task of identifying, coordinating and controlling numerous representatives from the many agencies on-scene. These agencies included New York Police Department (NYPD), Office of Emergency Management (OEM), Department of Environmental Protection (DEP), Department of Environmental Control (DEC), United States Coast Guard (USCG), Occupational Safety and Health Administration (OSHA), Spectra Energy, IMTT Pipeline, Colonial Pipeline, Keyspan, Con Edison, Ecol Sciences, Clean Earth, 380 Development, Earth Tech, International Speedway, NASCAR, JV National Transport, BCS Barbella Construction and Staten Island Towing. These organizations represented Federal, State and local government agencies, the pipeline companies, utility companies, property owners, developers, contractors, subcontractors, environmental clean-up and monitoring companies, the trucking company and recovery company.

Rescue 5 was directed to take meter readings to determine if there was any leakage. While this was taking place, a plan was formulated with Spectra Energy to determine the actual depth of the pipelines beneath the truck. Members of Ladder 80--a water rescue unit--donned exposure suits and operated in the moat, assisting a representative from Spectra Energy in taking soundings. This operation determined that the truck was actually in contact with the pipelines and that both were bowed under the truck's weight.

At 1040 hours, another conference was held with Spectra Energy, whose representatives now considered both pipelines compromised. Based on this, a decision was made to back all operating forces 1000 feet away from the truck. A plan was formulated with Spectra to valve off this section of the pipelines and then institute a controlled release of the gas still contained in the valved-off sections.

Ladder 86 was assigned to assist and coordinate this operation with Spectra. Representatives from Spectra felt that these actions had to take place without delay, because a far worse situation would have occurred if one of the pipelines had broken, resulting in an uncontrolled release of its contents. A weather report was requested through the dispatcher to determine wind direction and speed since it was anticipated that numerous reports of gas odors would be received downwind from the controlled release.

Since the South Water Supply Task Force and Ladder 86 now



Diesel fuel is off-loaded by FDNY members. Two pipelines were bowed under the truck's weight.

were operating separately and at a distance from the Incident Commander, Battalion Chief John Gialella, Battalion 23, was special-called at 1103 hours and designated as the South Sector Supervisor.

Battalion Chief Dominick DeRubio of Safety Battalion 1 arrived shortly after this and was briefed on what had transpired up to this time. At 1111 hours, Spectra started to bleed the gas remaining in the now-sectored pipelines. The requested weather report indicated that the wind was blowing north/northeast at seven mph. This would have sent the released gas over congested areas.

Visual observation of the wind, however, indicated just the opposite, as steam discharges from nearby industrial plants were blowing to the southwest, toward unoccupied areas. The actual bleed-off took place from valves located approximately a half-mile south of the incident location. Approximately 40 minutes later, both pipelines were empty. No phone calls for gas odors were received. This was attributed to the gas being discharged in a remote area, in conjunction with the wind blowing to the southwest, taking it over unpopulated areas and rapidly dispersing the odor.

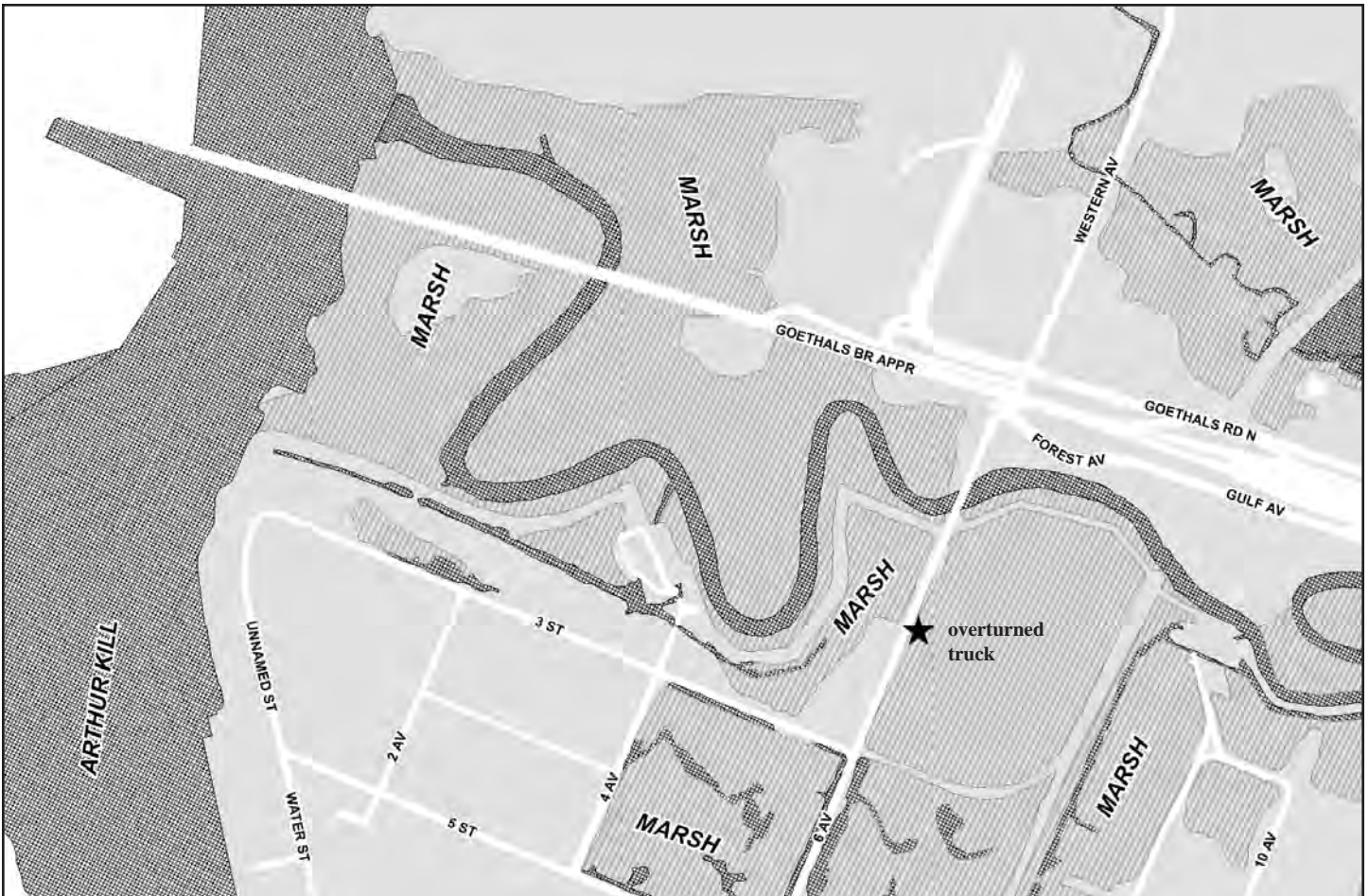
Once the main danger of the pressurized gas was eliminated, FDNY members were able to address the problem of the overturned truck. Haz-Mat 1 was assigned to off-load the diesel fuel from the truck's saddle tank. During this operation, Engine 228 positioned nearby with its dry-chemical rig, with a dry chemical hand-line ready to operate. (The reason for Engine 228's Purple K apparatus was that during transfer of the diesel fuel from the truck saddle tanks, dry chemical--Purple K--would provide a quick knockdown of active flaming and reduce the chance of flame spread due to the precarious position of the truck.)

Once this fuel was off-loaded, the process of uprighting the truck started. The heavy recovery firm employed three heavy-duty wreckers to do this. Initially, members of Ladder 80 in exposure suits entered the water and assisted in placing slings and cables for this operation. However, after several questionable attempts at removing the vehicle failed, both Safety and Operations removed FDNY personnel from this phase of the operation.

At 1436 hours, the truck was removed from the water and uprighted. Using meters to make sure there were no undetected leaks, a final survey was made of the scene and the incident was placed under control at 1441 hours.

### Lessons learned

- *ICS terminology*--ICS terminology worked well at this incident with Chief Officers designated by their functions. It should be noted that while the Operations position usually is not filled until a Staff Chief is on-scene, at this incident, Chief Calderone's functions best suited the Operations title, especially with Command located at the Command Post more than 1000 feet



away from the truck.

- *Wind direction*--There was confusion when the dispatcher provided the wind direction as “wind is blowing north/northeast at seven mph.” Chief Calderone observed smokestack discharges blowing to the southwest, away from populated areas. In Weather Bureau terminology, the wind blows from the direction for which it is named. A north/northeast wind blows toward the south/southwest. When provided with wind direction, try to confirm this by visual observation.
- *Uprighting the vehicle*--A license does not guarantee someone’s qualifications. While FDNY extends its personnel and equip-

ment to assist “outside experts” at incidents, it appeared to both Safety and Operations that the attempts to recover the vehicle were more trial and error than a planned, safe operation. A decision was made to remove FDNY personnel from the water to avoid a possible injury from these attempts. This decision did slow down the operation somewhat, but a risk-versus-gain analysis justified this determination and prevented any injuries to FDNY members.

- *Patience*--At an incident of this type, actions taken must be deliberate operations based on information obtained from outside experts and agreed upon with the Incident Commander. This requires conferences with all involved, including any questions and discussion of any concerns. Out of necessity, these kinds of operations are slow moving and take time to bring to a safe conclusion. A high degree of patience must be employed compared to those decisions made at a fast-paced fire incident.
- *Outside agencies*--A common theme at this operation was that representatives from most outside agencies, after viewing the scene and being advised of the hazards involved, were inclined to turn the responsibility over to the FDNY. FDNY ran this operation from start to finish, bringing it to a safe conclusion.



Wearing exposure suits, FDNY members prep the vehicle in the process of uprighting it. Ultimately, three heavy-duty wreckers removed the truck from the water.

#### About the Author...

Battalion Chief John A. Calderone has served the FDNY since 1973. He is assigned to Battalion 22. He holds a degree in Fire Protection from New York City Community College and has written extensively on the subject of fire apparatus. He is a regular contributor to WNYF.

