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Stephan Hittmann  
President

1 November 2006

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Sub-Comandante  
Jefe de Cuerpo Activo

**Héctor Omar León**  
Presidente  
Honorable Comision Directiva

**Sociedad de Bomberos Voluntarios de Garin**  
San Luis 3777 Garin  
Pdo de Escobar  
CP 1619 Buenos Aires, Argentina

Dear Adrián and Omar,

Thank you for your extraordinary hospitality during our recent visit to Argentina. We were privileged to work with you and the esteemed firefighters in Garin as you celebrate your 30<sup>th</sup> year of service. You indeed have much to be proud of, as was evidenced by the high level of morale and enthusiasm by everyone with whom we met. We were welcomed like family and made to feel like royalty. Neither of us will ever forget the friendships made during our visit.

The trip was an important educational experience since we were able to observe so many of your operations first-hand. Although many of your fire and emergency operations are performed in ways that are similar to our own, we believe that there are several areas where we can learn from each other and mutually benefit.

As promised, we have summarized our observations in the attached document, and have included a CD of our photos. We look forward to receiving your reaction to the enclosed (which Patrick Baert and Fernanda Michelini have kindly offered to translate into Spanish), and continuing this collaboration in the realization of your efforts to reduce firefighter risk, enhance civilian health and safety, and minimize property loss from fire.

Sincerely,

**Stephan Hittmann**  
President  
911 FUND

**Dennis K. Haas**  
Fire Chief  
City of Copperas Cove Fire Dept



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**Sociedad de Bomberos Voluntarios de Garin**  
Observations and Topics for Further Discussion

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## History and Background of the 911 FUND:

Created in the aftermath of the tragedy that occurred on September 11<sup>th</sup>, 2001, the 911 FUND was born from the personal, hard-won experience and first-hand knowledge of New York City firefighters and emergency personnel. As we watched firefighters commit their efforts, and in 343 cases their lives, to the rescue of 25,000 innocent civilians, we became convinced of the need to enhance our systems of emergency management and preparedness, and to share the understanding, skills and lessons-learned with friends and allies the world over.

Firefighters routinely put themselves in harms way to protect the citizens of all nations. Service, solidarity, fraternity, brotherhood, and a willingness to accept risks and make sacrifices are the common bloodline of firefighters worldwide.

Ever since September 11<sup>th</sup>, we have worked to provide training and equipment to governments, industry, fire departments, emergency responders and individuals as part of a collective effort to reduce risk for those most at-risk, while enhancing safety in both the public and private sectors. The 911 FUND has also worked to support firefighters and emergency personnel by its donations to aid firefighters in this never-ending work.

Firefighters in developing countries have profound training and equipment deficiencies yet typically assume the same risks that are assumed by American firefighters. The training, equipment and/or apparatus that we provide are truly gifts that keep on giving, while adhering to the best principles and highest traditions of the American fire service.

Each of the individuals who volunteers with the 911 FUND has between 10 and 35 years of technical professional experience in their respective discipline. We also have the ability to access virtually unlimited additional expertise and/or personnel, as needed.

Specific activities of the 911 FUND have included:

- Conducting needs assessments to help address critical safety and security issues.
- Donating equipment (turnout gear, SCBA, tools, etc.), fire apparatus and ambulances to those with the greatest need.
- Providing training in fire operations, dispatch, emergency vehicle operations, fire prevention, fire safety education, code enforcement, hazardous materials, special operations, emergency medical services, leadership, instructor development, etc. All training is customized to the needs of the respective department, and reflects one or more topics of importance to them, with training typically provided by senior firefighting personnel with extensive expertise in a respective topic.
- Working with governments, industry, fire departments and emergency responders in critical safety and security areas, including maximizing inter-agency communication and cooperation/mutual aid, response to NBC and WMD events, maritime and homeland security, strategic planning involving natural disasters and/or acts of terrorism, etc.
- Advising governments and fire departments alike on upgrades to or building and operating new training facilities, including preliminary site and equipment needs, operational costs, staff and curricula needs, etc.

## Report to the Sociedad de Bomberos Voluntarios de Garin Following our Visit:

The following report is divided into eleven (11) sections. It is drawn from our first-hand observations while in Garin and the surrounding areas during early October 2006, as well as from our discussions with the leadership and members of the Sociedad de Bomberos Voluntarios de Garin, the local Federation within Escobar to which you belong, as well as the municipal and industry representatives with whom we met. Subsequent to these observations are a series of recommendations, several outstanding issues as well as some topics for further discussion.

We cannot stress strongly enough that these observations are not in any way intended as a criticism. They are, rather, a starting point upon which we hope to develop an expanding dialogue with you and the community you serve. As we have repeatedly said, our goal in making the following recommendations is to help reduce firefighter risk, enhance civilian health and safety, and minimize property loss from fire.

It should also be noted that the following sections are not listed in any priority order.

The following eleven (11) sections are:

1. Personnel / Workload
2. Written and Operational Procedures
3. Basic and Specialized Training
4. Tools, Equipment and Inventory Tracking
5. Facilities
6. Apparatus, Maintenance and Water Supply
7. Dispatch and Communications
8. Fire Prevention / Fire Safety Education
9. Coverage Area
10. Interagency Operations
11. The Need for an Expanded Dialogue with Government and Industry

### 1. Personnel / Workload:

- Number of Firefighters: Approximately sixty (60) individuals serve as volunteer firefighters in Garin. Given the large geographic area for which coverage is provided, a workload that is approaching 1,000 interventions per year, the typical response protocol that calls for one or two trucks to respond to structural fires (40% of your current workload), automobile accidents (25% of your current workload), etc., all-of-which is heavily compounded by the industrial, rail and other large-scale potential hazards that exist in this community, we recommend increasing the number of volunteer firefighters available to respond in and around in Garin. Since many current firefighters participate in the department's many routine responses, others may be unavailable (prior work commitment, out-of-town, sick or injured, etc.), and a growing number of Garin's volunteers are middle-aged, a major emergency would quickly overwhelm the department's limited resources and require

mutual aid from one or more departments in the Federation. We recommend, therefore, a recruitment campaign to double the number of firefighters in Garin to a minimum of one-hundred and twenty (120) individuals.

- Firefighter Assignments: The assignment of volunteers to pull "shifts" at the station is a great way to provide for coverage on a 24/7 basis and should be maintained and supported.
- Promotional Standards and Staff Performance Evaluations: It remains unclear how firefighters are promoted from bombero to sub-official to official. The system that exists must be codified to ensure that it is comprehensive, fair and dispassionate. Even though all of the firefighters in Garin are volunteers, they must be evaluated nonetheless to ensure that their performance meets acceptable standards. An annual timetable for staff performance evaluations should be established and announced, with it the responsibility of the department's leadership to ensure that performance evaluations are both periodically performed and conducted in a fair and dispassionate manner.
- The Cadet Program: This is an excellent program that should be standardized across the Federation, if not the country as a whole.

## 2. Written and Operational Procedures:

- Standard Operating Procedures Manual (SOPM): The department appears to have no written SOPM, and the development or adoption of one is strongly recommended.
- Firefighting Tactics: The tactics witnessed were inadequate to provide for maximum firefighter safety (1" line deployed without backup, no 2 in/2 out, etc.).
- Incident Command System (ICS): No accountability or ICS appears to be in place, and the development or adoption of one is strongly recommended. Decision-making, problem-solving, company administration, report writing, in-unit training, community relations, etc., are all required of the commanding officer. Incident command and safety coordination, particularly during an emergency, coupled with the strategies and tactics required to successfully manage a variety of fire and emergency situations, must be developed.

## 3. Basic and Specialized Training:

- Training Academy: The department has neither a Training Academy nor a periodic training schedule in place, both of whom are desperately needed. Although we visited the former training site, its level of disrepair has rendered it virtually useless. Several vacant buildings in Garin were identified that could easily and for very little money be converted to excellent training facilities.
- Multi-Unit Drills / Cooperative Training: The department is in need of cooperative training between departments within the Federation as well as with local industry.
- Basic Firefighting: While the ultimate goal of North and South American fire departments are largely the same, we thought many of the methods used to achieve these goals were different. In addition to the absence of a ladder truck to respond and perform search or forcible entry, virtually no-one carried any kind of tool, and the tools that were used (pinch bars, small hatchets, etc.) are quite limited in

purpose. Acquisition of other types of tools is essential, especially for ventilation, entry and search operations.

- Firefighter Removal: Firefighter safety is an extremely important topic, and from what we observed, removal techniques for injured firefighters are an essential area that needs to be stressed. A "down firefighter" may be the result of a medical condition, not necessarily a fire-related injury. An example of a drill that could be run would involve instructing three of the largest members to don their turnout gear and SCBA's. Go to the stairs and have two of the members carry the third member (acting as if he was unconscious) up one flight in a wide staircase. (Less experienced firefighters will generally try to carry the "unconscious" member from side-by-side positions, each holding one arm. This method is unnecessarily strenuous because it overuses the small muscles of the upper body, instead of taking advantage of the more powerful muscles of the lower body. It also invites serious injury to the lower back of the unconscious firefighter.) Now select two of the smallest members and set the stage by first narrowing the stairway (like you would find leading to a cellar). Using our method, the two members would carry the "unconscious" member with emphasis on leg muscles, which is our prescribed way to carry, and which is generally quicker and easier. This task is of vital importance, and with a willingness to learn and share information, we see no reason why the firefighters in Garin couldn't adopt an efficient method and practice in this area, as in others.
- Collapse: Work needs to be done in this area, with emphasis on building construction and types of collapse, stages of collapse rescue, tools, shoring, void entry with breaching and debris removal (using light, medium or heavy saws, torches, air bags, etc.). We view this as a mid-level priority that can only be addressed given increased access to heavy machinery.
- Confined Space: This is the area where we felt considerable work needs to be done, especially in terms of safety to the rescuer. We never observed any method for collapse shoring, and a cache of struts and wood timbers, with proper training, would greatly minimize the risk to rescue personnel. Firefighter removal techniques and a method to monitor atmospheric conditions are needed. Monitoring for lower explosive levels as well as oxygen and carbon monoxide levels is a critical safety issue. Patient packaging techniques and equipment are also important in this area.
- Forcible Entry: Tools such as haligans, mauls, heavy axes, etc., are important, as are procedures on their use, which we believe could dramatically enhance your efficiency. We never saw any irons being used, and this was a major concern to us.
- Mask Confidence: Additional training is needed in this area. You should consider running search drills with blacked-out face pieces, using search lines, setting off their Personal Alarm Safety System (PASS alarm) during drills once these systems are obtained, etc., so that mask confidence becomes second-nature.
- Special Operations Training: Based on our observation of your equipment and methods, training is needed in breaking and breaching, collapse operations, heavy rigging, shoring and cribbing, torch operations, trench rescue and void search.
- Miscellaneous Training: Additional training should be provided in the following areas: Auto extrication, communication on the fire ground, engine operations, hose stretches, ladder skills, lock-out tag-out, monitoring of firefighters during operations, removal techniques (trapped firefighters, man in a machine, under a

train, etc.), roof operations, ropes and knots, self-contained breathing apparatus (SCBA) procedures (reduced profile, quick escape, mask confidence, etc.), search techniques, simple entries with a safety line, railroad emergencies, multiple-casualty incidents, electric utility emergencies, physical fitness, etc. All of these require minimal equipment, and must be mastered before emphasizing any advanced training. Training in these areas must be coordinated with access to and use of the appropriate equipment, which we would be happy to recommend.

#### 4. **Tools, Equipment and Inventory Tracking:**

- **Personal Protective Equipment (PPE):** The department is very much in need of standardized PPE for all personnel, including bunker pants, coats, boots, hoods, gloves, safety ropes, etc.
- **Self-Contained Breathing Apparatus (SCBA):** The department has two Scott and two Draeger SCBA without PASS devices. The department is very much in need of additional SCBA, the goal of which should be one SCBA for each member, plus a reasonable reserve supply of masks and bottles, as well as a compressor to test and refill bottles. SCBA should also be standardized from a single manufacturer, with the inclusion of PASS devices if possible.
- **Firefighting Equipment:** The department is in need of all standard firefighting tools and equipment (hoses, nozzles, axes, pikes, halligans, flashlights, etc.)
- **Helmets:** The Bullard helmets that are used are excellent. The flap in the rear (to shed water and give it a smaller profile, making it less likely to get knocked off) is an excellent feature. The department should ensure that each member has his own helmet. In addition, a lightweight emergency helmet with built-in eye protection for other work would also make great sense. Much of the eye irritation that was experienced at the World Trade Center would have been reduced if firefighters had helmets with built-in eye protection.
- **Hose Reels:** Additional roll-ups and/or removable hose reels attached to the back of apparatus makes stretching long lines to a water supply an easy task for one person. A winch at the fire station would also be helpful to assist in rolling-up hose that's been dried, thus getting units back in service much more quickly.
- **HazMat:** Given the industrial park with its sizeable volume of hazardous materials within the confines of the Garin response area, coupled by the freight rail service that passes through Garin, additional Level-A suits and large ground mats (that distinguish the various zones in which to operate a safe and organized manner) are a recommended addition.
- **High Angle:** Given the number of ten-story apartment buildings in Garin (that have neither sprinkler systems, standpipes, attack and evacuation stairs, etc.), a Tripod/Gin Pole with a built-in crank-haul system efficient rope operations, utilizing Petzl Stops for lowering and hauling operations (to make for fast changeovers in technical rope operations), emphasis on c-spine immobilization (for patient packaging), etc., should all be considered.

5. **Facilities:**

- The fire station is in desperate need of a complete overhaul. Repairing that which is broken (walls, doors, windows, electric lines, etc.), cleaning and painting the entire building, and organizing both the tool and gear rooms are a necessary first step.

6. **Apparatus, Maintenance and Water Supply:**

- **Fire Apparatus:** The department operates with six pieces of apparatus, the oldest being nearly 45 years old, and the newest being 15 years old. While we were most impressed with the department's ability to customize trucks for firefighting operations and maintain your rapidly aging fleet, the need for newer, additional and more versatile apparatus is immediately evident. Substitute and/or additional pumpers, tankers and a ladder truck are absolutely essential.
- **Small Vehicles:** Having multiple smaller trucks, preferably four-wheel drive trucks given the large number of unpaved roads in and around Garin, should be a strong consideration.
- **Ambulances:** Consideration should also be given to the acquisition of at least one ambulance, given the department's rapid response capability and first-aid responsibility. This is compounded by the frequent unavailability of the one municipal ambulance or privately-run ambulance service. The department is in need of an ambulance with which, like the others, you could generate revenue when you provide patient transportation.
- **Victim Transportation:** The department is occasionally required to transport accident victims to the hospital on fire trucks due to the unavailability of an ambulance. The department is in need of an ambulance with which you could generate revenue when you provide patient transportation.
- **Water Supply:** With the exception of certain areas in the industrial park, Garin has no hydrant system and generally relies upon the water that it carries on its apparatus or local wells. That being the case, the department must ensure that it also has the resources to draft water from rivers, ponds or pools, as needed. This also speaks to the need for additional fire apparatus and/or tanker trucks to guarantee the availability of an adequate supply of water at fire emergencies.
- **Water Rescue:** Given the frequent flooding that occurs, the acquisition of a zodiac should be considered to assist with rapid surface rescue. In addition, the acquisition of Self-Contained Underwater Breathing Apparatus (SCUBA) should be considered to assist with victim rescue.

7. **Dispatch and Communications:**

- **Firefighter Notification:** The department uses an antiquated notification system for volunteers (warning siren) and should consider alternatives and back-up systems in case of loss of power to the siren.
- **Fireground Communication:** Given the absence of radios, eye contact and hand signals are relied upon. This type of communication is ineffective in the best of circumstances, and the department should explore the acquisition of Motorola (or other types of) radios that be can used on the fireground for its members.

- Dispatch: Dispatch operations must be improved to include mapping and topographic information, as well as the development of a Critical Incident Dispatch System (CIDS) with CIDS cards in each apparatus. Call taking, handling call assignments, maintaining the status of vehicles, prioritizing calls for dispatch, communication with units, serving as liaison between callers and responding units, etc., are among the dispatchers responsibilities and are skills that must be perfected.

#### 8. Fire Prevention / Fire Safety Education:

- Fire Prevention / Fire Safety Education: It appears as if there are no fire prevention programs in place. Fire safety, cause and origin of fires, community-based fire prevention programs, teaching basic concepts to the public, etc., including but not limited to inspections, pre-fire planning, school programs and building codes, are essential areas to be developed in and around Garin. **A much heavier investment of time and resources in fire prevention and fire safety education is the most expedient route for Garin to reduce life and property losses from fire.**
- Smoke Detectors: The municipality has very few smoke detectors and the department has no detector program. This must be addressed.
- Building Codes / Code Enforcement: An in-depth understanding of Argentine fire and building codes, fire prevention codes, fire department rules, regulations and enforcement policies as they relate to code enforcement, an understanding of the relationship between building construction and the hazards they potentially present to firefighters., etc., must be emphasized.

#### 9. Coverage Area:

- Coverage Area: Located 40 km from the Federal Capital, covering an area 60 km square and surrounded by 2 major highways and several rail links, Garin presents a complex and congested physical environment in which to operate. Its population of 75,000 residents, large workload and absence of hydrants further complicate this emerging department that is already struggling to meet the demands of its limited manpower and newly-selected leadership.
- Industrial Park: The department provides primary response coverage to a local industrial park that houses 80 different companies. While several of these companies have their own (generally limited) fire brigade, given the huge volume of chemicals, paints, solvents, plastics, fiberglass, paper and other combustible materials within the industrial park, a significant emergency would almost immediately overwhelm all local resources. Among the larger multi-national companies located in the industrial park are Alba (paint manufacturer), Ford, Indura Argentina (supplier of industrial, medical and scientific gases), Rigatosso Hnos, Tecnoflow Argentina, ThyssenKrupp, Volkswagen, etc. **The best and most immediate thing to be done is to leverage this industrial / private sector commitment to Garin into an investment into training and better equipping of your emergency services personnel.**

#### 10. Interagency Operations:

- Police: From what we observed, the municipal police don't assist firefighters with either traffic or crowd control during routine emergencies. This should change, and a coordinated effort must be undertaken to develop an all-hazards preparedness policy, the readiness and resources for which should be brought to bear in all types of emergencies. A standardized set of concepts should allow for effective, efficient and collaborative incident management at all levels and in all types of emergencies.
- Regional Plans: Regional response plans within the local Federation as well as within the Federal Capital should also be developed.
- Unified Command: A unified command system must be developed when there is more than one agency with incident jurisdiction (a rail event involving police, firefighters and railroad personnel) or when incidents cross political or geographic jurisdictions (a mutual aid response within the Federal Capital) .

#### 11. The Need for an Expanded Dialogue with Government and Industry:

Fire protection has historically been a local responsibility. Each community has both static and dynamic conditions that are unique to itself, and a system of fire protection that works well in one community cannot necessarily be assumed to work equally well in another. Fire prevention is the key, and without intensive and ongoing local-level planning, the system of fire protection is apt to be ill-suited to local needs.

Each community must balance acceptable risks, the need for adequate fire protection with reasonable financial costs. Major emergencies, however, can easily overwhelm the capabilities of a small fire department like Garin, and neighboring departments must have detailed cooperative plans for coping with such emergencies. Effectiveness can only be improved through pre-planning, joint training, familiarity with each other's day-to-day operations and some standardization of tools, equipment and response protocols.

Even with joint planning however, expanded coordination must involve the Federal government as well as local industry. Fire prevention, fire suppression and public education on fire safety should remain the responsibility of local governments. Regulatory responsibilities for fire prevention, code enforcement and financial support for local fire departments should remain at the government level. So too must government's be responsible to provide adequate financial support to local department's, especially when, like Garin, they are staffed entirely by volunteers.

While we recognize that government alone cannot satisfy all requirements, industry must fulfill its responsibility when it is the beneficiary of services provided by volunteer firefighters who it calls upon in time of need. Volunteer firefighters are a basic form of insurance; no one likes paying the cost for this insurance, but they deeply appreciate the fact that they have it in times of emergency. What realistically is the alternative, if industry looks at the short and long-term financial losses they would incur from a fire. In prevention we have cure, and our hope is to strengthen industries awareness of the risks from fire, a natural disaster and/or an act of terrorism.

By sharing information, identifying risks, performing vulnerability assessments, developing emergency response and business continuity plans, enhancing their overall readiness, implementing appropriate prevention and protection programs, and by providing increased financial support for local fire departments, like Garin, industry can dramatically assist their community by both being an employer, and in responding to and recovering from an emergency.

**Outstanding Issues and Topics for Further Discussion:**

1. On a number of occasions we suggested the importance of your building a relationship with the National Fire Protection Association (NFPA). The NFPA is an independent, nonprofit organization whose mission is to reduce the worldwide burden of fire and other hazards by promulgating scientifically-based consensus codes and standards. NFPA has offices in Argentina that can be reached as follows:

IRAM  
Peru 552/558  
1068 Buenos Aires  
Tel: 4346-0600  
E-mail: [codocconsultas@iram.org.ar](mailto:codocconsultas@iram.org.ar)

CPL Contacto Profesional  
Av. Corrientes 5354, piso 2  
Buenos Aires  
Tel: 4855-8535  
E-mail: [info@cpl.com.ar](mailto:info@cpl.com.ar)

2. We discussed at great length the need to develop relationships with Argentine national airlines, shipping companies, hotels, freight forwarders and others who might support your efforts by providing free or deeply-reduced costs for the training, equipment and other assistance we might be able to provide. We would appreciate an update of your efforts in this area. To assist you in these efforts, we have listed below the names of several highly-regarded freight forwarders in Argentina who you might contact:

Danzas Aero Expreso Internacional  
Bernardo de Irigoyen 308, piso 4  
C1072AAH Buenos Aires  
Tel: 4334-3023

Delfino Cargas Aereas  
San Martin 439, P.B.  
C1004AAI Buenos Aires  
Tel: 6320-1000

Emery Air Freight Corporation  
San Martin 439, Piso 10  
C1004AAI Buenos Aires  
Tel: 4325-1301

Schenker Argentina  
Centro Industrial Garin  
Rute Oanamericana km 37,5 (ramal Campana)  
Calle Rivadavia (sin número), parcela 2425  
B1619 Buenos Aires  
Tel: 2741-4422

3. We also discussed at great length the need to build stronger ties between government and industry, as well as the need for you to expand your own fund-raising efforts with prominent Argentine sports figures, local leaders in business and industry, and others who might work with you in support your efforts. We would appreciate an update of your efforts in this area as well.