

# KBR

Government and Infrastructure  
4100 Clinton Dr. - Houston, TX. 77020-6237

## Incident Investigation Report #: B1-FIRE-061029-DFAC1.3-REC-PIIR.2

### Incident Date:

29-Oct-06

0300 hrs

AL ASAD

### Investigation Conducted By:

Travis Scott, HSE Coordinator

DeLane McElrath, HSE Coordinator

Lance Exum, HSE Coordinator

Kevin Sattler, HSE Coordinator

B1 - Al Asad, Iraq

### General Data

Equipment: Dining Facility 1.3

Type: Dining Facility Building

Assigned to: Gulf Catering Company

Supervisor: Beamon, James

### General Data:

This incident occurred on 29-Oct-06 at approximately 0300 hrs, at DFAC 1.3, on Site B1 Al Asad. Affected assets are assigned to 1<sup>st</sup> Tier Sub Gulf Coast Catering Company, assigned to Task Order #139, Site B1 Al Asad.

At approximately 0300 hrs on 29-Oct-06 HSE was notified on an ongoing fire at DFAC 1.3. HSE arrived on scene at 0311 and found WSI Firefighters already on scene and the area secured. The KBR DFAC supervisor for the shift had 100% accountability for KBR and GCC employees already established at this time. Key personnel were denied access to the area at this point by military personnel.

### Property Damage:

Total ECOD pending, investigation ongoing

L219898 Printer HP LaserJet 3020 -	\$413.00
L338325 Monitor 17" CRT -	\$149.00
L555891 Monitor 17" RT -	\$149.00
L522986 Printer Color HP 3700 -	\$2121.44
L591016 Radio	\$548.00
L590440 Radio	\$540.00
L644330 Printer Q3942A -	\$2610.00
L644331 Printer Q3942A -	\$2610.00
L590406 Motorola power supply -	\$150.00
L796853 Motorola 6 ports charger	\$407.27
L519092 Motorola Mobile Radio	\$600.00
? Motorola Handheld Radio -	\$615.00
? Motorola Handheld Radio -	\$615.00
? Motorola Handheld Radio -	\$615.00
? Motorola Handheld Radio -	\$615.00
Motorola battery (x6 @ 43.56) -	\$261.48
Motorola Single Charger (x3 @ \$85.00) -	\$255.00

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Motorola Nylon Case (x4 @ \$23.00) - \$92.00

Food product - \$1,907,783.19

## Injury Summary:

2 WSI employees suffered from dehydration and 1 WSI employee suffered from 1<sup>st</sup> degree burns on his back while fighting the fire

## Statements from Witnesses on Scene:

**Croman, Jonathan #0493:** Advised on scene of sparks on roof and a StaffSGT with Occ. Med reported a lightning strike to roof of building. **VERBATIM AS WRITTEN.**

**E.D.A.L. De Silva #5946** "When I am in the store (Warehouse) at 3:00AM, I smelt something burning and look for it, and I found that black smoke coming through the freezer "Ventilation Panel". Then I open the freezer door and couldn't see anything due to no light inside, except for the burning light which caused by a burning hanging wire, which is on top of the stack of boxes of bread. Then I shouted "There is A Fire, and get some fire extinguishers". Suresh M. one of the salad Makers, enter with me with couple of fire extinguishers in hand. We attempt to diminish the fire. Meantime I shouted to inform KBR, employees who were on duty at that time. Mr. Lawrence, of KBR, arrived and asked us to come out from the freezer, and subsequently he informed the "Fire Department" for assistance. By this time we used 10-12 fire extinguishers. Cause of 10 minutes "Fire Brigade" arrived at the point (DFAC) and enter into building. They evacuate all the staff and everybody concer out of the DFAC building. **VERBATIM AS WRITTEN.**

**S.A.F. Mohamad #5893:** When I passed the warehouse (after using the toilet), I saw a store-keeper, Mr. Silva, was running and shouting "There is a fire", which coming from inside". Then store-keeper, Mr. Silva open the door of the freezer chamber and we entered together. We saw a fire inside and nothing else due to no electricity. Then Mr. Silva mentioned "that we will extinguish the fire", but we saw the major fire is on the roof of the freezer chamber. Meantime we used exceeding of 10 fire extinguishers. Subsequently, Mr. Lawrence, of KBR, arrived at the scene and asked us to come-out of the freezer, by this time we extinguished the fire what we were seen in the freezer chamber (inside). **VERBATIM AS WRITTEN.**

**Kyaw, Khine Latt #6003:** At the time of 3:00 am my QA/QC officer came to me and informed that there was a fire in one of out freezer. At that time I was working in my office. When I arrived the store, one of the freezers door was opened and black smoke are coming out from that door. My storekeeper, Mr. Silva, said there was a fire inside and, he and another kitchen staff are trying to put off the fire. At that time the KBR supervisor Mr. Lawrence was on the scene. We cannot see anything from inside, only the black smoke. The storekeeper and the kitchen staff used 10-12 fire extinguishers but they cannot put it the fire off. After 10 minute Mr. Lawrence ordered me for evacuation. At 3:20 am all of my staff and KBR personel were totally evacuated from the building. The store keeper also mentioned that the hanging wire from A/C unit was on fire when he entered the freezer. **VERBATIM AS WRITTEN.**

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**J. Ganessan #5386:** I was in the "Maintenance Work Shop", cleaning some tools, and one of the store keepers, Mr. Manikandon, mentioned "Come soon there is a fire in the freezer chamber.. Then I, took a fire extinguisher and ran into the freezer chamber. When I, entered I, saw other store keeper, Mr. Silva, was on top of the boxes attempting extinguish the fire. He shouted at me asking for the fire extinguisher. I handed over it to him, and checked out side of building where compressors were installed, and found out that total breaker of the freezer chamber was shut down. I, proceed towards the Dining Hall, looking for other 02 (two) maintenance people who were on duty at that time, but before that KBR representative Mr. Lawrence, asked us to evacuate the building. **VERBATIM AS WRITTEN.**

**I. Marimuttu #5589:** Around 3.00 AM; I was storing some dry goods in the dry store room, which located in the store area, with the store-keeper, Mr. manikandon. Then other store-keeper, Mr. Silva, called us and mentioned, that "there is a fire in the freezer chamber" When I come out with Mr. Manikandon, we saw a "black smoke" inside the store area. Along with Mr. Manikandon, I also rushed with him carrying a fire extinguisher with me. I saw Mr. Silva, the other store-keeper, was on a pile of boxes attempting to extinguish the fire. I activate the fire extinguisher and handed over to Mr. Silva, as Mr. Manikandon (s/k) Furthermore, to this I handed over another 03 (three). It was totally of (four). When I came to fetch another fire extinguisher Mr. Lawrence of KBR informed to evacuate the building immediately. **VERBATIM AS WRITTEN.**

**M. Ramasubbiah #4366:** Around 3.00 AM, I, was storing some dry goods in the 'Dry Goods Store' room, which is located in the store area. Other store-keeper, Mr. Silva, called me and mentioned that "There is a fire in the freezer chamber". When I, came out of the dry storage, I, witness a "Black Smoke" inside the store area. I took one of the fire extinguishers and rushed into freezer chamber. This moment I saw that Mr. Silva, the other store-keeper, was on top of pile of boxes, and attempting to extinguish the fire. I handed over the fire extinguisher to Mr. Silva. Meanwhile, Mr. Lawrence, of KBR, informed everybody to evacuate the building soon as possible. **VERBATIM AS WRITTEN.**

**V. Subramaniam #6116:** around 2.20Am, I checked inside of the freezer chamber and everything was alright at that time. After this I proceed to the Dining Hall, to help plumber, Sera Singh, who is cleaning the "Air Curtains". During this I, went through one of the front door to go to the toilet, which was located outside of DFAC building. Leave the toilet and I entered the building through the side entrance of the store to re-check the temperature of the freezer chamber as a periodic examination. While entering I saw a "Black Smoke" in the warehouse (store) area, and Mr. Lawrence, of KBR was there and informed everybody to evacuate the DFAC premises soon as possible. **VERBATIM AS WRITTEN.**

**Sewa, Singh #4642:** At about 2.20AM, I, cleaned the ice which formed on the plastic curtains with the assistance of one of the store-keepers, Mr. Silva. After this I, was in the dining room, attending on cleaning of "Air Curtains". Then suddenly Mr. Lawrence, of KBR, asked us to evacuate the building. **VERBATIM AS WRITTEN.**

**Weinkauf, Ronald 392266:** I was in the Mermite Holding Area. At approx. 0300 Sauda. (KBR employee) came in and told me there was a fire in the freeze. I immediatly went toward the warehouse/freezer area. Fellow expat Lawrence Jones was already at the scene. I saw 4 fire

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extinguishers on the floor at the freezer door, smoke was coming out of the freezer. Lawrence said everybody out of the building. Myself, Lawrence, and Sauda began the evacuation of all employees. Once all employees were out of the building, Lawrence had already called the fire department and we did a 100% accountability to be sure all people were present. We had followed the evacuation procedures set in place by KBR. Then following military MP directions the entire group left the area to a safe distance. **VERBATIM AS WRITTEN.**

**Chu, Bau 325707:** On October 29, 2006 at approximately 0300 hrs, I Bau Chu-KBR, asked the GCC Warehouse supervisor what was happening? He told me that he smelled the burning smoke around, so he went to check and opened the freezer door and saw the wire hanging from the ceiling to the boxes of bread and started to burn, so he grabbed the fire extinguisher and try put the fire out and that is all I know from GCC Warehouse supervisor. So everybody gather and evacuate out the dining facility to the parking lot and waited by the bus stop location. **VERBATIM AS WRITTEN.**

**Summers, Larry 334096:** During approx. the first week of July 2006 I was sent by my supervisor, Sam Jones, to DFAC - 1.3 to observe the installation of the cooling units for the freezer vault, chiller and thaw room. I observed that the units being installed were set up for 404A refrigerant and the contractor doing the installation was charging the systems with R-22 refrigerant. I returned to the HVAC shop and informed Mr. Jones about what was taking place and was told that he would check into it. A couple of days later Mr. Jones told me that he had talked to the

contractor and that they were going to charge the systems with R-22 refrigerant. This would have been acceptable if they had done this properly, such as change the oil in the compressors since 404A uses the ester oil and R-22 uses a polyether and they will not interchange and they will change the expansion valves on the evaporators. They changed the expansion valve on one out of 5 evaporators and did not change the oil in any of the compressors. They were going to start them up with the units charged with R-22 refrigerant and I asked them to wait until I could get my foreman, Scott Leininger out there to see what they were doing. A couple of days past before I returned after I told Scott what was going on. I was then told by Sam that the contractor had brought in another HVAC Tech to fix the problem. During those few days the other contractor ran all the units with the R-22 refrigerant, contaminating the oil in the compressors. I talked to the new tech they brought in and he told me that he was going to change the expansion valve that had been replaced back to one for 404A like original and that he was going to charge the systems with 404A as they were originally set up for. This would have been fine I told him as long as they changed the contaminated oil out of the systems like I suggested and that they didn't do. The units were started and ran for more than 24 hrs and still not reached set point with no load in the vault. I think that the vault finally reached set point within 48 hrs and GCC started loading the vault. DFAC - 1.3 opened its doors for meals on July 16<sup>th</sup> and they lost the first compressor for the freezer on Aug 1<sup>st</sup>. Between opening day and Aug 1<sup>st</sup> I looked at the units at least 4 times a week and observed that the compressors were flooding back with refrigerant causing the compressors to ice completely over. I also observed that the oil level in each compressor was dangerously low due to the refrigerant flooding driving the oil out of the compressors. I brought this to the attention of the GCC employee that worked on the units. I was told by him that there was no problem which is a standard response from him. On Aug 1<sup>st</sup> I was given a PRMO to check the compressors on the freezer vault at DFAC - 1.3. When I got there only one condensing unit was operating and it was a ball of ice. I started on the first inoperative unit and found that the

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compressor windings were shorted to ground. I also found the same problem on the other 3 inoperative units. The GCC employee was also checking them and said that there was not a problem with the compressors but with the contactors because the overloads kept tripping (like they are suppose to when theres a short). I found him and his co worker trying to start one of the bad units by one of them holding the breaker to keep it from tripping and the other one pushing the contactor in with a screwdriver. Every time the did it sounded like a large firecracker going off when that 460v jumped to ground through the shorted windings. I made them stop before they got electrocuted. They moved from that unit to another one and when I went to see what they were doing they had bypassed the overload on the contactor and were going to try to put power on the shorted compressor. I made them stop again and leave things alone. I have no idea what they attempted after I left. I told my foreman what I had observed. GCC ordered new compressors for the units. The compressors arrived around the 8<sup>th</sup> Aug. and I was asked by my supervisor to observe the installation by the GCC employees. I found that the compressors were smaller than the originals. They were 6 cyl. And the new ones were 4 cyls. They had to reduce the piping size to match the smaller compressors which will reduce the capacity of the reefer. In order to use R-22 refrigerant they installed new expansion valves in each of the evaporators, but they replaced the 2 expansion valves with one on a split coil. All this will do is cause the coils to flood and be very inefficient. Scott and I were both very concerned with the way things were being done that we called the SCA, Richard Steffen to meet us at DFAC - 1.3. We explained to him what problems were going to arise with the way they were doing things and we were told by Mr. Steffen that we could make suggestions but we could not tell them what to do. We were told by Mr. Steffen that we could act in an advisory capacity and that we could take notes which I did and gave to Scott. In my role as advisor I suggestet to them that they change the oil in the compressors (which we supplied them with new oil & driers) which they didn't. That the new exspansion valves they installed would not work properly and they ignored. That they should pull at the very least a vacuum on the systems of at least 24 hrs per unit to make sure that all the non condensibles were removed from the system. The longest time that they evacuated any one of the systems was 27 min. and the shortest was 13 min. Even on the longest one they found a leak and repaired it but never put the vacuum pump back on it, just charged with R-22 and started unit. The 4 units with new compressors were started, some without oil safety switches to protect the compressors, some with the other safeties jumped out or by passed. All the units were flooding severly. If I recall correctly I think it took almost 2 days for the vault to finally reach set points, (if everything was right should have took about 6 hrs). In just about a week the compressors started failing due to same conditions as the original compressors. At that time I was asked to do an assessment of the units as to condition and material and labor to repair them which is attached to this statement. Since that asesment the 5<sup>th</sup> compressor has failed. GCC since that time has been replacing those failed compressors with old used compressors that are no were near the right capacity for these condensing units. These compressors also failed. At the time of the fire there was only one of the original replacements left in the condensing units. The other 4 had used compressors of which only one was operating. I have observed workmanship by these GCC employees that proved that they knew almost nothing about refrigeration and in my opinion was the total cause of failure of all this equipment. **VERBATIM AS WRITTEN.**

Laimonic, Suada 351428: In 03am employees GCC stors tell me they have fire in frizza in stors area. I am called Larenc from office He called operation and fire department. We tell GCC employees everybody must go outside. After 10 minutes all employees was outside.

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**Hajdarbegovic, Admir 397375:** That time I was at Bull Pen, I got the call from Housign 12 around 0300 AM, I responded to call, picked up my crue and we were on the road to DFAC 1.3, it took us 5-10 minutes to get there, when I got there two Fire Dep truck already were there, first time (at glance) the rear part of the DFAC (warehouse) already was smoking badly. After this I and my crue (two TCN) had to run around the building where all MDP's/main distribution panels) located, we could see that more more smoke comming out from the building so we turned off all four big MDP, those are four big breakers two regular and two aie breakers after this all electricity was down at the building (light were off) we were on out way back. This was first time that I got emergency call from DFAC 1.3 two weeks ago due to broken pumps over there what damaged waters heaters at the building we reconnected new ones. That's all work what I did overthere.  
**VERBATIM AS WRITTEN.**

**Anderson, David (US Army PrevMed):** While driving to air terminal from Bldg 10240, I noticed lots of smoke coming from somewhere. We arrived at the "T" junction & saw flames coming from back of the DFAC & approx 0335. MP's & Fire trucks were already there at scene. I talked to one Army soldier at the terminal he said he lives near DFAC3 & saw lightning hit the rear (LT) side/comer this would be the large freezer area probably. He told his C.O. who then called the Fire Dept.  
**VERBATIM AS WRITTEN.**

**Pugh, Kevin 289411:** At 3:15am, I was dispatched with Fire Dept. & electrician. I upon arrival observed there was (1) Fire Truck (3:20am) that was not able to safely position truck where it needed to be. At arrival the electrician headed to the south side of Bldg to shut power off to the entire bldg. At this time lights were still on in bldg. There was a small fire in the north back corner of warehouse storage & not much smoke. I headed around north back corner & found the electrical cable tray to the first freezer reefer was arcing & energized & had burnt a hole in the metal wall toward the inside evaporator unit. Within 2-3 minutes the north corner area was so smokey once the fire got to the insulation, that I removed myself & co-workers to a safe area. After that I assisted firefighters with drinking water from my truck & moving oxygen tanks where they needed them etc. From this point this fire would appear to go out & then come back time & time again.  
**VERBATIM AS WRITTEN.**

**Campbell, George 176784:** At the time stated 1930 I was outside walking past the freezer area when I heard a loud screeching noise coming from a freezer compressor along with banging. I then went and informed the GCC location manager who with me went to look at the compressor, he then went and informed the GCC maintenance person. I then went and informed the KBR DFAC Supervisor Mr. James Beamon. The two of us went to look at the compressor when the GCC maintenance person arrived a second compressor started making noises. The maintenance man stated to us that it was just a loose bearing and a belt would need tightened and it would be taken care off.  
**VERBATIM AS WRITTEN.**

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## Statements from Supervisor(s):

Lawrence Jones #323310 "At about 3A.M. on Sunday oct 29, 2006 my co-worker CSuadal came to me to tell me that there was a fire and the freezer and the warehouse. When I got there I witness the smoke coming from freezer. I called operations and ask them to get fire department to DFAC 3 ASAP there is a fire in the freezer and the warehouse Once I made that call I got all of KBR staff together so we could follow the KBR evacuation plan. We left the building and Genn, Suada and I made sure that all of the employee were safe. Then we did the account ability of all GCC employee all were accounted for. VERBATIM AS WRITTEN.

## Photos:



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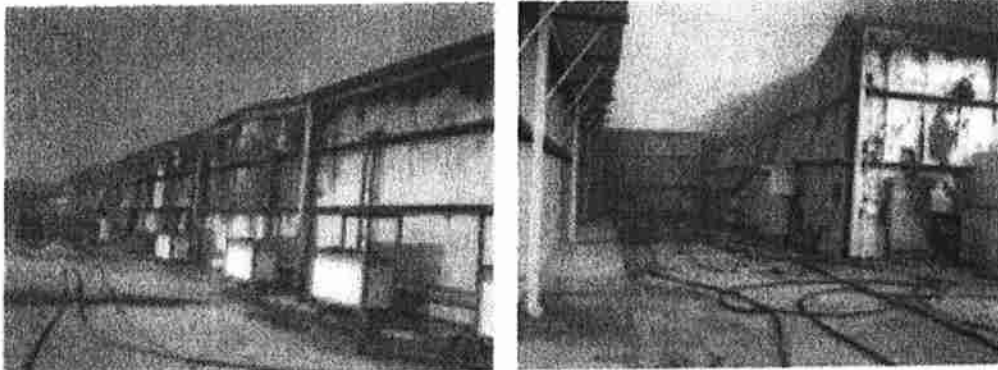
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### Investigation Revealed:

This incident occurred on 29-Oct-06 at approximately 0300 hours at Dining Facility 1.3 on Site B1, Al Asad. Affected assets are assigned to 1<sup>st</sup> Tier Subcontractor Gulf Coast Catering (GCC) Company. Investigation revealed that at approximately 0300 hours a GCC employee noticed smoke coming from the main freezer in the warehouse area. The employee opened the door and saw the fire inside the freezer was on the ceiling of the freezer. He informed other GCC employees in the storage area and together used approximately 12 fire extinguishers to put the fire out. Investigation reveals that the KBR supervisor was notified after the GCC employees failed in their attempt to control the fire. KBR supervisor immediately called KBR Operations and Al Asad Fire Department. WSI states that they were first called to move at 0306 hours. At approximately 0310 KBR supervisor and two other KBR employees began building evacuation. WSI, KBR HVAC, and KBR Electrician arrived on scene and began to fight the fire. KBR Electrician turned off power to the building as WSI employees ensured all personnel were evacuated. According to the Fire Chief, there were still GCC employees inside the building, which were instructed to leave. At the same time, military personnel were posted at all intersections surrounding the area, denying access to all personnel. At approximately 0315, HSE arrived on scene. At that time, HSE was denied access to the area by military personnel. HSE identified the muster point for the facility about 600 ft from the building and inquired about accountability. KBR DFAC Supervisor assured HSE that accountability was 100% for KBR and GCC personnel. At approximately 0430 HSE was granted access to the rear entrance of DFAC 1.3. At approximately the same time the military fire department arrived on scene. Coming on scene, HSE found that T-Walls placed around the dining facility posed an obstruction and severely limiting access for the fire trucks. Also, investigation found that during fire fighting procedures two WSI fire fighters suffered from dehydration and were treated on scene by KBR Medics and released from duty for the remainder of the day, and one WSI fire fighter injured his left hand and right knee in attempting to jump over a rail, also treated by KBR Medics and released to full duty. All injuries are being reported separately. According to WSI Asst Fire Chief, he received reports on scene of

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sparks bouncing on the roof of the facility. Also, according to military personnel, lightning was observed striking the roof of the facility at approximately 0300 hours. According to the KBR HVAC Technician, who observed this system from initial installation, there were numerous issues with the freezer compressor system, including severe and hazardous electrical problems. Another KBR HVAC Technician, who arrived on scene initially, states "There was a small fire in the north back corner of warehouse storage & not much smoke. I headed around north back corner & found the electrical cable tray to the first freezer reefer was arcing & energized & had burnt a hole in the metal wall toward the inside evaporator unit. Within 2-3 minutes the north corner area was so smokey once the fire got to the insulation, that I removed myself & co-workers to a safe area.", also pointing out the hindrance presented by the T-Wall positioning.

Further investigation revealed that electrical hazards at DFAC 1.3 were identified during HSE inspection conducted in conjunction with QA/QC on 23-Oct-06. This inspection also revealed inoperative fire suppression and alarm systems. All issues were reported immediately to proper chain of command.

This incident is still under investigation.

**Primary Factor:**

- Unknown

**Contributing Factors to the Accident:**

- Poor installation and maintenance of equipment
- Force protection interfering with Fire Department vehicles
- Subcontractor inactivity regarding identified safety hazards
- Inoperative fire prevention/suppression equipment

**Recommended Corrective Actions To Prevent Re-Occurrence (chain breakers):**

- Management to enforce established installation and maintenance program
- Management consult and adhere to Fire Department regulations and suggestions in regards to fire fighting equipment access
- Management to ensure immediate appropriate action to correct identified safety deficiencies and hazards
- Management to ensure fire prevention and suppression equipment installed is of a quality suitable for the purpose intended

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0300 hrs

AL ASAD

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DeLane McElrath, HSE Coordinator

Lance Exum, HSE Coordinator

Kevin Sattler, HSE Coordinator

B1 - Al Asad, Iraq

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Assigned to: Gulf Catering Company

Supervisor: Beamon, James

### General Data:

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L590406 Motorola power supply -	\$150.00
L796853 Motorola 6 ports charger	\$407.27
L519092 Motorola Mobile Radio	\$600.00
? Motorola Handheld Radio -	\$615.00
? Motorola Handheld Radio -	\$615.00
? Motorola Handheld Radio -	\$615.00
? Motorola Handheld Radio -	\$615.00
Motorola battery (x6 @ 43.56) -	\$261.48
Motorola Single Charger (x3 @ \$85.00) -	\$255.00

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Motorola Nylon Case (x4 @ \$23.00) - \$92.00

Food product - \$1,907,783.19

## Injury Summary:

2 WSI employees suffered from dehydration and 1 WSI employee suffered from 1<sup>st</sup> degree burns on his back while fighting the fire

## Statements from Witnesses on Scene:

**Croman, Jonathan #0493:** Advised on scene of sparks on roof and a StaffSGT with Occ. Med reported a lightning strike to roof of building. **VERBATIM AS WRITTEN.**

**E.D.A.L. De Silva #5946** "When I am in the store (Warehouse) at 3:00AM, I smelt something burning and look for it, and I found that black smoke coming through the freezer "Ventilation Panel". Then I open the freezer door and couldn't see anything due to no light inside, except for the burning light which caused by a burning hanging wire, which is on top of the stack of boxes of bread. Then I shouted "There is A Fire, and get some fire extinguishers". Suresh M. one of the salad Makers, enter with me with couple of fire extinguishers in hand. We attempt to diminish the fire. Meantime I shouted to inform KBR, employees who were on duty at that time. Mr. Lawrence, of KBR, arrived and asked us to come out from the freezer, and subsequently he informed the "Fire Department" for assistance. By this time we used 10-12 fire extinguishers. Cause of 10 minutes "Fire Brigade" arrived at the point (DFAC) and enter into building. They evacuate all the staff and everybody concer out of the DFAC building. **VERBATIM AS WRITTEN.**

**S.A.F. Mohamad #5893:** When I passed the warehouse (after using the toilet), I saw a store-keeper, Mr. Silva, was running and shouting "There is a fire", which coming from inside". Then store-keeper, Mr. Silva open the door of the freezer chamber and we entered together. We saw a fire inside and nothing else due to no electricity. Then Mr. Silva mentioned "that we will extinguish the fire", but we saw the major fire is on the roof of the freezer chamber. Meantime we used exceeding of 10 fire extinguishers. Subsequently, Mr. Lawrence, of KBR, arrived at the scene and asked us to come-out of the freezer, by this time we extinguished the fire what we were seen in the freezer chamber (inside). **VERBATIM AS WRITTEN.**

**Kyaw, Khine Latt #6003:** At the time of 3:00 am my QA/QC officer came to me and informed that there was a fire in one of out freezer. At that time I was working in my office. When I arrived the store, one of the freezers door was opened and black smoke are coming out from that door. My storekeeper, Mr. Silva, said there was a fire inside and, he and another kitchen staff are trying to put off the fire. At that time the KBR supervisor Mr. Lawrence was on the scene. We cannot see anything from inside, only the black smoke. The storekeeper and the kitchen staff used 10-12 fire extinguishers but they cannot put it the fire off. After 10 minute Mr. Lawrence ordered me for evacuation. At 3:20 am all of my staff and KBR personel were totally evacuated from the building. The store keeper also mentioned that the hanging wire from A/C unit was on fire when he entered the freezer. **VERBATIM AS WRITTEN.**

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**J. Ganessan #5386:** I was in the "Maintenance Work Shop", cleaning some tools, and one of the store keepers, Mr. Manikandon, mentioned "Come soon there is a fire in the freezer chamber.. Then I, took a fire extinguisher and ran into the freezer chamber. When I, entered I, saw other store keeper, Mr. Silva, was on top of the boxes attempting extinguish the fire. He shouted at me asking for the fire extinguisher. I handed over it to him, and checked out side of building where compressors were installed, and found out that total breaker of the freezer chamber was shut down. I, proceed towards the Dining Hall, looking for other 02 (two) maintenance people who were on duty at that time, but before that KBR representative Mr. Lawrence, asked us to evacuate the building. **VERBATIM AS WRITTEN.**

**I. Marimuttu #5589:** Around 3.00 AM; I was storing some dry goods in the dry store room, which located in the store area, with the store-keeper, Mr. manikandon. Then other store-keeper, Mr. Silva, called us and mentioned, that "there is a fire in the freezer chamber" When I come out with Mr. Manikandon, we saw a "black smoke" inside the store area. Along with Mr. Manikandon, I also rushed with him carrying a fire extinguisher with me. I saw Mr. Silva, the other store-keeper, was on a pile of boxes attempting to extinguish the fire. I activate the fire extinguisher and handed over to Mr. Silva, as Mr. Manikandon (s/k) Furthermore, to this I handed over another 03 (three). It was totally of (four). When I came to fetch another fire extinguisher Mr. Lawrence of KBR informed to evacuate the building immediately. **VERBATIM AS WRITTEN.**

**M. Ramasubbiah #4366:** Around 3.00 AM, I, was storing some dry goods in the 'Dry Goods Store' room, which is located in the store area. Other store-keeper, Mr. Silva, called me and mentioned that "There is a fire in the freezer chamber". When I, came out of the dry storage, I, witness a "Black Smoke" inside the store area. I took one of the fire extinguishers and rushed into freezer chamber. This moment I saw that Mr. Silva, the other store-keeper, was on top of pile of boxes, and attempting to extinguish the fire. I handed over the fire extinguisher to Mr. Silva. Meanwhile, Mr. Lawrence, of KBR, informed everybody to evacuate the building soon as possible. **VERBATIM AS WRITTEN.**

**V. Subramaniam #6116:** around 2.20Am, I checked inside of the freezer chamber and everything was alright at that time. After this I proceed to the Dining Hall, to help plumber, Sera Singh, who is cleaning the "Air Curtains". During this I, went through one of the front door to go to the toilet, which was located outside of DFAC building. Leave the toilet and I entered the building through the side entrance of the store to re-check the temperature of the freezer chamber as a periodic examination. While entering I saw a "Black Smoke" in the warehouse (store) area, and Mr. Lawrence, of KBR was there and informed everybody to evacuate the DFAC premises soon as possible. **VERBATIM AS WRITTEN.**

**Sewa, Singh #4642:** At about 2.20AM, I, cleaned the ice which formed on the plastic curtains with the assistance of one of the store-keepers, Mr. Silva. After this I, was in the dining room, attending on cleaning of "Air Curtains". Then suddenly Mr. Lawrence, of KBR, asked us to evacuate the building. **VERBATIM AS WRITTEN.**

**Weinkauf, Ronald 392266:** I was in the Mermite Holding Area. At approx. 0300 Sauda. (KBR employee) came in and told me there was a fire in the freeze. I immediatly went toward the warehouse/freezer area. Fellow expat Lawrence Jones was already at the scene. I saw 4 fire

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extinguishers on the floor at the freezer door, smoke was coming out of the freezer. Lawrence said everybody out of the building. Myself, Lawrence, and Sauda began the evacuation of all employees. Once all employee were out of the building, Lawrence had already called the fire department and we did a 100% accountability to be sure all people were present. We had followed the evacuation procedures set in place by KBR. Then following military MP directions the entire group left the area to a safe distance. **VERBATIM AS WRITTEN.**

**Chu, Bau 325707:** On October 29, 2006 at approxitely 0300 hrs, I Bau Chu-KBR, asked the GCC Warehouse supervisor what was happening? He told me that he smell the burning smoke around, so he went to check and opened the freezer door and saw the wire hanging from the ceiling to the boxes of bread and started to burn, so he grabbed the fire extinguisher and try put the fire out and that is all I know from GCC Warehouse supervisor. So everybody gather and evacuate out the dinning facility to the parking lot and waited by the bus stop location. **VERBATIM AS WRITTEN.**

**Summers, Larry 334096:** During approx. the first week of July 2006 I was sent by my supervisor, Sam Jones, to DFAC - 1.3 to observe the insallation of the cooling units for the freezer vault, chiller and thaw room. I observed that the units being installed were set up for 404A refrigerant and the contractor doing the installation was charging the systems with R-22 refrigerant. I returned to the HVAC shop and informed Mr. Jones about what was taking place and was told that he would check into it. A couple of days later Mr. Jones told me that he had talked to the

contracter and that they were going to charge the systems with R-22 refrigerant. This would have been acceptable if they had done this properly, such as change the oil in the compressors since 404A uses the esther oil and R-22 uses a polyesther and they will not interchange and they will change the expansion valves on the evaporators. They changed the expansion valve on one out of 5 evaporators and did not change the oil in any of the compressors. They were going to start them up with the units charged with R-22 refrigerant and I asked them to wait until I could get my foreman, Scott Leininger out there to see what they were doing. A couple of days past before I returned after I told Scott what was going on. I was then told by Sam that the contracter had brought in another HVAC Tech to fix the problem. During those few days the other contracter ran all the units with the R-22 refrigerant, contaminating the oil in the compressors. I talked to the new tech they brought in and he told me that he was going to change the expansion valve that had been replaced back to one for 404A like original and that he was going to charge the systems with 404A as they were originally set up for. This would have been fine I told him as long as they changed the contaminated oil out of the systems like I suggested and that they didn't do. The units were started and ran for more than 24 hrs and still not reached set point with no load in the vault. I think that the vault finally reached set point within 48 hrs and GCC started loading the vault. DFAC - 1.3 opened its doors for meals on July 16<sup>th</sup> and they lost the first compressor for the freezer on Aug 1<sup>st</sup>. Between opening day and Aug 1<sup>st</sup> I looked at the units at least 4 times a week and observed that the compressors were flooding back with refrigerant causing the compressors to ice completely over. I also observed that the oil level in each compressor was dangerously low due to the refrigerant flooding driving the oil out of the compressors. I brought this to the attention of the GCC employee that worked on the units. I was told by him that there was no problem which is a standard response from him. O Aug 1<sup>st</sup> I was given a PRMO to check the compressors on the freezer vault at DFAC - 1.3. When I got there only one condensing unit was operating and it was a ball of ice. I started on the first inoperative unit and found that the

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compressor windings were shorted to ground. I also found the same problem on the other 3 inoperative units. The GCC employee was also checking them and said that there was not a problem with the compressors but with the contactors because the overloads kept tripping (like they are suppose to when theres a short). I found him and his co worker trying to start one of the bad units by one of them holding the breaker to keep it from tripping and the other one pushing the contactor in with a screwdriver. Every time the did it sounded like a large firecracker going off when that 460v jumped to ground through the shorted windings. I made them stop before they got electrocuted. They moved from that unit to another one and when I went to see what they were doing they had bypassed the overload on the contactor and were going to try to put power on the shorted compressor. I made them stop again and leave things alone. I have no idea what they attempted after I left. I told my foreman what I had observed. GCC ordered new compressors for the units. The compressors arrived around the 8<sup>th</sup> Aug. and I was asked by my supervisor to observe the installation by the GCC employees. I found that the compressors were smaller than the originals. They were 6 cyl. And the new ones were 4 cyls. They had to reduce the piping size to match the smaller compressors which will reduce the capacity of the reefer. In order to use R-22 refrigerant they installed new expansion valves in each of the evaporators, but they replaced the 2 expansion valves with one on a split coil. All this will do is cause the coils to flood and be very inefficient. Scott and I were both very concerned with the way things were being done that we called the SCA, Richard Steffen to meet us at DFAC - 1.3. We explained to him what problems were going to arise with the way they were doing things and we were told by Mr. Steffen that we could make suggestions but we could not tell them what to do. We were told by Mr. Steffen that we could act in an advisory capacity and that we could take notes which I did and gave to Scott. In my role as advisor I suggestet to them that they change the oil in the compressors (which we supplied them with new oil & driers) which they didn't. That the new exspansion valves they installed would not work properly and they ignored. That they should pull at the very least a vacuum on the systems of at least 24 hrs per unit to make sure that all the non condensibles were removed from the system. The longest time that they evacuated any one of the systems was 27 min. and the shortest was 13 min. Even on the longest one they found a leak and repaired it but never put the vacuum pump back on it, just charged with R-22 and started unit. The 4 units with new compressors were started, some without oil safety switches to protect the compressors, some with the other safeties jumped out or by passed. All the units were flooding severly. If I recall correctly I think it took almost 2 days for the vault to finally reach set points, (if everything was right should have took about 6 hrs). In just about a week the compressors started failing due to same conditions as the original compressors. At that time I was asked to do an assessment of the units as to condition and material and labor to repair them which is attached to this statement. Since that asesment the 5<sup>th</sup> compressor has failed. GCC since that time has been replacing those failed compressors with old used compressors that are no were near the right capacity for these condensing units. These compressors also failed. At the time of the fire there was only one of the original replacements left in the condensing units. The other 4 had used compressors of which only one was operating. I have observed workmanship by these GCC employees that proved that they knew almost nothing about refrigeration and in my opinion was the total cause of failure of all this equipment. **VERBATIM AS WRITTEN.**

**Laimonic, Suada 351428:** In 03am employees GCC stors tell me they have fire in frizza in stors area. I am called Larenc from office He called operation and fire department. We tell GCC employees everybody must go outside. After 10 minutes all employees was outside.

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**Hajdarbegovic, Admir 397375:** That time I was at Bull Pen, I got the call from Housign 12 around 0300 AM, I responded to call, picked up my crue and we were on the road to DFAC 1.3, it took us 5-10 minutes to get there, when I got there two Fire Dep truck already were there, first time (at glance) the rear part of the DFAC (warehouse) already was smoking badly. After this I and my crue (two TCN) had to run around the building where all MDP's/main distribution panels) located, we could see that more more smoke comming out from the building so we turned off all four big MDP, those are four big breakers two regular and two aie breakers after this all electricity was down at the building (light were off) we were on out way back. This was first time that I got emergency call from DFAC 1.3 two weeks ago due to broken pumps over there what damaged waters heaters at the building we reconnected new ones. That's all work what I did overthere.  
**VERBATIM AS WRITTEN.**

**Anderson, David (US Army PrevMed):** While driving to air terminal from Bldg 10240, I noticed lots of smoke coming from somewhere. We arrived at the "T" junction & saw flames coming from back of the DFAC & approx 0335. MP's & Fire trucks were already there at scene. I talked to one Army soldier at the terminal he said he lives near DFAC3 & saw lightning hit the rear (LT) side/comer this would be the large freezer area probably. He told his C.O. who then called the Fire Dept.  
**VERBATIM AS WRITTEN.**

**Pugh, Kevin 289411:** At 3:15am, I was dispatched with Fire Dept. & electrician. I upon arrival observed there was (1) Fire Truck (3:20am) that was not able to safely position truck where it needed to be. At arrival the electrician headed to the south side of Bldg to shut power off to the entire bldg. At this time lights were still on in bldg. There was a small fire in the north back corner of warehouse storage & not much smoke. I headed around north back corner & found the electrical cable tray to the first freezer reefer was arcing & energized & had burnt a hole in the metal wall toward the inside evaporator unit. Within 2-3 minutes the north corner area was so smokey once the fire got to the insulation, that I removed myself & co-workers to a safe area. After that I assisted firefighters with drinking water from my truck & moving oxygen tanks where they needed them etc. From this point this fire would appear to go out & then come back time & time again.  
**VERBATIM AS WRITTEN.**

**Campbell, George 176784:** At the time stated 1930 I was outside walking past the freezer area when I heard a loud screeching noise coming from a freezer compressor along with banging. I then went and informed the GCC location manager who with me went to look at the compressor, he then went and informed the GCC maintenance person. I then went and informed the KBR DFAC Supervisor Mr. James Beamon. The two of us went to look at the compressor when the GCC maintenance person arrived a second compressor started making noises. The maintenance man stated to us that it was just a loose bearing and a belt would need tightened and it would be taken care off.  
**VERBATIM AS WRITTEN.**

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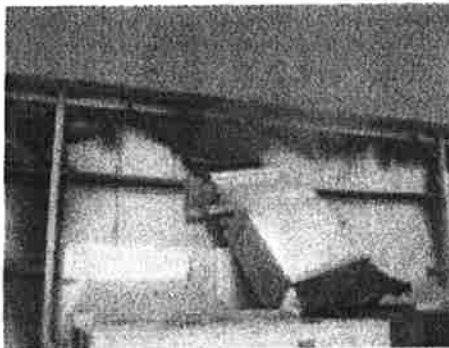
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## Statements from Supervisor(s):

Lawrence Jones #323310 "At about 3A.M. on Sunday oct 29, 2006 my co-worker CSuadal came to me to tell me that there was a fire and the freezer and the warehouse. When I got there I witness the smoke coming from freezer. I called operations and ask them to get fire department to DFAC 3 ASAP there is a fire in the freezer and the warehouse Once I made that call I got all of KBR staff together so we could follow the KBR evacuation plan. We left the building and Genn, Suada and I made sure that all of the employee were safe. Then we did the account ability of all GCC employee all were accounted for. VERBATIM AS WRITTEN.

## Photos:



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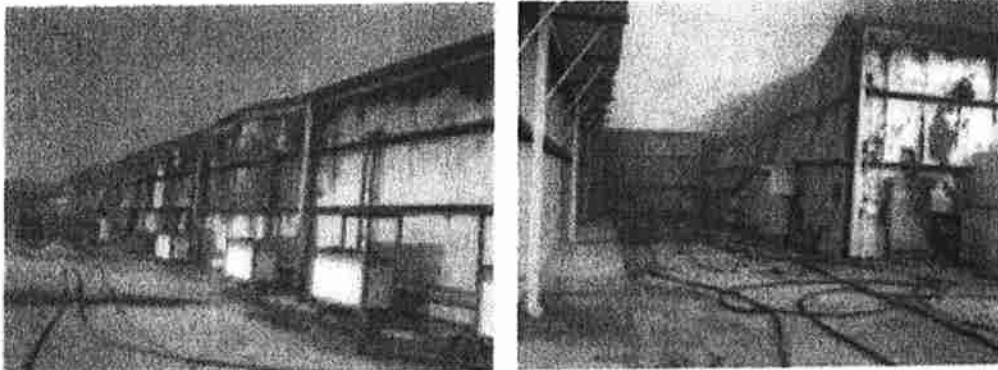
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### Investigation Revealed:

This incident occurred on 29-Oct-06 at approximately 0300 hours at Dining Facility 1.3 on Site B1, Al Asad. Affected assets are assigned to 1<sup>st</sup> Tier Subcontractor Gulf Coast Catering (GCC) Company. Investigation revealed that at approximately 0300 hours a GCC employee noticed smoke coming from the main freezer in the warehouse area. The employee opened the door and saw the fire inside the freezer was on the ceiling of the freezer. He informed other GCC employees in the storage area and together used approximately 12 fire extinguishers to put the fire out. Investigation reveals that the KBR supervisor was notified after the GCC employees failed in their attempt to control the fire. KBR supervisor immediately called KBR Operations and Al Asad Fire Department. WSI states that they were first called to move at 0306 hours. At approximately 0310 KBR supervisor and two other KBR employees began building evacuation. WSI, KBR HVAC, and KBR Electrician arrived on scene and began to fight the fire. KBR Electrician turned off power to the building as WSI employees ensured all personnel were evacuated. According to the Fire Chief, there were still GCC employees inside the building, which were instructed to leave. At the same time, military personnel were posted at all intersections surrounding the area, denying access to all personnel. At approximately 0315, HSE arrived on scene. At that time, HSE was denied access to the area by military personnel. HSE identified the muster point for the facility about 600 ft from the building and inquired about accountability. KBR DFAC Supervisor assured HSE that accountability was 100% for KBR and GCC personnel. At approximately 0430 HSE was granted access to the rear entrance of DFAC 1.3. At approximately the same time the military fire department arrived on scene. Coming on scene, HSE found that T-Walls placed around the dining facility posed an obstruction and severely limiting access for the fire trucks. Also, investigation found that during fire fighting procedures two WSI fire fighters suffered from dehydration and were treated on scene by KBR Medics and released from duty for the remainder of the day, and one WSI fire fighter injured his left hand and right knee in attempting to jump over a rail, also treated by KBR Medics and released to full duty. All injuries are being reported separately. According to WSI Asst Fire Chief, he received reports on scene of

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sparks bouncing on the roof of the facility. Also, according to military personnel, lightning was observed striking the roof of the facility at approximately 0300 hours. According to the KBR HVAC Technician, who observed this system from initial installation, there were numerous issues with the freezer compressor system, including severe and hazardous electrical problems. Another KBR HVAC Technician, who arrived on scene initially, states "There was a small fire in the north back corner of warehouse storage & not much smoke. I headed around north back corner & found the electrical cable tray to the first freezer reefer was arcing & energized & had burnt a hole in the metal wall toward the inside evaporator unit. Within 2-3 minutes the north corner area was so smokey once the fire got to the insulation, that I removed myself & co-workers to a safe area.", also pointing out the hindrance presented by the T-Wall positioning.

Further investigation revealed that electrical hazards at DFAC 1.3 were identified during HSE inspection conducted in conjunction with QA/QC on 23-Oct-06. This inspection also revealed inoperative fire suppression and alarm systems. All issues were reported immediately to proper chain of command.

This incident is still under investigation.

**Primary Factor:**

- Unknown

**Contributing Factors to the Accident:**

- Poor installation and maintenance of equipment
- Force protection interfering with Fire Department vehicles
- Subcontractor inactivity regarding identified safety hazards
- Inoperative fire prevention/suppression equipment

**Recommended Corrective Actions To Prevent Re-Occurrence (chain breakers):**

- Management to enforce established installation and maintenance program
- Management consult and adhere to Fire Department regulations and suggestions in regards to fire fighting equipment access
- Management to ensure immediate appropriate action to correct identified safety deficiencies and hazards
- Management to ensure fire prevention and suppression equipment installed is of a quality suitable for the purpose intended

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