

#### Florida Department of Environmental Protection

Rick Scott Governor Jennifer Carroll Lt. Governor Herschel T. Vinyard Jr. Secretary

Southwest District Telephone: 813-632-7600



# Plating and Cyanide

A Near Death Experience

REBECCA FOSTER FLORIDA DEP SW DISTRICT MAY 11, 2011

### You've Been Warned.



# Regency Artistic Metal Refinishing



# What was at the Facility

- Conditionally Exempt
- Copper, Nickel, Silver and Brass Plating
- Plating baths that contained cyanides
- Process baths that contained acids
- Many baths were in small 10 and 15 gallon tote style containers.

# **Small Rinse and Strip Tanks**



# Larger Process Tanks



# **March 2009**



## March 5, 2009

- Mr. Sutton is found unconscious in his facility
- Fire Department responds
- Fire Rescue is overcome by unknown fumes
- Pasco County HAZMAT responds
- FDEP BER responds
- Adjoining businesses are temporarily evacuated and the area is secured

### March 6, 2009

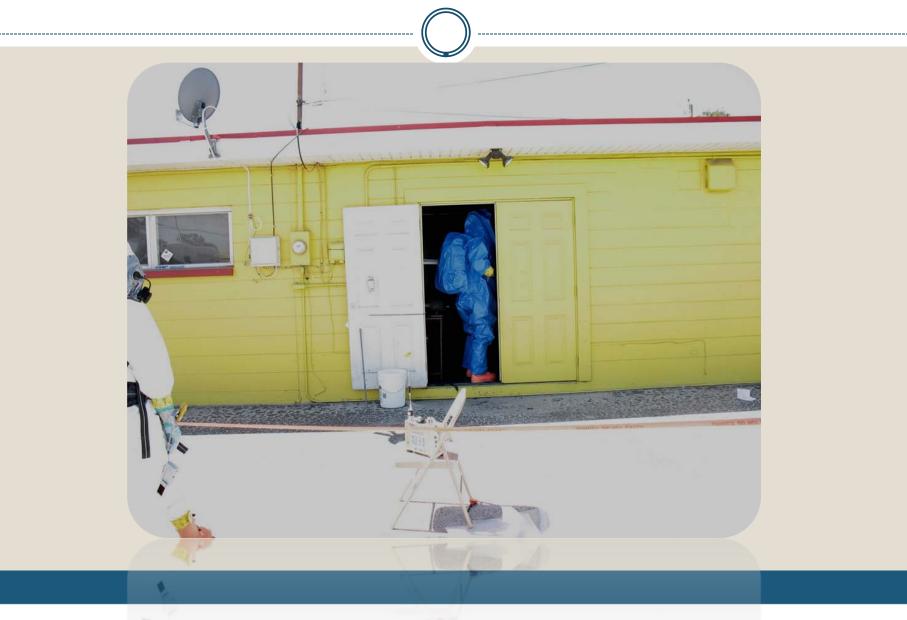
- FDEP-BER returns to the facility
- Hydrogen Cyanide levels inside the building are 2X IDLH
- FDEP-BER secures and monitors the building for the weekend
- USEPA Emergency Response is called to respond to the release

# March 8, 2009

#### EPA Visits Mr. Sutton in the Hospital

- Brass brightner (sulfuric and chromic acid) was added to a tank by mistake.
- Mr. Sutton went to the office to call the company about the chemicals they shipped him.
- Mr. Sutton claimed that he had ordered a brass plating solution and that was what was supposed to be in the container that he added to his plating tank.

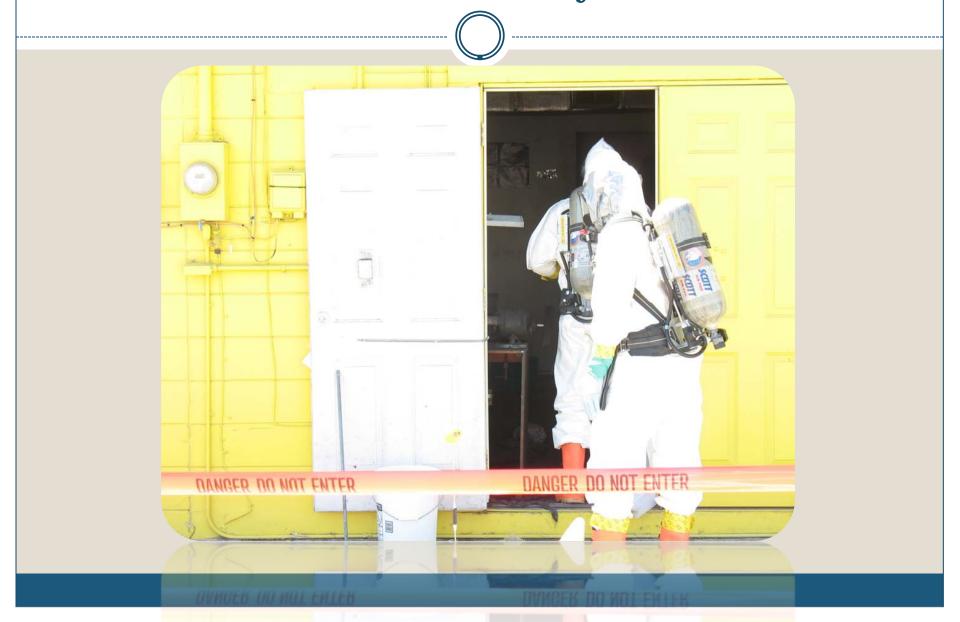
# March 9, 2009



# Response

- EPA entered the building
- Cyanide Levels 3X IDLH were recorded in the plating area
- The area over the reacting tank exceeded 4X IDLH
- pH of the tank was raised to 4.8.
- First attempt to neutralize the reaction with sodium hydroxide failed

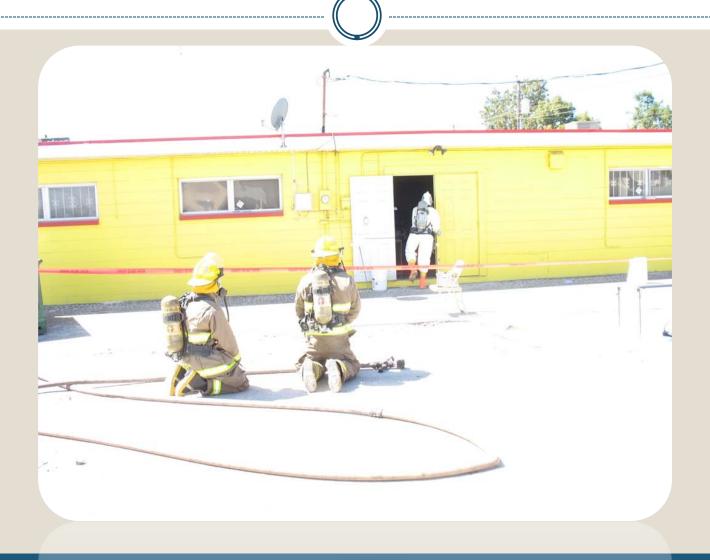
# **Second EPA Entry Team**



# Response Cont.

- A third entry team was sent into the building to attempt to stop the reaction.
- Second attempt to raise the pH using 90% sodium hydroxide was successful.
- Air monitoring of the building indicated that cyanide levels had fallen to 2-4 ppm.

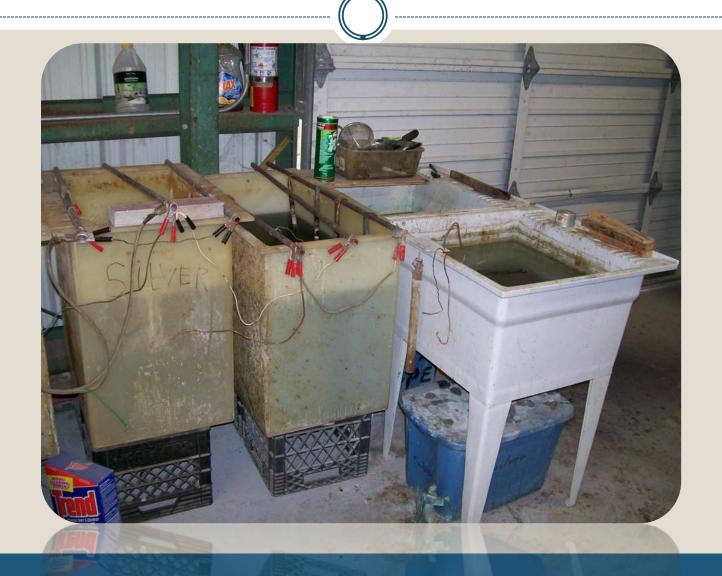
# Fire Rescue Staged as Back-up



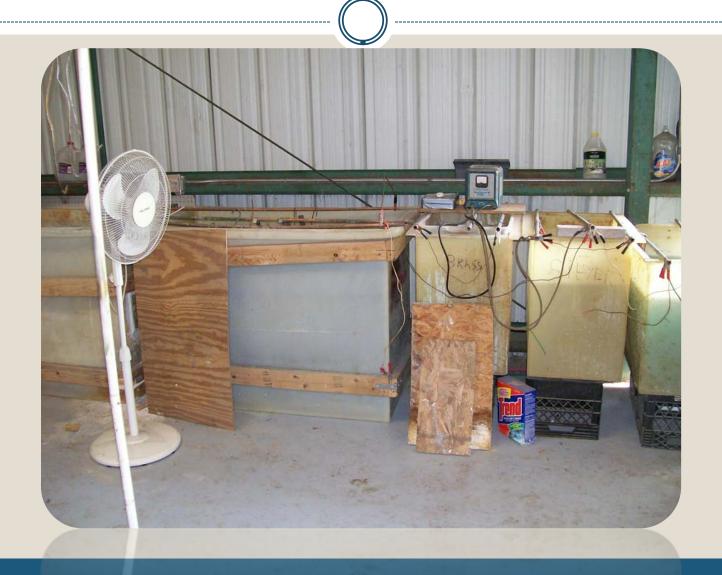
#### That is Not the End

- Mr. Sutton recovered from this accident.
- Mr. Sutton disposed of the waste generated during the incident in September 2009.
- He was unable to pay rent and was evicted from the building he occupied.
- The remaining viable plating solutions were placed into storage.
- Just when we were about to declare these chemicals a waste under speculative accumulation he opened up a new plating facility and takes on a silent partner.

# Facility Number Two



# Mr. Sutton Setting Up His New Facility



# What Happens Next

- Mr. Sutton fails to pay rent.
- An unknown business partner moves all the chemicals and plating baths to an unknown location.
- The Department has no clue where the chemicals are.
- Anonymous complaint is filed that leads us to the business partner and the chemicals.

# **Facility Number Three**

- Complaint is investigated on July 16, 2010.
- Mr. Sutton's business partner "Johnnie Walker" owns and operates an automotive tire and service shop "Fix UR Car".
- 12 drums of plating solution were found at this location.

### Johnnie Walker was Told the Following:

- > The danger of the chemicals was explained to him.
- ➤ The contents of the drums based on the DEP's past dealings with Mr. Sutton was discussed.
- > Told that cyanides and acids are suspected.
- ➤ Told he would be required to dispose of the plating chemicals (now considered a waste) to a permitted TSD.
- ➤ He was required to have a waste determination done on the waste and profile the waste correctly.

EQ FLORIDA \* 7202 EAST 8TH AVENUE \* TAMPA, FL 33619 \* tol 813-319-3426 \* fax 813-628-0842

October 12, 2010



Dear ,

EQ Florida, Inc. (The Environmental Quality Company) is pleased to submit this quotation letter to the Aerial Company for their non-hazardous waste disposal. The scope of work involves the pickup of DOT-shippable drums, and proper disposal of waste.

Supplies	Quantity	Rate	Total
Analysis Metals	2 Samples	\$176.80	\$353.60
Analysis Cyanides	2 Samples	\$221.00	\$442.00
Sampling Fee (includes, Supervisor, PPE) Lump		\$500.00	\$500.00
Chemist Hourly Rate (portal to portal)	4 est.	\$85.00	\$340.00
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Insurance Surcharge		1.5 %	\$24.53

#### Estimated Project Total: \$1,660.13

In the event that the scope of work should change there will be additional charges; these will be quoted separately. This quotation includes transportation and disposal and is contingent upon the waste conforming to the approved profile. All containers must meet D.O.T. requirements. This serves as notice as required by 40 CFR 264.12(b) that EQ Florida, Inc. has the appropriate permits and will accept the approved waste streams.

If your waste is hazardous, a 3% disposal charge will be added to your invoice in accordance with Florida Statute 403.7215(2) requiring this charge on the commercial storage and treatment of hazardous waste. With an established open line of credit with EQ Florida, Inc., terms are net 30 days.

If I can be of any further assistance, please do not hesitate to contact me at (813)319-3429.

Since rely,

Addie Botkin Resource Coordinator The Environmental Quality Company

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# Improper Disposal

- A waste determination was never done. Mr. Walker claimed generator knowledge.
- The wastes were shipped and manifested as dilute acids with a D002 waste code.
- The drums were intercepted at the Safety Kleen facility in Tampa.
- The drums were removed from the truck and held at the Tampa facility per DEP request.

# Drums Isolated at Safety Kleen



### All the Same Chemical Solutions?



# Important Lessons Learned

- 1. Do not mix incompatible chemicals.
- 2. Always read labels before mixing chemicals. Even if you think you know what you have.
- 3. If an unexpected reaction occurs GET OUT! GET ALL THE WAY OUT! Then call the appropriate emergency response personnel.

# Important Lessons Learned (cont)

- 4. Don't get complacent. These are dangerous chemicals and should be respected.
- 5. Always accurately profile and do hazardous waste determinations on your wastes prior to disposal.
- 6. Don't assume the generator will do the right thing and don't close your case too soon.

# The End