

**UNCLASSIFIED**

**APE 2048 Metal Parts Flashing  
Furnace  
for Blue Grass Army Depot, KY**

**\*Brent Hunt- Tooele Army Depot  
Michael Rondeau- Blue Grass Army Depot**



**2007 Global Demil Symposium & Exhibition**

**16 May 2007**

***JMC - Ready - Reliable - Lethal***

**UNCLASSIFIED**



**UNCLASSIFIED**



# **APE 2048 for BGAD, KY**

## **AGENDA**

- ✓ **Background**
- ✓ **Blue Grass AD Requirements**
- ✓ **Installation**
- ✓ **Testing**
- ✓ **Production**
- ✓ **Project Schedule**
- ✓ **Questions**

**UNCLASSIFIED**



**UNCLASSIFIED**



# **APE 2048 for BGAD, KY**

## **BACKGROUND**

### **BGAD Contaminated Waste Processor (CWP)**

- ✓ **CWP (now Flashing Furnace System- FFS)  
Installed in early 1980s by TEAD-AEO**
- ✓ **Flash explosive residue from metal parts  
generated at Washout Plant**
- ✓ **Air pollution control:**
  - **Unfired afterburner**
  - **Gas cooler**
  - **Cyclone**
  - **Nomex baghouse**

**UNCLASSIFIED**



**UNCLASSIFIED**



# **APE 2048 for BGAD, KY**

## **BACKGROUND**



**UNCLASSIFIED**



**UNCLASSIFIED**



# **APE 2048 for BGAD, KY**

## **BACKGROUND**

---

### **APE 2048 Characteristics**

- ✓ **Metal Parts Furnace**
- ✓ **Production: 8000 pounds metal per hour**
- ✓ **2 million BTUs/hour heat input**
- ✓ **Initially configured as propane pilot with main fuel oil heating**
- ✓ **Currently installed at Tooele Army Depot, to be installed at Demilitarization Facility, ROK**

**UNCLASSIFIED**



**UNCLASSIFIED**



# **APE 2048 for BGAD, KY**

## **BGAD REQUIREMENTS (01 FEB 07 meeting)**

- ✓ **Only one Flashing Furnace to meet Washout production**
  - **APE 2048 primary flashing furnace**
  - **Carbottom secondary flashing furnace**
- ✓ **Air Pollution Control Equipment (APE 1236M1)**
  - **Nomex Baghouse**
  - **Cyclone**
  - **Gas Coolers**
  - **Add fired afterburner**

**UNCLASSIFIED**





**UNCLASSIFIED**



# **APE 2048 for BGAD, KY**

## **BGAD REQUIREMENTS FOR JMC APE**

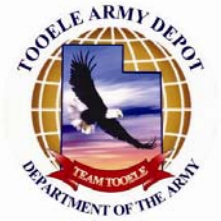
### **✓ FEB 2006**

- **Evaluated APE 2048 upgrade requirements**
- **Prepare Title V Mod. Permit Application to the Kentucky Div of Air Quality (KY DAQ)**
- **Remove old Pollution Control Equipment**
- **Add APE 2048 Flashing Furnace and Conveying System**
- **Add new Air Pollution Control Equipment (APCE)**

**UNCLASSIFIED**



**UNCLASSIFIED**



# **APE 2048 for BGAD, KY**

## **BGAD REQUIREMENTS**

---

### **✓ JUN 2006**

- **Requirement to convert Flashing Furnace, Carbottom and Afterburner from fuel oil to natural gas**

### **✓ JUL-SEP 2006**

- **Received Title V Mod. (revision 1) permit**
- **KY DAQ approved the FFS upgrades and notice to proceed with the construction**
  - **Remove old equip from APE 1236, CWP sites**
  - **Install APE 2048, new APCE**

**UNCLASSIFIED**



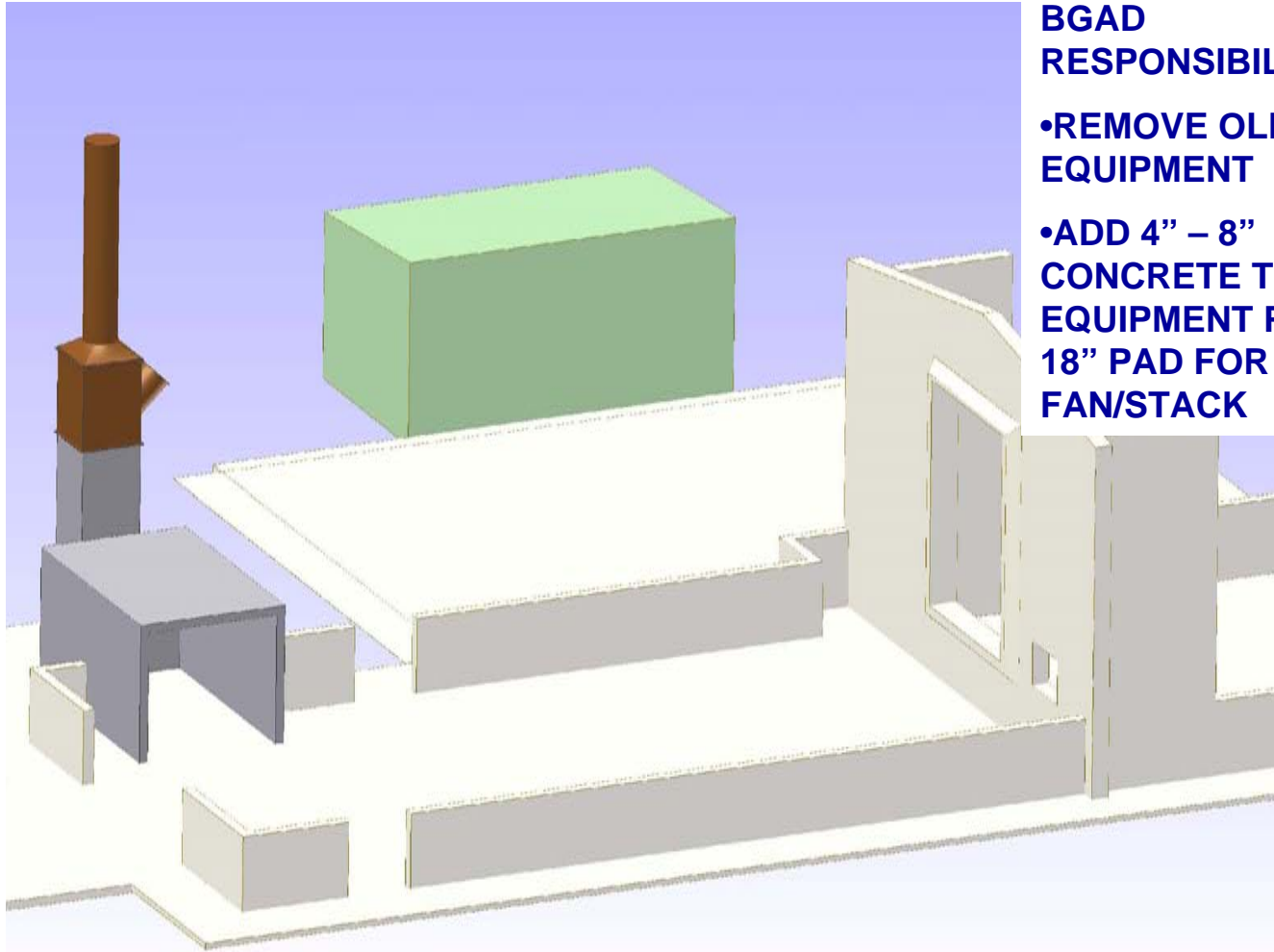


**UNCLASSIFIED**



# **APE 2048 for BGAD, KY**

## **INSTALLATION (BGAD)**



### **BGAD RESPONSIBILITIES:**

- REMOVE OLD EQUIPMENT**
- ADD 4" – 8" CONCRETE TO EQUIPMENT PAD and 18" PAD FOR DRAFT FAN/STACK**

**UNCLASSIFIED**



**UNCLASSIFIED**



# APE 2048 for BGAD, KY

## INSTALLATION (TEAD-AED)

HIGH and LOW  
TEMP COOLERS

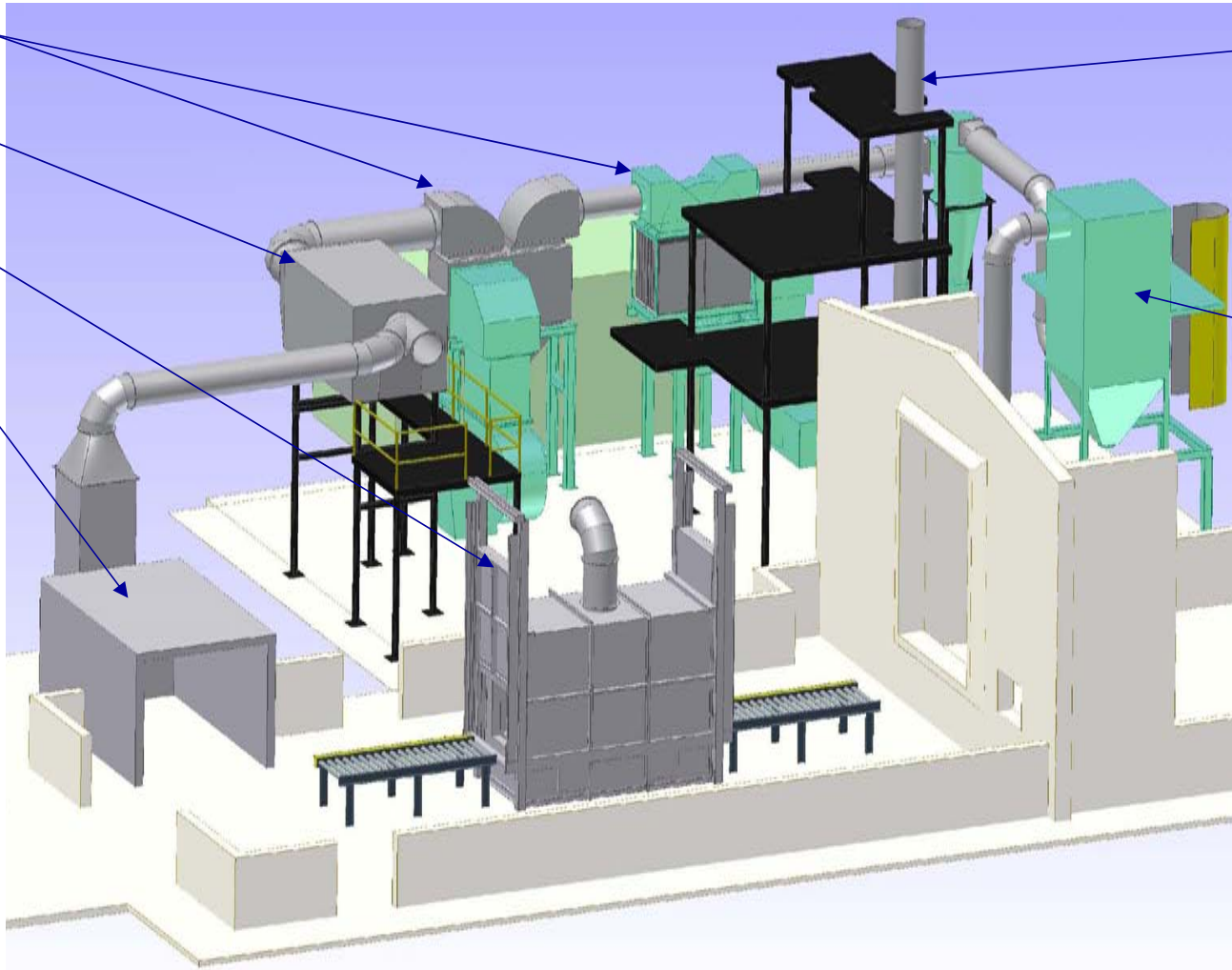
8 MMBTU  
AFTERBURNER

2 MMBTU APE 2048  
and CONVEYORS

CARBOTTOM  
FURNACE  
(EXISTING)

• APE SUPPLIED

• TEAD-AED  
FABRICATED and  
SUPPLIED



STACK,  
STACK  
PLATFORM,  
DRAFT FAN,  
STAINLESS  
STEEL  
DUCTING

BAGHOUSE  
(NOMEX  
CLOTH)

**UNCLASSIFIED**



**UNCLASSIFIED**



# **APE 2048 for BGAD, KY**

## **INSTALLATION**



**UNCLASSIFIED**



**UNCLASSIFIED**



# **APE 2048 for BGAD, KY**

## **TESTING REQUIREMENTS**

- ✓ **Flashing Furnace System = EU010**
- ✓ **Kentucky Department for Environmental Protection requires particulate matter (PM10) and 20% opacity compliance**
- ✓ **Stack testing pursuant to air permitting and Kentucky Administrative Regulations Title 401 KAR 59:005, 59:010, 59:020 and 50:045**

**UNCLASSIFIED**



**UNCLASSIFIED**



# **APE 2048 for BGAD, KY**

## **TESTING RESULTS**

- ✓ **Allowable PM: 2.34 lb/hr**
- ✓ **Measured PM (natural gas, cyclone, baghouse): 0.006 lb/hr**
- ✓ **TEAD (fuel oil, no cyclone, no baghouse) concentration 5X more**

**UNCLASSIFIED**





**UNCLASSIFIED**



# **APE 2048 for BGAD, KY**

## **PRODUCTION**

- ✓ **8 inch**
- ✓ **105mm**
- ✓ **Mines**



**UNCLASSIFIED**



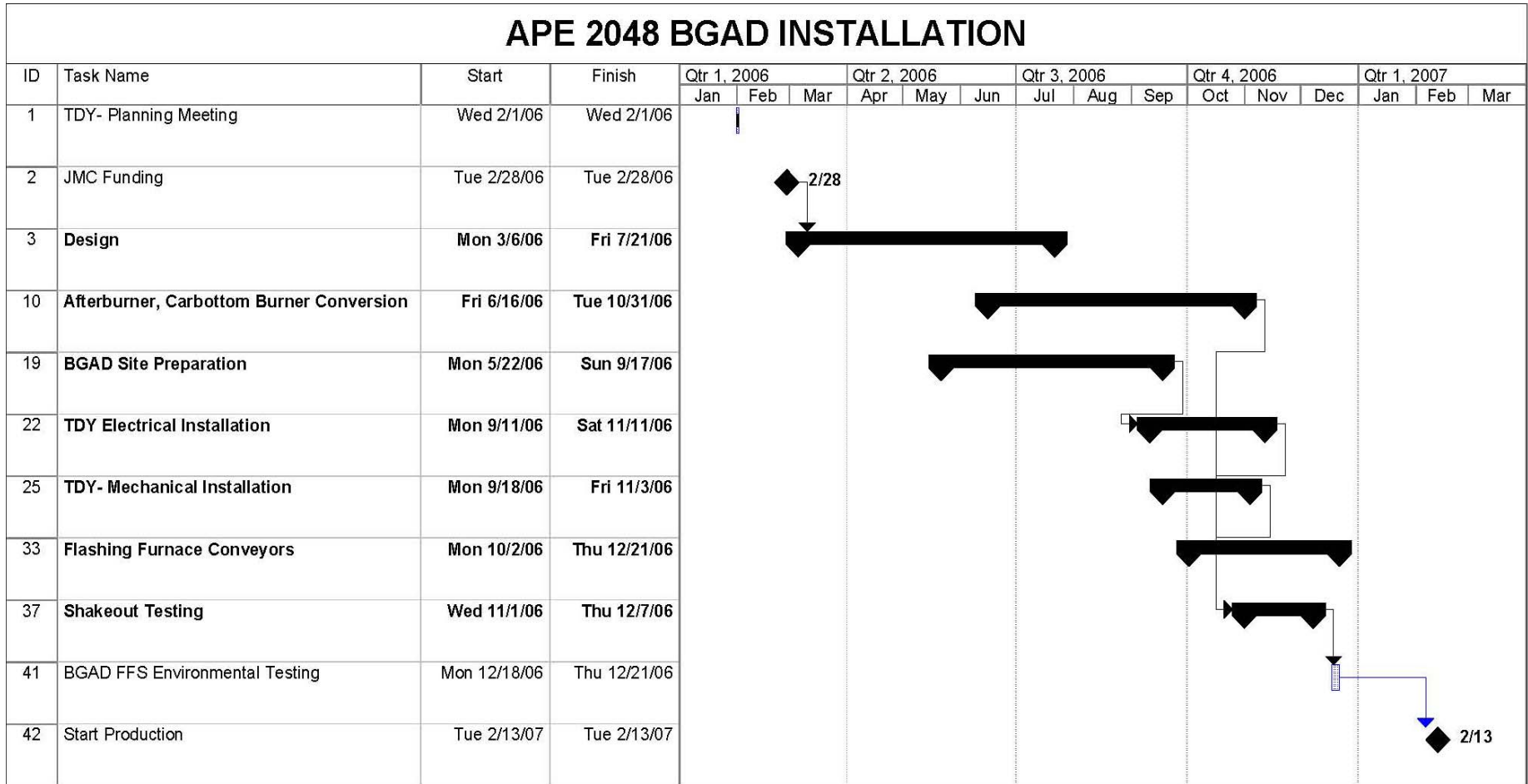
**UNCLASSIFIED**



# APE 2048 for BGAD, KY

## PROJECT SCHEDULE

### APE 2048 BGAD INSTALLATION



**UNCLASSIFIED**





**UNCLASSIFIED**

# **APE 2048 for BGAD, KY**



**QUESTIONS?**

**UNCLASSIFIED**