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

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APE 2048 for BGAD, KY

AGENDA

✓ Background
✓ Blue Grass AD Requirements
✓ Installation
✓ Testing
✓ Production
✓ Project Schedule
✓ Questions
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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
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
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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
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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)
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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
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INSTALLATION (BGAD)

BGAD RESPONSIBILITIES:
• REMOVE OLD EQUIPMENT
• ADD 4” – 8” CONCRETE TO EQUIPMENT PAD and 18” PAD FOR DRAFT FAN/STACK
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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

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INSTALLATION

UNCLASSIFIED
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
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
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PRODUCTION

- 8 inch
- 105mm
- Mines
## APE 2048 BGAD INSTALLATION

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<th>ID</th>
<th>Task Name</th>
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QUESTIONS?