



## ReliaBuilder-RCM® Software

### Advanced Software for the Management of an Effective Reliability Centered Maintenance Process

**Critical Evaluation**

List Function: 03 Provide up to 550M lbs/hr air (total) for combustion air to the regenerator and lift air to move catalyst to the regenerator. (Main Air Blower)

Equipment ID: 3BK1  
Description: MAIN AIR BLOWER

Equipment Type: MB-CEN CENTRIFUGAL BLOWER

Failure Modes:  
 FTR FAILS TO RUN  
 INF INTERNAL FAILURE

Failure Effects:  
 OP-AUT AUTOMATIC ACTIVATION OF OTHER EQUIPMENT REQUIRED  
 PR-CAT RESULTS IN SHORTENING OF CATALYST LIFE  
 PR-ISD RESULTS IN IMMEDIATE SHUTDOWN

Dimension	Score
Safety	4
Environmental	4
Lost Production	9
Repair Cost	9
<b>High:</b>	<b>9</b>
<b>Overall:</b>	<b>26</b>

Risk: Criticality: Critical

Critical Basis:  
 ECON FAILURE RESULTS IN INTOLERABLE ECONOMIC IMPACT  
 PROD FAILURE RESULTS IN INTOLERABLE PRODUCTION OR QUALITY IMPACT

Drawing #: 3201-FCCU-123

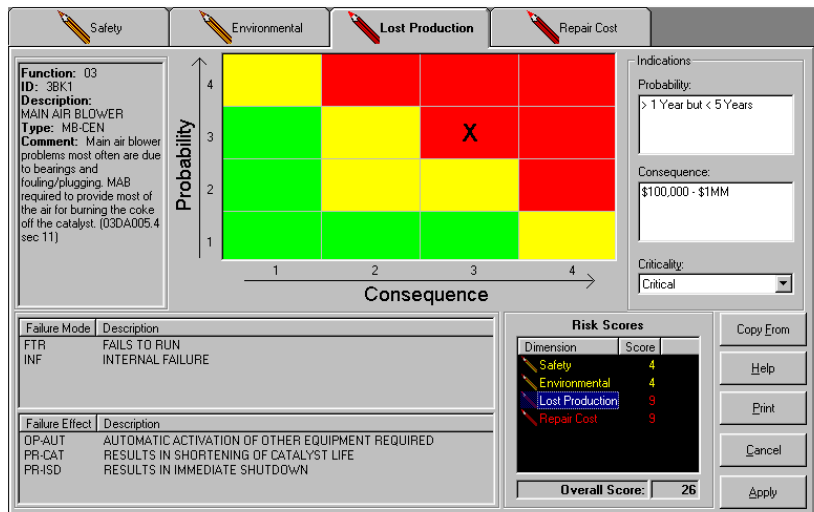
Comments: Main air blower problems most often are due to bearings and fouling/plugging. MAB required to provide most of the air for burning the coke off the catalyst. (03DA005.4 sec 11)

Task Summary

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- Operational Objectives, Functions, and Criticality Evaluation via Failure Modes and Effects Analysis
- Smart lookups by Equipment Type for potential Failure Modes
- Filter and Find features
- Copy feature greatly accelerates Data Entry

- Optional Risk Ranking Module
- User-Defined Risk Matrices
- Point and Click Scoring
- Assets scored by Highest Individual and Combined Score
- Provides prioritization for Planning and Scheduling, and Emergent Work
- Supports Utilization for PHA and RBI



- **Task Selection Module for Assets by Failure Mode**
- **Smart lookups for Potential Failure Causes and Tasks by Equipment Type**
- **Optional Cost-Benefit Module for Non-Critical Assets**
- **Direct Integration with other systems, greatly improves Implementation time**

Plant: ART Plant FCCU  
System: FCCU (Units 3 & 4)  
RCM Analysis Summary Report - By Equipment ID

Equipment ID:	3BK1	MAIN AIR BLOWER	Drawing: 3201-FCCU
Equipment Type:	MB-CEN	CENTRIFUGAL BLOWER	
Function:	03	Provide up to 550M lbs/hr air (total) for combustion air to the regenerator and lift air to move catalyst to the regenerator. (Main Air Blower)	
Failure Modes:	FTR FAILS TO RUN INF INTERNAL FAILURE	Criticality Justification:	Failure Effects: OP-AUT AUTOMATIC ACTIVATION OF OTHER EQUIPMENT REQUIRED PR-CAT RESULTS IN SHORTENING OF CATALYST LIFE PR-IBD RESULTS IN IMMEDIATE SHUTDOWN
Risk Ranking:	High Score: 9	Overall Score: 26.0000	
Critical?:	Y	Critical Basis: ECON FAILURE RESULTS IN INTOLERABLE ECONOMIC IMPACT PROD FAILURE RESULTS IN INTOLERABLE PRODUCTION OR QUALITY IMPACT	
Remarks:	Main air blower problems most often are due to bearings and fouling/plugging. MAB required to provide most of the air for burning the coke off the (03DA005.4 sec 11)		
Failure Causes:	BEA BEARING FAILURE LUF LUBRICATION RELATED FAILURE	Non-critical Justification:	
Task Description:	PERFORM SPECTROGRAPHIC LUBE OIL ANALYSIS. COMPARE TO PREVIOUS READINGS. REPORT UNUSUAL FINDINGS. PERFORM ROUTINE VISUAL INSPECTION OF EQUIPMENT. CHECK FOR NOISE, VIBRATION AND LEAKS IN PROCESS. LUBRICATION, SEALING, AND COOLING SYSTEMS. NOTE CONDITION OF LOCAL INDICATORS. REPORT UNUSUAL FINDINGS. CONDUCT EQUIPMENT PERFORMANCE TEST (INLET & OUTLET PRES., TEMP & FLOW). RECORD RESULTS. COMPARE TO PREVIOUS READINGS.	Frequency: M1 SHIFT-2	Responsibility: MAD TECH OP-B / OUTSIDE T/A MACH ENG
Task Details:	Include this test		

- **Flexible Reporting Module, prints to paper or other electronic formats (.doc, .xls, etc.)**
- **Multiple filtering & sorting criteria**
- **Basic sorts by Function, Equipment, or Drawing Number**
- **Export feature to send results to an MS Access Database**

**ART is a full service Reliability Consulting and Technology provider, specializing in the implementation of integrated reliability management solutions.**

- \* **Reliability Centered Maintenance**
- \* **Maintenance & Reliability Assessments**
- \* **Root Cause Failure Analysis**
- \* **Complete CMMS Implementation**

- \* **Reliability / Availability Modeling**
- \* **Operator Surveillance Technology**
- \* **Reliability Skills Training**
- \* **Mechanical Integrity Management**



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