Section III: Other Technology
Application No.: 291716
Equipment Category – Polymeric Cellular (Foam)
Product Mfg. -Polystyrene

1. GENERAL INFORMATION		DATE: 5/9/2000
A. MANUFACTURER: NRM Corporation		
B. TYPE: Polystyrene Sheet Extrusion	C. MODEL: Pacemaker 70	
D. STYLE:		
E. APPLICABLE AQMD REGULATION XI RULES: 1175		
F. COST: SOURCE OF COST DATA:		
G. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WK 52 WKS/YR		

2. EQUIPMENT INFORMATION		APP. NO.: 291716
A. FUNCTION: Polystyrene Foam Sheet Extrusion, Using Non-VOC Blowing Agent		
B. SIZE/DIMENSION/CAPACITY: Extruder, Electrically Heated, With One Primary Extruder, One Secondary Extruder, Two Cooling Pumps, One Feed Station, Two Roll Up Stations, And Associated Conveyors, Surge Bins, And Hoppers.		
C. BLOWERS:	D. TOTAL FLOW RATE:	
E. MATERIAL STORED/PROCESSED/HANDLED: Polystyrene Foam Sheet		
F. THROUGHPUT/PROCESS RATE/USAGE RATE: Confidential		

3. COMPANY INFORMATION		APP. NO.: 291716
A. NAME: Elm Packaging Company		
B. ADDRESS: 2300 Raymer CITY: Fullerton STATE: CA ZIP: 92833		
C. CONTACT PERSON: Andrew Dieter	D. PHONE NO.: (714) 870-6880	

4. PERMIT INFORMATION		APP. NO.: 291716
A. AGENCY: SCAQMD		
B. AGENCY CONTACT PERSON: Mark Liu	C. PHONE NO.: (909) 396-2538	
D. PERMIT TO CONSTRUCT INFORMATION: P/C NO.: ISSUANCE DATE:		
E. START-UP DATE: April 18, 1994		

F. PERMIT TO OPERATE INFORMATION: P/O NO.: D82112 ISSUANCE DATE: 4/18/1994

5. EMISSION INFORMATION		APP. NO.: 291716

A. PERMIT

A1. PERMIT LIMIT: None

A2. BACT/LAER DETERMINATION: 1,1-difluoroethane (HFC-152a) is used as the blowing agent. This material is classified in SCAQMD Rule 102 as a Group I exempt compound. Since the blowing agent is not classified as a VOC or ozone depleting compound (ODC), the subject equipment is not subject to VOC or ODC BACT requirements.

B. CONTROL TECHNOLOGY

B1. MANUFACTURER/SUPPLIER: Not applicable

B2. TYPE: Process Modification

B3. DESCRIPTION: HFC-152a is used as the blowing agent, and it is injected at high pressure into the molten polystyrene. After being forced through a dye, the blowing agent expands and forms cells in the polystyrene. They currently use small quantities of a nonflammable, non VOC/ODC blowing agent for start-up only.

B4. CONTROL EQUIPMENT PERMIT APPLICATION DATA: P/C NO.: N/A ISSUANCE DATE: N/A
P/O NO.: N/A ISSUANCE DATE: N/A

B5. WASTE AIR FLOW TO CONTROL EQUIPMENT: N/A FLOW RATE: N/A
ACTUAL CONTAMINANT LOADING: N/A BLOWER HP: N/A

B6. WARRANTY: N/A

B7. PRIMARY POLLUTANTS: Blowing agent is emitted from the polystyrene foam. At some point in time, all of the blowing agent is emitted from the product. The blowing agents used at this facility are classified in SCAQMD Rule 102 as Group I exempt compounds.

B8. SECONDARY POLLUTANTS: None

B9. SPACE REQUIREMENT: N/A

B10. LIMITATIONS: Use of HFC-152a (as the blowing agent) is limited to polystyrene foam sheet extrusion applications. Currently, use of this blowing agent has not been demonstrated for expanded polystyrene board or expandable polystyrene molding applications.

B11. LOCATION OF PRIOR DEMONSTRATION & AGENCY: UNKNOWN
FACILITY:
CONTACT PERSON: PHONE NO.:
AGENCY:
ADDRESS:
CONTACT PERSON: PHONE NO.:

B12. OPERATING HISTORY: Elm Packaging has been using HFC-152a as the blowing agent since they began operating in the Fullerton facility in 1994.

B13. SOURCE TEST/PERFORMANCE DATA ANALYSIS:

DATE OF SOURCE TEST: N/A CAPTURE EFFICIENCY: N/A

DESTRUCTION EFFICIENCY: N/A OVERALL EFFICEINCY: N/A

PERFORMANCE DATA: Operating records demonstrate compliance with SCAQMD Rule 1175 requirements.

B14. SOURCE TEST CONDITIONS/PERFORMANCE DATA: N/A

C. COST

C1. CONTROL EQUIPMENT COST: [ ] CHECK IF INSTALLATION COST IS INCLUDED IN CAPITAL COST

CAPITAL: See 6 (Comments) INSTALLATION: SOURCE OF COST DATA:

C2. ANNUAL OPERATIONAL/MAINTENANCE COST: SOURCE OF COST DATA:

D. DEMONSTRATION OF COMPLIANCE

D1. STAFF PERMFORMING FIELD EVALUATION:

ENGINEER'S NAME: Knut J. Beruldsen INPECTOR'S NAME: DATE: May 18, 1999

D2. COMPLIANCE DEMONSTRATION: Compliance with BACT achieved in practice criteria was verified by reviewing their operating records.

D3. VARIANCE: NO. OF VARIANCES: 0 DATES:

CAUSES:

D4. VIOLATION: NO. OF VIOLATIONS: 0 DATES:

CAUSES:

D5. FREQUENCY OF MAINTENANCE:

6. COMMENTS

APP. NO.: 291716

Although there are no control equipment costs, the cost to convert a medium to large plant using a flammable blowing agent to HFC-152a is approximately $98,000.

This equipment was issued an equipment precertification under the statewide Equipment and Process Precertification Program by California Air Resources Board Executive Order G-096-029-032.