

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 70-1100/90-01

Docket No. 70-1100

License No. SNM-1067

Licensee: Combustion Engineering, Incorporated
100 Prospect Hill Road
Windsor, Connecticut 06095-0500

Facility Name: Windsor Nuclear Fuel Fabrication Facility

Type of Meeting: Management Meeting

Meeting Date: January 4, 1990

Inspector:

Joseph D. Doria

J. Roth, Project Engineer, Effluents
Radiation Protection Section, FRSSB

1/17/90

date

Approved by:

Robert J. Bores

R. J. Bores, Chief, Effluents Radiation
Protection Section, Facilities Radiological
Safety and Safeguards Branch (FRSSB)

1-17-90

date

Meeting Summary: A management meeting was held at Region I, King of Prussia, Pennsylvania, on January 4, 1990, to discuss the status of completion of facility modifications and programmatic upgrades of the Windsor Fuel Manufacturing facility as described in the facility performance improvement plan written in response to the September 9, 1988, Confirmatory Action Letter Number 88-23. The licensee also discussed redeployment of processing equipment to the Hematite, Missouri facility, the status of plans to conduct an internal self-assessment of the Windsor Fuel Manufacturing facility, and the status of training and emergency preparedness programs.

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DETAILS

1.0 Meeting Attendees

1.1 Combustion Engineering, Incorporated

C. R. Waterman, Acting Vice President, Nuclear Fuel
A. E. Sherer, Director, Nuclear Licensing
R. Vaughn, Plant Manager
P. R. Rosenthal, Program Manager, Radiological and
Industrial Safety
J. Conant, Manager, Nuclear Material Licensing

1.2 Nuclear Regulatory Commission

M. Knapp, Director, Division of Radiation Safety
and Safeguards (DRSS)
J. Joyner, Division Project Manager, DRSS
R. Egres, Chief, Effluents Radiation Protection Section (ERPS), DRSS
M. A. Austin, Radiation Specialist, ERPS, DRSS
C. Gordon, Emergency Preparedness Specialist, Emergency
Preparedness Section, DRSS
J. Roth, Project Engineer, ERPS, DRSS

2.0 Summary of Discussion

Dr. Knapp opened the meeting and thanked the licensee's representatives for attending the meeting.

Mr. Scherer provided information on the status of the acquisition of Combustion Engineering, Inc. by ABB Ltd., a foreign corporation. He also discussed the licensee's actions to fill the vacant position of Manager, Radiological and Industrial Safety. In the meantime, Mr. Rosenthal is fulfilling the requirements of the position.

Mr. Waterman provided information on the status of the Windsor Fuel Manufacturing facility equipment and programmatic upgrades (see attached slides) as described in the licensee's performance improvement plan (PIP) written in response to Item 1 of the September 9, 1988, Confirmatory Action Letter Number 88-23. Mr. Waterman also stated that all elements of the upgrade program were expected to be completed by January 31, 1990.

Specific information on the status of the facility training and emergency preparedness programs was provided by Mr. Vaughn. Mr. Rosenthal noted that a correction factor for beta radiation exposure is being used. He also provided information on the status of the licensee actions to deploy equipment and processes from the licensee's Windsor, Connecticut facility to the Hematite, Missouri facility.

In addition, the status of plans to initiate and conduct the self-assessment discussed during the October 1989 meeting was presented. This self-assessment is the responsibility of Mr. Mawhinney, Vice President,

Nuclear Quality Systems, is expected to start about January 15, 1990 and will take about six weeks to complete. An internal response will be due from Mr. Waterman to the assessment team within 30 days of the issuance of the assessment report. That report, with Mr. Waterman's responses, will be provided to the NRC by about April 15, 1990.

3.0 Conclusions

Dr. Knapp concluded the meeting by stating that, while the information provided by the licensee was useful in understanding the facility and programmatic upgrades initiated, he was much more interested in learning about specific accomplishments. For example, he suggested that the licensee provide the NRC with information on specific programs that had been started, modified, or completed during the previous quarter and what programmatic changes occurred as a result of those modifications.

Dr. Knapp also stated that the licensee was expected to continue the monthly status reports until all required actions were completed and that the NRC would conduct a confirmatory review (inspection) during the second quarter of 1990 subsequent to receipt of the licensee's self-assessment report.

January 4, 1990

PROPOSED AGENDA

License Compliance Status - 4th Quarter	C. R. Waterman
Windsor Operations & Safety Training	R. E. Vaughan
Emergency Preparedness	R. E. Vaughan
Planned Windsor Facility Modifications	P. R. Rosenthal
Independent Self-Assesement Program Status	A. E. Scherer

**LICENSE COMPLIANCE STATUS REPORT
ACTIVITIES COMPLETED 4TH QTR-1989
OCTOBER 1, 1989- DECEMBER 31, 1989**

PG 1 OF 3

PROGRAM	ACTIVITIES COMPLETED
NFM STAFF RESP & ASSIGNMNTS	A108 - LINE ITEM DISPOSITION A111 - LINE ITEMS TO PROCEDURES A112 - LINE ITEMS TO PROGRAMS
BIOASSAY	B109 - AUDIT BIOASSAY PROGRAM
INSTRUMENT CALIBRATION	B200 - LINE ITEMS TO INSTR CALIB PROG B204 - LINE ITEMS TO RPI-222
CRITICALITY SAFETY	B306 - REVIEW & APPROVE CSI-1,2,3 B307 - ISSUE CSI-1,2,3 B309 - AUDIT CRIT SAFETY PROG
DOSIMETRY	B400 - LINE ITEMS TO DOSIMETRY PROG B401 - PREPARE DOSIMETRY PROG B402 - REVIEW & APPROVE DOSIMETRY PROGRAM B404 - LINE ITEMS TO RPI-205 B405 - REVISE RPI-205 B406 - REVIEW AND APPROVE RPI-205 B407 - ISSUE RPI-205 REVISION B408 - PROCEDURE IMPLEMENTATION INSTRUCTION B409 - AUDIT DOSIMETRY PROGRAM
ENVIRONMENTAL MONITORING	B500 - LINE ITEMS TO ENVIRONMENTAL MONITORING PROG B501 - PREPARE ENVIRONMENTAL MONITORING PROGRAM B504 - LINE ITEMS TO RPI-211,219

LICENSE COMPLIANCE STATUS REPORT
ACTIVITIES COMPLETED 4TH QTR-1989
OCTOBER 1, 1989- DECEMBER 31, 1989

PROGRAM

ACTIVITIES COMPLETED

EXTERNAL EXPOSURE CONTROL B600 - LINE ITEMS TO EXTERNAL EXP CTL PROG

B601 - PREPARE EXT EXP CTL PROG

B602 - REVIFY; & APPV EXT EXP CTL PROG

*B604 - LINE ITEMS TO RPI-201,2,3

*B605 - REVISE RPI-201,2,3

*B606 - REVIEW & APPV RPI-201,2,3

*B607 - ISSUE RPI-201,2,3

*B608 - PROCEDURE IMPLEMENTATION INSTR

B609 - AUDIT EXT EXP CTL PROG

*RPI-201,202,&203 HAVE BEEN CANCELED - NO LONGER
REQUIRED BY THE ISSUED EXT EXP CTL PROG

INTERNAL EXPOSURE CONTROL B709 - AUDIT INT EXP CTL PROG

RESPIRATORY PROTECTION B809 - AUDIT RESP PROT PROG

NFM TRAINING

C200 - LINE ITEMS TO NFM TRNG PROG

C201 - PREPARE NFM TRAINING PROG

C202 - REVIEW & APPV NFM TRNG PROG

C203 - JOB SPECIFIC TRNG LESSON PLANS

C204 - GET PROG LESSON PLANS

C205 - AUDIT NFM TRNG PROG

INDUSTRIAL SAFETY

C306 - REVIEW AND APPV IND SAFETY PROCEDURES

C307 - ISSUE INDUST SAFETY PROCEDURES

TRANSPORTATION MGMT

D310 - AUDIT TRANSP MGMT PROGRAM

**LICENSE COMPLIANCE STATUS REPORT
 ACTIVITIES COMPLETED 4TH QTR-1989
 OCTOBER 1, 1989- DECEMBER 31, 1989**

PROGRAM	ACTIVITIES COMPLETED
WASTE MANAGEMENT	D410 - AUDIT WASTE MGMNT PROGRAM
EMERGENCY PLAN	D507 - REVIEW AND APPV EMERG PROCEDURES D508 - ISSUE EMERGENCY PROCEDURES D509 - CONDUCT EMER PROC TRNG D510 - IMPLEMENT EMERG PROCEDURES D511 - CONDUCT EMERG DRILLS S512 - AUDIT EMERGENCY PROGRAM
PREVENTATIVE MAINTENANCE	E 109 - AUDIT PREV MAINT PROG
PROCEDURE CONSOL/IMPVMT	E205 - IMPLEMENT PROC CONSOL/IMPRVMT E206 - AUDIT PROC CONSOL/IMPVMT PROG
CONFIGURATION MGMNT	F 103 - ESTABLISH DATA BASE F 104 - PREPARE CONFIG MGMNT PROCEDURE
ADMINISTRATIVE CONTROLS	F205 - PREPARE ADMIN CTL PROCEDURES F206 - REVIEW & APPV ADMIN CTL PROC F207 - ISUE ADMIN CTL PROC F209 - IMPL ADMIN CTL PROCS F210 - AUDIT ADMIN CTL PROG
COMMITMENT TRACKING	F310 - AUDIT COMMITMENT TRKG PROG
MANAGEMENT AUDIT	F406 - REVIEW & APPV MGMNT AUDIT PROC F407 - ISSUE MGMNT AUDIT PROC F409 - IMPLEMENT MGMNT AUDIT PROC F410 - AUDIT MGMNT AUDIT PROG
<u>62 ACTIVITIES COMPLETED</u>	

**DOCUMENTS ISSUED
FOURTH QUARTER-1989**

PG 1 OF 1

PROGRAMS

DATE ISSUED

PR-4 DOSIMETRY*	12/14/89
PR-6 EXTERNAL EXPOSURE CONTROL	12/14/89
PR-10 INDUSTRIAL SAFETY	11/ 2/89
PR-11 NFM TRAINING	12/14/89
* DOSIMITRY PROG ISSUED AS PART OF EXTERNAL EXPOSURE CONTROL PROGRAM	

RADIOLOGICAL PROTECTION INSTRUCTIONS

RPI-208 BIOASSAY REV 1	10/23/89
RPI-213 DECONTAMINATION OF PERSONNEL	12/ 8/89

CRITICALITY SAFETY INSTRUCTIONS

CSI-3 CRITICALITY ALARM SYSTEM	11/21/89
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INDUSTRIAL SAFETY PROCEDURES

ISI-101 EYE PROTECTION	12/20/89
ISI-102 SAFETY SHOES	12/20/89
ISI-103 CLOTHING REQUIREMENTS	12/20/89
ISI-104 HAZARDOUS COMMUNICATIONS	12/20/89
ISI-105 HANDLING AND STORING HAZARDOUS MATERIAL	12/20/89
ISI-106 EQUIPMENT LOCKOUT/TAGOUT	12/20/89
ISI-107 CONFINED SPACE AREA ENTRY	12/20/89
ISI-108 HOT WORK PERMIT	12/20/89

ADMINISTRATIVE PROCEDURES

AP7 AUDITS AND INSPECTIONS	10/30/89
AP12 SAFETY RELATED DOCUMENTS	11/17/89

**PROGRAMS COMPLETED AND AUDITED
FOURTH QUARTER-1989**

PG 1 OF 1

- 1) NFM STAFF RESPONSIBILITIES & ASSIGNMENTS**
- 2) BIOASSAY**
- 3) CRITICALITY SAFETY**
- 4) DOSIMETRY ***
- 5) EXTERNAL EXPOSURE CONTROL**
- 6) INTERNAL EXPOSURE CONTROL**
- 7) RESPIRATORY PROTECTION**
- 8) NFM TRAINING**
- 9) SNM ACCOUNTABILITY**
- 10) SECURITY**
- 11) TRANSPORTATION MGMNT**
- 12) WASTE MANAGEMENT**
- 13) EMERGENCY PLAN**
- 14) PREVENTATIVE MAINTENANCE**
- 15) PROCEDURE CONSOL/IMPROVEMENT**
- 16) ADMINISTRATIVE CONTROLS**
- 17) COMMITMENT TRACKING**
- 18) MANAGEMENT AUDIT**

*** THE DOSIMETRY PROGRAM IS INCLUDED IN THE EXTERNAL
EXPOSURE CONTROL PROGRAM**

**PROGRAMS TO BE COMPLETED
BY JANUARY 31, 1990**

PG 1 OF 1

PROGRAM	ACTIVITIES TO BE COMPLETED
INSTRUMENT CALIBRATION	B201 - PREPARE PROGRAM B202 - REVIEW AND APPROVE PROGRAM B205 - REVISE RPI-222 B206 - REVIEW AND APPROVE PROCEDURE B207 - ISSUE PROCEDURE B208 - IMPLEMENTATION INSTRUCTION B209 - AUDIT
ENVIRONMENTAL MONITORING	B502 - REVIEW AND APPV ENVIR MON PROG B505 - REVISE RPI-211 B506 - REVIEW AND APPROVE PROCEDURE B507 - ISSUE PROCEDURE B508 - IMPLEMENTATION INSTRUCTION B509 - AUDIT
ALARA	C100 - LINE ITEMS TO ALARA PROG C101 - PREPARE PROGRAM C102 - REVIEW AND APPROVE PROGRAM C103 - PROGRAM IMPLEMENTATION C104 - GET ALARA TRAINING C105 - AUDIT
INDUSTRIAL SAFETY	C308 - CONDUCT PROCEDURES TRAINING C309 - IMPLEMENT PROCEDURES C310 - AUDIT
CONFIGURATION MGMNT	F105 - REVIEW AND APPROVE PROCEDURE F106 - ISSUE PROCEDURE F107 - CONDUCT PROCEDURE TRAINING F108 - IMPLEMENT PROCEDURE F109 - AUDIT

GENERAL EMPLOYEE SAFETY TRAINING

- 134 INDIVIDUALS RECEIVED GENERAL EMPLOYEE TRAINING (RADIATION WORKER TRAINING).

- 311 INDIVIDUALS RECEIVED G.E.T. RETRAINING.

- 41 INDIVIDUALS RECEIVED SITE SPECIFIC TRAINING AND TOOK THE CHALLENGE TEST IN LIEU OF G.E.T.

ACCOUNTABILITY, SECURITY AND WASTE MANAGEMENT

TOPIC

TRAINING

SNM ACCOUNTABILITY
SHOP OPERATIONS

Each individual involved in SNM Accountability receives job specific training. Shop work station qualification lists are maintained which identify which individuals have been trained for the station. Approximately 65 shop personnel have been trained in SNM Accountability and Control Operations.

WASTE MANAGEMENT

Each individual working waste management operations receives job specific training. Training is required before the individuals are allowed to operate the work station. Approximately 14 shop personnel have been or will be trained in all aspects of waste handling.

SECURITY

Each security watchperson is trained per MFG 19-30. Five (5) watchpersons have been trained and certified.

MANUFACTURING OPERATORS

MANUFACTURING OPERATORS RECEIVE TRAINING AND ANNUAL RETRAINING IN THE FOLLOWING AREAS:

- UO₂ RECYCLE OPERATIONS
- PELLET PROCESS OPERATIONS
- FUEL ROD FABRICATION
- GRID AND GRID CAGE FABRICATION
- CLEANING AREA OPERATIONS
- FUEL ASSEMBLY OPERATIONS
- OTHER COMBINATIONS OF OPERATIONS BASED ON SIMILARITY OF THE OPERATIONS, SIMILARITY OF SKILLS AND CLASSIFICATION OF PERSONNEL

RADIATION PROTECTION TECHNICIAN TRAINING

- . ALL RADIATION PROTECTION TECHNICIANS ARE QUALIFIED FOR DAY-TO-DAY OPERATIONS
- . ALL RADIATION PROTECTION TECHNICIANS HAVE STARTED A SELF-STUDY TRAINING PROGRAM BASED UPON NEEDS ASSESSMENT
- . THREE R. P. STAFF TRAINED AS TRAINERS FOR

RESPIRATORY PROTECTION TRAINING

SELF-CONTAINED BREATHING APPARATUS TRAINING

FALL 1989 EMERGENCY EXERCISE PROGRAM SEQUENCE

- 3/20/89 -- EPIP DRAFT ISSUED
- 6/30/89 -- SUBMITTED EMERGENCY PLAN TO NRC
- 7/19/89 -- EPIP REV. 0 ISSUED
- 7/26/89 -- REVIEWED EMERGENCY PLAN WITH WINDSOR CIVIL PREPAREDNESS DIRECTOR
- 8/29/89 -- REVIEWED PERSONNEL EMERGENCY PROCEDURE WITH ST. FRANCIS HOSPITAL STAFF
- 8/31/89 -- RECEIVED AGREEMENT LETTER FOR SUPPORT BY ST. FRANCIS HOSPITAL
- 9/12/89 -- RECEIVED AGREEMENT LETTER FOR SUPPORT BY WINDSOR POLICE
- 10/02/89 -- RECEIVED AGREEMENT LETTER FOR SUPPORT BY WINDSOR FIRE COMPANIES
- 10/04/89 -- RECEIVED AGREEMENT LETTER FOR SUPPORT BY WINDSOR VOLUNTEER AMBULANCE ASSOCIATION
- 10/16/89 -- EPIP REV. 1 ISSUED
- 10/17/89 -- REVIEWED EMERGENCY PLAN WITH CONNECTICUT OFFICE OF EMERGENCY MANAGEMENT PERSONNEL
- 11/7/89 -- SELECT DISTRIBUTION OF DRILL SCENARIO
- 11/11/89 -- EMERGENCY RESPONSE TEAM TRAINING
- 11/13/89 -- BUILDING 17 2ND SHIFT EXERCISE
- 11/14/89 -- BUILDING 5 DAY SHIFT EXERCISE
- 11/15/89 -- BUILDING 17 3RD SHIFT EXERCISE
- 11/20/89 -- BUILDING 17 DAY SHIFT EXERCISE

EMERGENCY RESPONSE AREAS EXERCISED

- CRITICALITY ALARM SYSTEM ACTUATED BY RADIOACTIVE SOURCE
- BUILDING COMPLEX EVACUATION
- NOTIFICATION OF EMERGENCY RESPONSE ORGANIZATION
- ACTIVATION OF EMERGENCY OPERATIONS CENTER
- PERSONNEL ACCOUNTABILITY
- MOBILIZATION OF EMERGENCY RESPONSE TEAMS
- FACILITY RE-ENTRY AND DETERMINATION OF CONDITIONS
- SEARCH FOR MISSING PERSONNEL
- NOTIFICATION OF OFF-SITE AGENCIES

EMERGENCY RESPONSE PERSONNEL TRAINING

INSTRUCTION TOPICS

Response organization,
EPIP orientation and
Emergency Facility tour

Criticality Alarm System

Radiation Survey
Instrument use

SCBA use and trial fit

EMERGENCY RESPONSE TEAMS

Re-Entry Team, Survey Team,
Radiation Protection and
Emergency Director

Re-Entry Team and Emergency
Director

Re-Entry Team, Survey Team
and Emergency Director

Re-Entry Team and Emergency
Director

- EPIP STUDY GUIDE MATERIAL PROVIDED TO SELECTED
MANAGEMENT PERSONNEL PRIOR TO TRAINING SESSIONS
- HANDOUT MATERIAL ALSO PROVIDED DURING TRAINING
SESSIONS

IMPROVEMENT AREAS IDENTIFIED IN THE DRILLS

- PROVIDE A STREAMLINED PROCESS AND/OR STANDARDIZED DEVICES FOR NOTIFYING CE EMERGENCY RESPONSE PERSONNEL WHEREVER THEY ARE (ON OR OFF-SITE).

- IMPROVE MEANS OF NOTIFYING PERSONNEL OUTSIDE OF THE BUILDING 5 COMPLEX THAT AN ALARM CONDITION EXISTS INSIDE THE FACILITIES.

- IMPROVE RE-ENTRY TEAM COMMUNICATIONS WITH THE EMERGENCY DIRECTOR.

- IMPROVE RE-ENTRY TEAM RESPONSE TIME TO ENTER FACILITY.

REDEPLOYMENT

PREREQUISITE

MODIFIED ENRICHMENT CLEAN UP
TRAINING

PHASE ONE

MOVE PRESS 1
MOVE PRESS 5 TO HEMATITE
MOVE B.M.U. HOOD
SHIP DEWAX 1 TO HEMATITE
SHIP SINTERING 2 TO HEMATITE
MOVE GRINDERS
BUILD TEMPORARY WALL-PELLET STORAGE
MOVE CONVEYOR STORAGE P-18
REMOVE MISC. HOODS
MOVE P. STAMP MACH. TO HEMATITE

PHASE TWO

REMOVE MICRONIZER STATION
REMOVE POWDER PREP STATION 1
REMOVE O+R FURNACE
REMOVE PRESSES 1 AND 2
REMOVE SMALL CENTRIFUGE

REDEPLOYMENT

PHASE THREE

MOVE DEWAX 2 TO HEMATITE
MOVE SINTERING 3 TO HEMATITE

PHASE FOUR

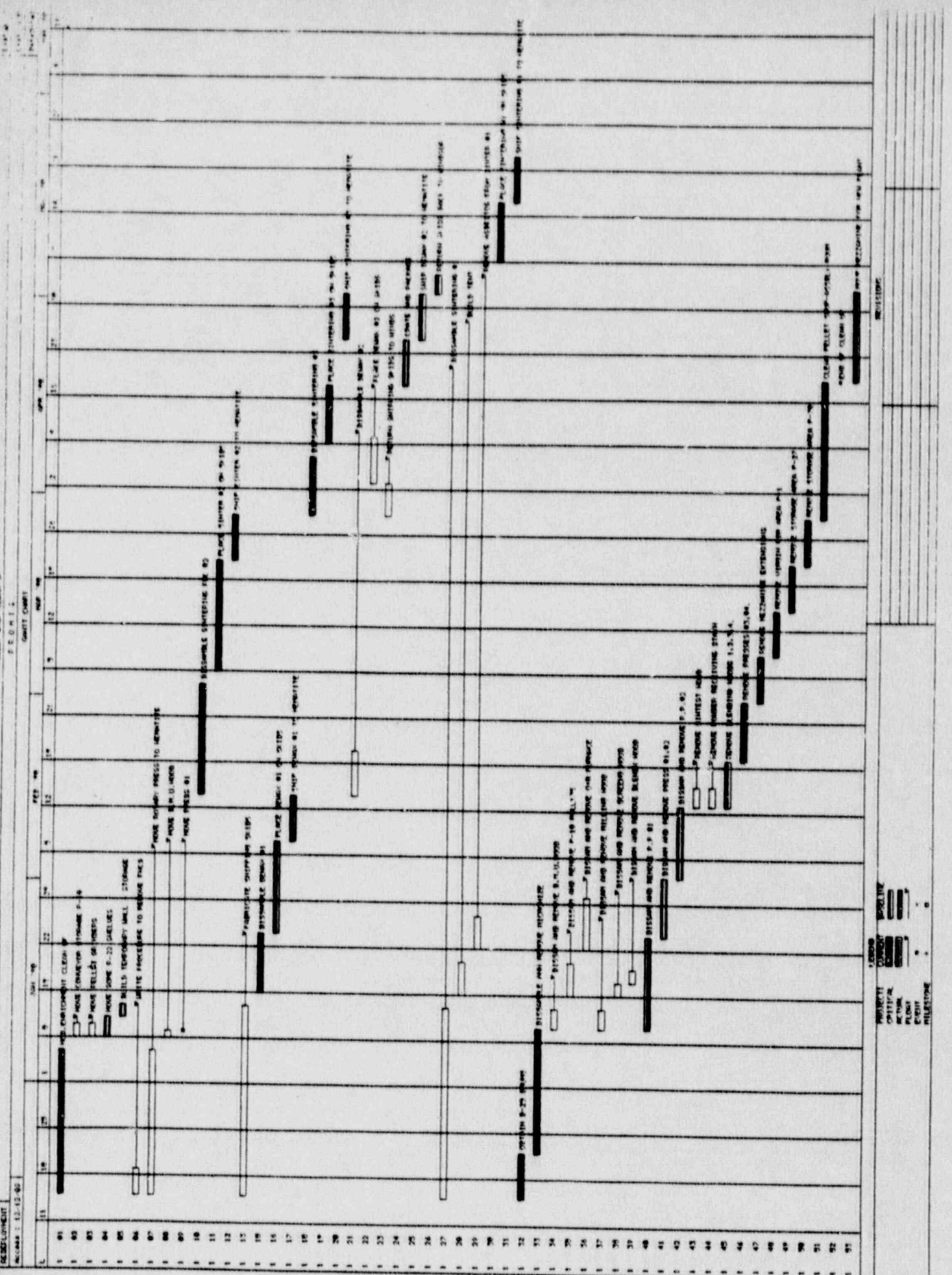
MOVE SINTERING 1 TO HEMATITE
REMOVE POWDER PREP 2
REMOVE WALKWAY
REMOVE BLENDER HOODS
REMOVE MEZZANINE (FOR BLENDING HOODS)

PHASE FIVE

REMOVE STORAGE AREA P-70
REMOVE STORAGE P-27
REMOVE V.P. STORAGE AREA P-1
REMOVE SIN. TEST HOOD

PHASE SIX

DECONTAMINATE
MODIFY SHOP FOR NEW EQPM.
MOVE AMMONIA TANK TO HEMATITE
MOVE LINBERG DISSOCIATOR TO HEMATITE



REDEPLOYMENT PROJECT

PROJECT MANAGEMENT	G. PAGE D. VALICKIS
RADIATION PROTECTION	P. ROSENTHAL J. VOLLARO
ACCOUNTABILITY	R. SHEERAN M. DODGE M. SMALLIDGE
MANPOWER	G. BUDDENHAGEN K. WAGNER
MAINTENANCE	R. GORSKI
SHIPPING	D. PARKS

MATERIAL & EQUIPMENT DISPOSITION

SHIP TO HEMATITE

REMAIN AT WINDSOR

DISPOSAL (RECYCLE CENTER)

OPERATIONS DURING REDEPLOYMENT

PROCESSING & CONTROLLING URANIUM SCRAP

DEWAX FURNACE #2 (SCRAP PROCESSING)

SCRAP PACKAGING (CE-250)

CENTRIFUGE STATION

ASSAY UNIT

TRASH COMPACTING

FILTER KNOCKDOWN HOOD

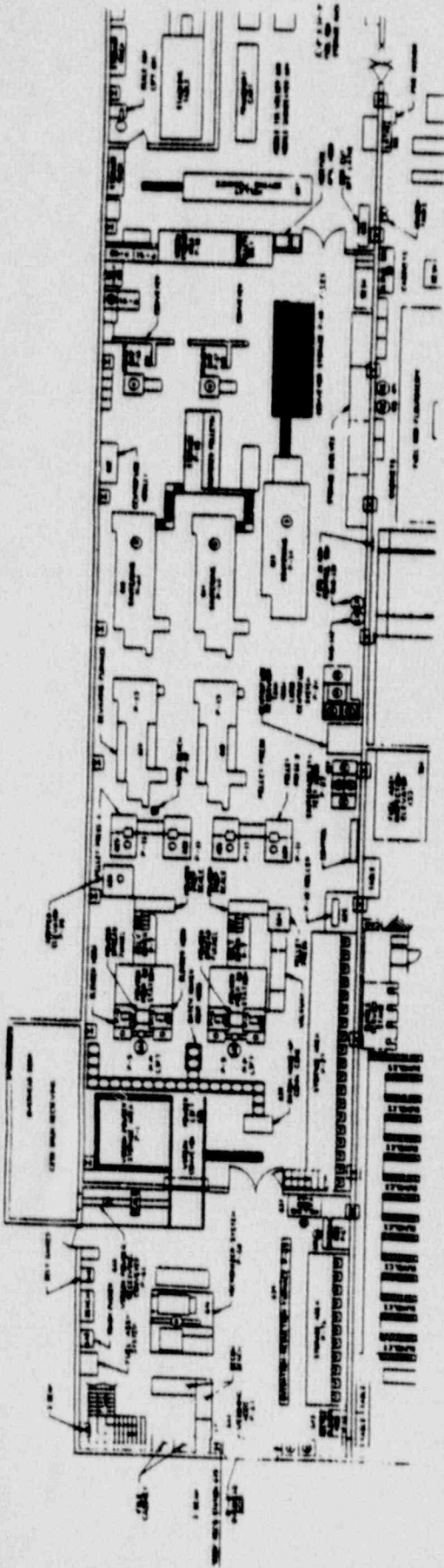
FILTER DRYING (BLUE M OVEN)

FILTER STORAGE (ANNEX MEZZANINE)

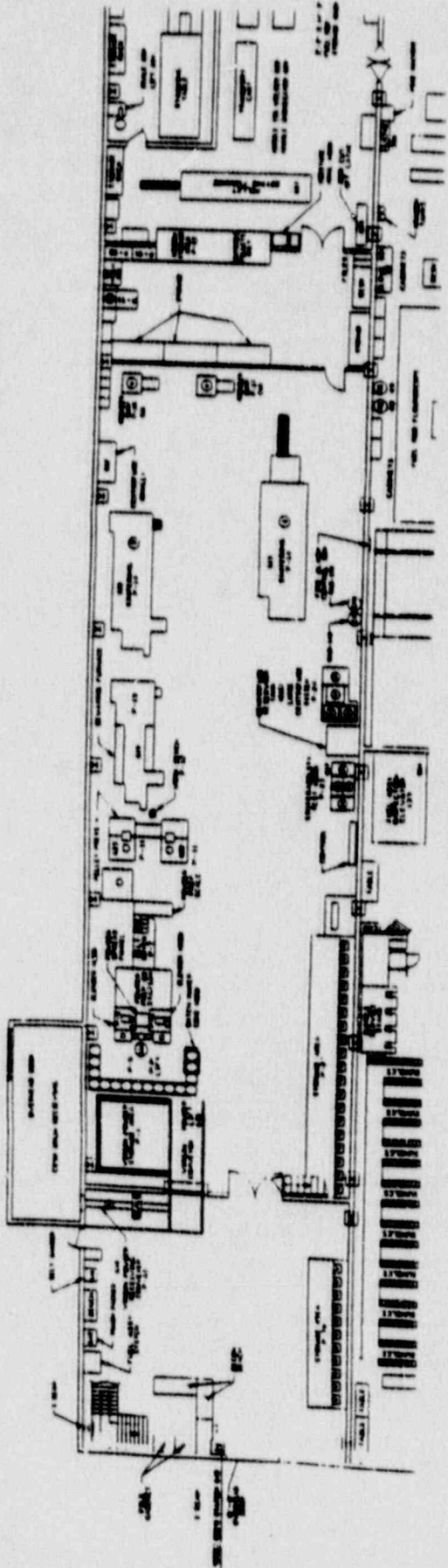
B-25 PACKAGING

HEALTH AND SAFETY

- . ALL WORK TO BE PERFORMED UNDER RWP, OPERATION SHEET, OR DISASSEMBLY PROCEDURE INVOKED BY RWP
- . R. P. TECHNICIANS DEDICATED TO PROJECT
- . VENTILATION SYSTEMS WILL NOT BE ALTERED WITH EXCEPTION OF DISCONNECTING EQUIPMENT
- . USE LAPEL AIR SAMPLERS AND GENERAL AIR SAMPLERS (EVENTUALLY REMOVING THE FIXED POSITION SAMPLERS)

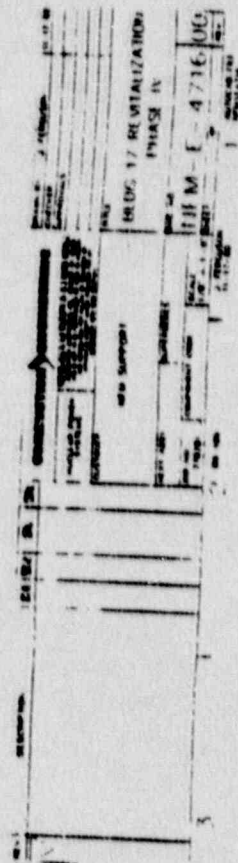
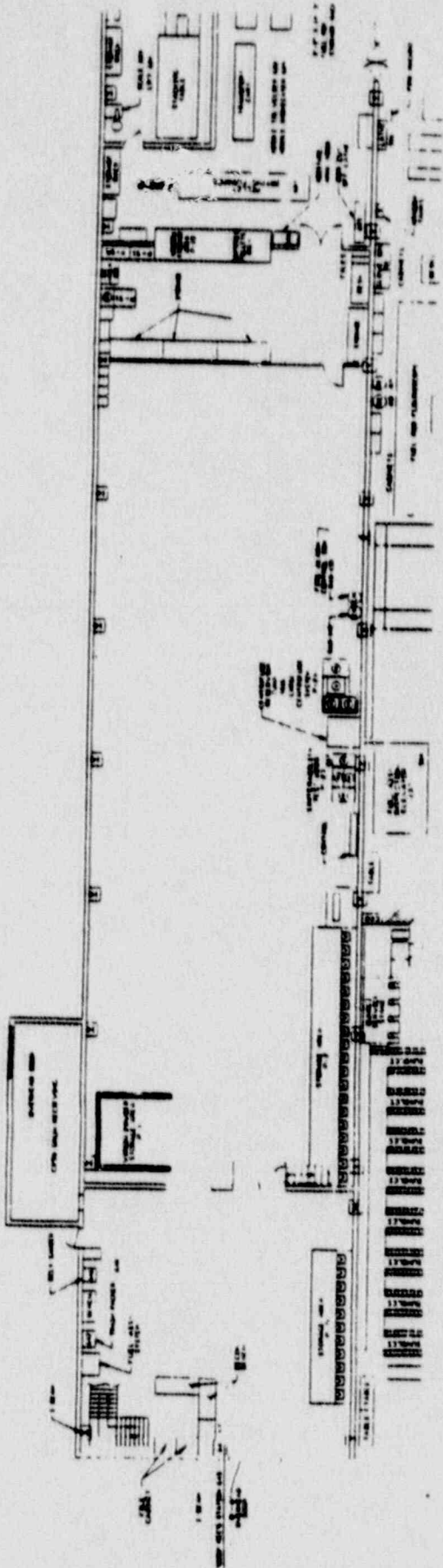


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	OFFICE SUPPORT	BLEDC 17 REALIZATION EHS DMG
		NFM-E - 4712 00
		50000



NO.	DESCRIPTION	QTY	UNIT	PRICE	TOTAL
1	...	...	...	...	...
2	...	...	...	...	...
3	...	...	...	...	...
TOTAL					...

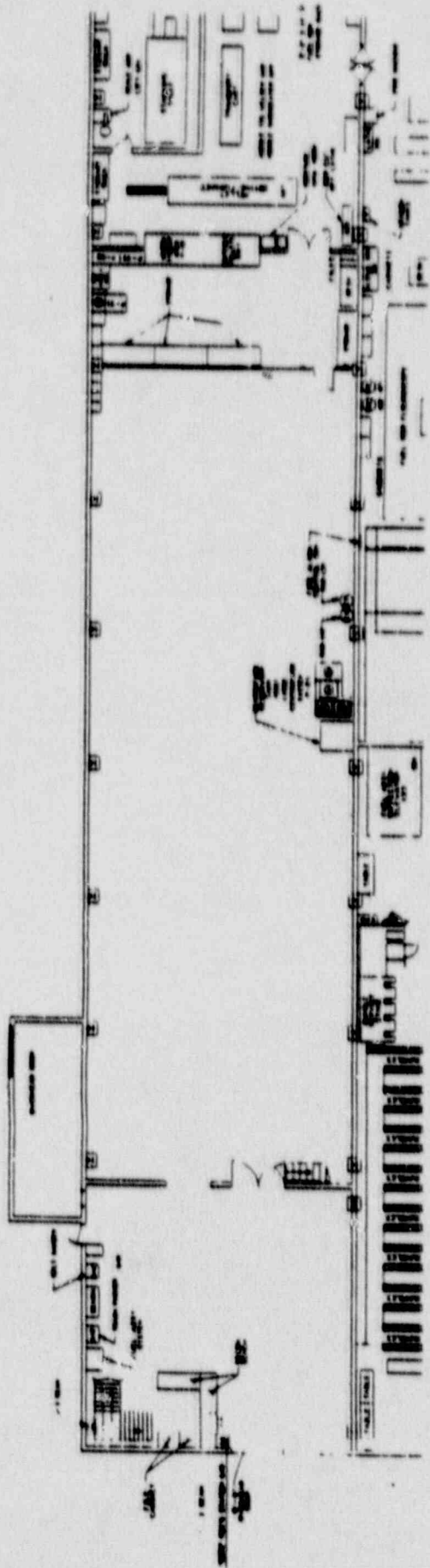
BLDG 17 REALIZATION
PHASE II
NFM-4-714 00



DEDC 17 REALIZATION
PHASE IV

HPM-4716-00

10/17/88



BLDG 17 RE UTILIZATION
PHASE V

REF M-E-4717 (00)

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4