

**ENCLOSURE**

**CONSUMERS POWER COMPANY  
PALISADES PLANT  
DOCKET 50-255**

**FINAL SCENARIO  
1996 PALISADES EMERGENCY EXERCISE**

9612110205 2009



**Consumers  
Power**

**POWERING  
MICHIGAN'S PROGRESS**

# 1996 PALEX

October 22, 1996

Palex 1996

*With one of the two diesel electrical generators tagged out for maintenance, (recoverable if maintenance on the diesel is completed) the plant undergoes a Steam Generator tube leak and is tripped off line.*

*Safety Injection will be initiated to maintain Primary Coolant Pressure and will be subsequently throttled. One of the High Pressure pumps will trip but may be recovered by the crew if timely and appropriate actions occur.*

*Emergency procedures mitigating the casualty will be entered. An Alert will be declared and the Emergency Plan entered. An accountability exercise will require the plant staff to locate an unaccounted for employee. Two Primary Coolant Pumps will be turned off.*

*A Primary Coolant Pump will become distressed as it undergoes shaft failure. When it fails (just as it is tripping), debris will enter the Primary Coolant System. Within minutes it enters the fuel region of the core and causes fuel failure due to impingement. Local radiation detectors will then give some indication of the failed fuel. At this time, an uncontrolled cool down of the Primary Coolant System begins due to a structural failure of Steam Generator relief valve RV-0707 which allows the valve to open. As the downstream flange on this valve has been improperly assembled (no gasket), the affected steam generator safety valve downstream piping in the middle level of the Component Cooling Room is also spewing contaminated steam into the room. This area will then be inaccessible due to steam, visibility and unknown radiation dose rates.*

*Attempts to quantify the extent of failed fuel will be reduced to sample analysis and field data. A significant off site contaminated plume will be manifested for at least an hour.*

*The Site Emergency Director( SED) at the Emergency Off Site Facility (EOF) should raise the event classification to a General Emergency (GE). Protective Action Recommendations should be given to the State of Michigan Authorities recommending some identified sheltering of local inhabitants. As information from the field begins to come in as to the extent and intensity of the radioactive plume, Protective Action Recommendations are escalated to include evacuation locally and in specific areas.*

*A security door alarm will be received at the Spent Fuel Pool. The security force is prevented from checking the alarm on time by the Operations Support Center OSC (requires significant communications, notifications, and decision making).*

*A news media team attempts to breach security at the Emergency Off Site Facility (EOF) to obtain an interview with the Site Emergency Director (SED).*

*Time jump to stable plant conditions (no further release occurring or threatened).*

*Drill terminated.*

**Time:**

0815 Initial conditions:

**Plant is at 100% Power near the end of Core Life.**

**1-2 Diesel is tagged out of service for maintenance** and work is in progress. Mechanical maintenance has removed the first of two Pressure Control Valves (PCVs) 1489 and 1490 from the Air start motors for their replacement. Instrument Technicians have removed the belly tank fuel switches LS 1468, 1471, 1473, and 1475 for a Functional Equivalent Substitution.

Radiation monitor RIA 2325 (Stack Gas) is out of service for calibration.

**No other equipment is out of service.**

0830 Scenario begins (post turnover etc.):

0835 **70 g.p.m. tube leak begins in the B Steam Generator.**

0836 Condenser Off Gas Radiation Monitor Alarms (RIA 0631 @  $5 \times E6$ ) and continues to rise (Will lower if it is isolated from the steam flow stream from the B Steam Generator). The Operators enter the Alarm Response Procedure (ARP) and begin to perform directed actions such as: requests confirmatory Steam Generator samples and consider entry into Off Normal Procedures (ONPs) for Steam Generator Tube Leak (ONP 23.2).

0837 Second Charging pump automatically starts, first Charging pump speeds up in an attempt to maintain level in the Pressurizer.

Operators attempt to quantify the leak (may leave Letdown in service).  
Failed Fuel Monitor Low Flow alarm if Letdown is isolated.

RIA 2323 "B" Main Steam Line Gamma Radiation monitor alarms in the "alert" range.

RIA 2326 Stack Gas low range monitor reading trends upward.

Stack gas monitor trending up.

PCS Pressure begins to lower.

0838 Third Charging pump automatically starts, first Charging pump at max speed  
(May take longer if letdown is isolated).

0840 Volume Control Tank Low Level alarm (VCT).

0842 Crew quantifies the leak at greater than 50 gallons per minute and then:

The Control Room Supervisor (CRS) orders the reactor plant "tripped" off and the Shift Supervisor (SS) enters the Emergency Implementation (E.I.) Procedure (per Off Normal Procedure 23.2).

**OR....** The CRS orders the plant to commence a down power evolution (per Off Normal Procedure ONP 23.2).

**IF....** The plant down power evolution is ordered instead of a plant trip, the scenario controllers will **insert a turbine trip** on the simulator to cause the reactor plant to trip and force Emergency Operating Procedure (EOP) entry by the crew.

Post trip actions and diagnosis of Emergency Operating Procedure EOP 1.0 and Emergency Implementation Plan event classification begins.

0847 Steam Generator Blowdowns isolate (affects the ability to obtain Steam Generator chemistry samples.)

0851 Event diagnosis and classification complete.

Control Room Supervisor conducts a "briefing" of the operating crew.

Operators exit the Reactor Trip procedure (EOP1.0) and enter the Steam Generator Tube Rupture procedure (EOP 5.0) or the Functional Recovery procedure (EOP 9.0).

Operators initiate Emergency Boration of the Primary Coolant System.

Shift Supervisor activates the Site Emergency Plan at the **ALERT** level based on Primary Coolant System Integrity. Emergency Siren sounded, site wide accountability initiated.

Work on the 1-2 Diesel is interrupted.

**Note: The Diesel 1-2 can be returned to service after installation of the**

Pressure Control Valves and Level Switches. The protective tagging would have to be released and cleared, post maintenance testing performed and operability testing done before it would be considered OPERABLE. This would take several hours if undertaken.

**Controllers arrange the detention of an employee** in the Nuclear Performance Assessment Department (NPAD) office trailer for an Accountability process check.

0855 Operations requests Chemistry samples for activity and Lithium requested on both steam generators in accordance with Emergency Procedures (sample path may be automatically isolated).

Operators request Radiation surveys for both main steam lines.

0900 Operators continue the actions and notifications of Emergency Operating Procedures (EOP 5.0 or 9.0) and Emergency Implementation Procedure EI-2.1.

0905 Safety Injection Actuation Signal (SIAS) initiates on low Pressurizer Pressure.

Operators begin B Steam Generator isolation.

Operators determine adequate boron to be in the Primary Coolant System (PCS) allowing the cooling of the PCS below 525 degrees F. They then start cooling <525 but >500 degrees F. (They must get the plant below 525 degrees F to be able to isolate the B Steam Generator.)

Operators open Primary system relief valves (PORV) isolation valves in anticipation of future over pressure protection needs.

0907 **P 66A High Pressure Safety Injection (HPSI) pump trips** on a faulty supply breaker over current timed (Y phase) relay (the relay turns but does not reset as it should thus resulting in the unwarranted trip of the breaker).

**Note:** Recovery of this component enhances the plant safeguards capability should the crew elect to troubleshoot, repair, and recover P66A. The relay could be replaced from plant spared storage or the entire breaker may be exchanged with the spare breaker. The coordination of the activities necessary to restore this pump could take several hours.

0913 Operators remove the first two Primary Coolant Pumps (PCP)s from service.

0916 Operators meet the criteria for throttling and then throttle the equipment initiated by the Safety Injection Actuation Signal (SIAS).

0920 The Duty and Call Superintendent takes the Site Emergency Director (SED) role from the Shift Supervisor (SS). Emergency notifications are turned over from the Control Room to the Technical Support Center (TSC).

Chemistry delivers sample results (activity and lithium) if they were attainable (not isolated).

Operators complete the isolation of B Steam Generator.

0921 Accountability is completed and it is determined that one employee is missing.

Search and rescue activities begin.

0950 Site Emergency Director (SED) transfers Command and Control to the Emergency Off Site Facility (EOF) Director.

The missing employee in the NPAD trailer is recovered.

0956 Operators request that the Turbine Building Sump, Condensate, and connected systems requested be sampled.

Operators request additional radiation surveys per EOP Sup #14.

Operators place Low Temperature Over Protection System in service.

1000 Operators begin a plant cooldown below 500 degrees F to curtail the Steam Generator tube leak.

Emergency Procedure actions and notifications continue.

1015 **Intrusion alarm is received on the Cask Transfer access door due to a faulty mechanism. Security must coordinate their response through the Operations Support Center (OSC). Due to concerns regarding unknown radiation doses in the area, the response may be delayed by the OSC. Interface between security and the OSC must be sufficient to ensure appropriate permissions and notifications occur with regard to the suspension/delay of normal security requirements.**

1020 **Primary Coolant Pump (PCP) P50C vibration distress alert alarm occurs.**

1025 **PCP P50C tripped (due to distress associated with shaft failure) if the crew has not manually tripped the pump by this time.**

1031 **B Steam Generator steam safety valve RV- 0707 undergoes structural failure** allowing the valve to lift, causing an uncontrolled cool down of the plant to begin.

**1%Failed fuel** (due to PCP shaft component debris) occurs causing some local radiation monitors to begin to reflect elevated radiation indications.

Operators exit any "optimal recovery" procedures that they might have been in (EOP 5.0) and enter Emergency Operating Procedure (EOP) 9.0 (if they were not already using this "functional recovery" procedure).

**Main steam line gamma monitors (RIA 2323 and 2324), the corridor monitor outside the Control Room (RIA 2309), the Containment area monitor (RIA 2315), and the Component Cooling Upper Level area monitor (penetration and fan room RIA 5710) radiation readings begin to raise slightly.**

The Component Cooling Room (CCW) room is uninhabitable due to steam, visibility and unknown radiation as there was no gasket installed in the downstream flange.

A radioactive plume is initiated with some contamination (only on site at first).

Radiation levels around Chemical and Volume Control System components is unaffected as Letdown flow is isolated.

1040 **Failed Fuel Monitor (if in service via Letdown flow) alarms and indicates at the top of its scale. If the crew asks to have this monitor "up scaled", controllers will only simulate doing so and report that it has been up scaled (leave it on the initial scale where it is at the top of the scale).**

Attempts to obtain Primary Coolant System (PCS) samples via Post Accident Sample Panel (PASM Panel) may be made. (Extent of fuel damage is not discernable from the indications of fuel damage which are available at this time). Radiation dose received by those attempting to draw and process such samples will be significant.

Off Gas and Containment Area Monitors (RIA 1805, 1806, 1807, and 1808) are trending higher. **Controllers will raise the background radiation levels on these detectors about for an hour before allowing them to begin to lower or "decay".**



Entry into the Failed Fuel Procedure Off Normal Procedure (ONP) 11.1 may be delayed due to the time it takes for plant conditions to match the "Symptoms" for entry.

1045 The Emergency Off Site Facility (EOF) Director declares a **General Emergency (GE)**

**Protective Action Recommendations** given to the State of Michigan for shelter within 2 miles and a radius 5 miles for the downwind sector.

First field team radiation readings detected at ½ mile from the site indicate that an off site release is in progress.

1100 Field team data indicates that the **Protective Action Guidelines are exceeded** at 2 miles.

Emergency Procedure actions and notifications continue.

1115 **Protective Action Recommendations** are generated (evacuation to 5 miles in all sectors and 10 miles in down wind sectors).

1150 A media identified vehicle breeches Emergency Off Site Facility (EOF) perimeter security.

Security within the Emergency Off Site Facility (EOF) is notified to anticipate an encounter with the media by the perimeter security.

1155 Media team attempts access to Emergency Off Site Facility (EOF) to film and interview the Site Emergency Director (SED).

Emergency Off Site Facility (EOF) security detains the media team and makes the appropriate notifications.

1200 Emergency Procedure actions and notifications continue.

1300 Emergency Procedure actions and notifications continue.

1400 "**Time jump**" conditions announced: Plant is in Cold Shutdown and depressurized on Shutdown Cooling System flow. All electrical and Safety Train equipment is operable. The release has been terminated. Maintenance has "shored up" the depressurized RV-0707 and its downstream flange (from the B Steam Generator) in the Component Cooling Room middle level.

1415 Scenario concluded.

Scenario: **Palex 96** Date 22 October 1996 Time 0800

Message No: 1 Scenario time 0000

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**

All oncoming shift personnel

**Simulated Plant Conditions:**

See the attached data sheets and the initial conditions listed below.

**Message:**

The plant has been operating at 99.6 % power for more than 100 days and is very near to the end of core life. The plant is running well and few alarms are annunciated. The 1-2 Diesel Generator has been tagged out of service for workmen protection at 0200 and released for Maintenance at 0300. Mechanical Maintenance has removed the first of two pressure control valves (PCVs 1489 and 1490) from the 1-2 Diesel Generator air start motors for their replacement. Instrument Technicians have removed the belly tank fuel oil switches (LS-1468, 1471, 1473, and 1475) from the 1-2 Diesel Generator for a Functional Equivalent Substitution of the switches. RIA 2325 Radiation Monitor (Stack Gas Effluent particulate Iodine) is out of service for calibration. No other equipment is degraded or out of service. The plant is at 11.7 GWD with PCS boron at 71 ppm. Xenon is at equilibrium and target ASI is .02. Dose equivalent iodine is  $8.5 \text{ E}^{-2} \mu\text{/Ci}$  and Iodine 131 is at  $2.1 \text{ E}^{-1} \mu\text{/Ci}$ . The Primary to Secondary Leak Rate based on Xenon 133 analysis of condenser off gas is at  $7 \text{ E}^{-5} \text{ gpm}$ . The weather is cool, partly cloudy, with a 10% chance of precipitation.

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**For Controller use only**

**Controller Notes:**

Selected players have been given copies of these initial conditions at the player briefing. The Simulator operator has brought up the **Simulator in IC 21** with 1-2 DG OOC (**Remote ED-45B Local over speed trip lever tripped** and the red "unit" light turned off **override DG 1-2 Pus-R** to simulate "tagged out" configuration). **RIA 2325** is on override "off". The simulator has been placed in "run" with charts etc. on.

**Action expected:**

The SCR staff should thoroughly familiarize themselves with the provided conditions.

Scenario: **Palex 96** Date 22 October 1996 Time 0815

Message No: 2 Scenario time 0015

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

Instruct the Control Room (simulator) to announce the following message: "Attention all personnel. The Emergency exercise will commence shortly. All announcements related to the exercise will be preceded and followed by the statement 'This is a drill.'"

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**For Controller use only**

**Controller Notes:**

**Note: The Diesel 1-2 can be returned to service** after reinstallation of Pressure Control Valves and Level Switches. The protective tagging would have to be released and cleared, post maintenance testing performed and operability testing done before it would be considered fully OPERABLE even if it were placed back in service. This would take several hours if undertaken. The Simulator Operator restores the diesel to service when "clearing" the protective tagging order (remote **ED-45B local over speed trip lever** for and the red "unit" light **DG 1-2 PUS-R** lit on 1-2 DG). AO Controller will have to get word to the Simulator Operator when the "clearing of the tags" has begun.

**Action expected:**

Control Room makes the Drill preparatory announcement.

Scenario: **Palex 96** Date 22 October 1996 Time 0830

Message No: 3 Scenario time 0030

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

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**For Controller use only**

**Controller Notes:**

The Simulator Operator will **insert a 70 gpm tube rupture** in the B Steam Generator (**MF- SG01B at .07**) in 5 minutes (0835 and runtime 0035). If a plant down power evolution is ordered instead of a plant trip, the scenario controllers will **insert a turbine trip (MF TC 01)** on the simulator to cause the reactor to trip and force Emergency Operating Procedure (EOP) entry.

**Action expected:**

Operators begin to detect/diagnose the casualty. Condenser Off Gas Radiation Monitor Alarms (RIA 0631 @ 5xE6) and continues to rise (Will lower if it is isolated from the steam flow stream from the B Steam Generator). The Operators enter the **Alarm Response Procedure (ARP)** and begin to perform directed actions such as: request confirmatory Steam Generator samples and consider entry into Off Normal Procedures (ONPs) for Steam Generator Tube Leak (ONP 23.2). They should then enter **ONP 23.2** for procedural guidance. The "B" Charging pump automatically starts and "A" Charging pump speeds up in an attempt to maintain level in the Pressurizer. Operators attempt to quantify the leak (may leave Letdown in service). The Failed Fuel Monitor Low Flow alarm will be received if Letdown is isolated. RIA 2323 "B" Main Steam Line Gamma Radiation monitor alarms in the "alert" range. RIA 2326 Stack Gas low range monitor reading trends upward. Stack gas monitor trending up. PCS Pressure begins to lower. The "C" Charging pump automatically starts, "A" Charging pump reaches maximum speed (if letdown is not isolated). Volume Control Tank Low Level alarm (VCT) annunciates. When the operators determine that the **PCS leak is greater than 50 gpm** and that it possibly is going into one of the Steam Generators, the following should occur: The Control Room Supervisor (CRS) orders the reactor plant "tripped" off or powered down, post trip actions and **diagnosis per Emergency Operating Procedure EOP 1.0** begins.

Scenario: **Palex 96** Date 22 October 1996 Time 0845

Message No: 4 Scenario time 0045

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**

Control Room personnel

**Simulated Plant Conditions:**

See the attached data sheets.

**Message:**

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**For Controller use only**

**Controller Notes:**

**Controllers arrange the detention of an employee in the Nuclear Performance Assessment Department (NPAD) office trailer for an Accountability process check.**

**Action expected:**

Steam Generator Blowdowns isolate (affects the ability to obtain Steam Generator chemistry samples.) Operators should determine that the PCS leak is a tube leak and that it is most likely in the B Steam Generator. They should have entered EOP 1.0 upon the reactor trip. Operators continue to diagnose the casualty in EOP 1.0. When the post trip actions and event diagnosis are complete, the following activities should occur: Control Room Supervisor (CRS) conducts a "briefing" of the operating crew, Operators exit the Reactor Trip procedure (EOP 1.0) and enter the Steam Generator Tube Rupture procedure (**EOP 5.0**) or the Functional Recovery procedure (**EOP 9.0**), Operators initiate Emergency Boration of the Primary Coolant System, the Shift Supervisor completes event classification and activates the **Site Emergency Plan** at the **ALERT** level based on Primary Coolant System Integrity, the **Emergency Siren is sounded, site wide accountability is initiated**, work on the 1-2 Diesel is interrupted as workers assemble in accountability areas, Operators requests Chemistry samples for activity and Lithium on both steam generators in accordance with Emergency Procedures, Operators request Radiation surveys for both main steam lines.

Scenario: **Palex 96** Date 22 October 1996 Time 0900

Message No: 5 Scenario time 0100

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

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**For Controller use only**

**Controller Notes:**

Simulator Operator causes **P 66A High Pressure Safety Injection (HPSI) pump to trip** after it is automatically started on Safety Injection Actuation Signal (SIAS) for low Pressurizer pressure (**MF SI-01**). **Note:** Recovery of this component enhances the plant safeguards capability **should the crew elect to troubleshoot, repair, and recover P66A**. The relay has a faulty supply breaker over current timer on the Y phase (the relay turns but does not reset as it should thus resulting in the unwarranted trip of the breaker). **AO and Maintenance Controllers must know which relay to indicate tripped** to the players. The relay could be replaced from plant spared storage or the entire breaker may be exchanged with the spare breaker. The coordination of the activities necessary to **restore this pump could take several hours**. The **AO controller will have to notify the Simulator Operator** when the initial tagging and final "clearing" has begun to facilitate installation and deletion of (**MF SI-01**) the P 66A malfunction which removes and restores the pump to service. If an **Alert is not declared** by 0910, **Controllers will "force" the Alert** declaration.

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures (EOP 5.0 or 9.0) and Emergency Implementation Procedure EI-2.1 and an **Alert** declared.. The following should be expected: Safety Injection Actuation Signal (SIAS) initiates on low Pressurizer pressure, Operators determine adequate boron to be in the Primary Coolant System (PCS) allowing the cooling of the PCS below 525 degrees F., they then start cooling <525 but >500 degrees F. (They must get the plant below 525 degrees F to be able to isolate the B Steam Generator.), Operators begin B Steam Generator isolation, Operators open Primary system relief valves (PORV) isolation valves in anticipation of future over pressure protection needs, **P 66A High Pressure Safety Injection (HPSI) pump trips**, Operators detect the loss of P66A, Operators remove the first two Primary Coolant Pumps (PCP)s from service at 1300 Psi as directed by procedure.

Scenario: **Palex 96** Date 22 October 1996 Time 0915

Message No: 6 Scenario time 0115

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**

Control Room personnel

**Simulated Plant Conditions:**

See the attached data sheets.

**Message:**

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**For Controller use only**

**Controller Notes:**

If Radiation Protection performs a survey of the steam piping prior to 1030, the **Controller can indicate that the levels are near normal with B generator steam lines slightly elevated** (After 1030, the area will not be accessible).

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures (EOP 5.0 or 9.0) and Emergency Implementation Procedure. This should include the meeting of the SIAS throttling criteria and the possible throttling of some of this equipment, as well as the possible completion of the isolation of B Steam Generator. Chemistry delivers sample results (activity and lithium) if they were attained. **The Duty and Call Superintendent takes the Site Emergency Director (SED) role from the Shift Supervisor (SS). Emergency notifications are turned over from the Control Room to the Technical Support Center (TSC). Accountability is completed and it is determined that one employee is missing. Search and rescue activities begin.**

Scenario: **Pallex 96** Date 22 October 1996 Time 0930

Message No: 7 Scenario time 0130

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

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**For Controller use only**

**Controller Notes:**

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures (EOP 5.0 or 9.0) and Emergency Implementation Procedure



Scenario: **Palex 96** Date 22 October 1996 Time 0945

Message No: 8 Scenario time 0145

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**

Control Room personnel

**Simulated Plant Conditions:**

See the attached data sheets.

**Message:**

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**For Controller use only**

**Controller Notes:**

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures (EOP 5.0 or 9.0) and Emergency Implementation Procedure. **Site Emergency Director (SED) transfers Command and Control to the Emergency Off Site Facility (EOF) Director.** **The missing employee in the NPAD trailer is recovered.** Operators request that the Turbine Building Sump, Condensate, and connected systems requested be sampled. Operators request additional radiation surveys per EOP Sup #14. Operators place Low Temperature Over Protection System in service as they are able.

Scenario: **Palex 96** Date 22 October 1996 Time 1000

Message No: 9 Scenario time 0200

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

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**For Controller use only**

**Controller Notes:**

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures (EOP 5.0 or 9.0) and Emergency Implementation Procedure. Operators begin a plant cooldown below 500 degrees F to curtail the Steam Generator tube leak.

Scenario: **Palex 96** - Date 22 October 1996 Time 1015

Message No: 10 Scenario time 0215

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**

Control Room personnel

**Simulated Plant Conditions:**

See the attached data sheets.

**Message:**

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**For Controller use only**

**Controller Notes:**

Controllers cause a the SFP access **door to alarm** (with a "nonplaying" Security Officer). At 1020, Primary Coolant Pump (PCP) P50C vibration distress alert alarm occurs (**Simulator Operator inserts RC-16C**). **PCP P50C tripped by the Simulator operator** after 5 minutes (due to distress IAW shaft failure) if the crew has not manually tripped the pump by this time. Some **component material** from the Primary Coolant Pump (PCP) enter the system and begin to **access the reactor core**. If Letdown has been isolated by the crew, The **Simulator Operator overrides the Control Valve hand switch to close** to prevent its reopening. If it is still in service, then the **Simulator Operator will override the Hand Switch for CV 2001 to "auto" and override TIC 0201 to "1.0"** (could be preloaded on remote 5 for easier implementation).

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures (EOP 5.0 or 9.0) and Emergency Implementation Procedure. Operators may trip P50C Primary Coolant Pump. **Intrusion alarm** is received on the Spent Fuel Pool access door due to a faulty mechanism. Security must **coordinate their response through the Operations Support Center (OSC)**. Due to concerns regarding unknown radiation doses in the area, the response may be delayed by the OSC. Interface between security and the OSC must be sufficient to ensure appropriate permissions and notifications occur with regard to the suspension/delay of normal security requirements.

Scenario: **Palex 96** Date 22 October 1996 Time 1030

Message No: 11 Scenario time 0230

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

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**For Controller use only**

**Controller Notes:**

**B Steam Generator steam safety valve RV-0707 (last of the 12) undergoes structural failure and lifts (MS-06B), causing an uncontrolled cool down of the plant to begin as contaminated steam exits the North West Safety Valve plenum (3 valves per plenum) forming a plume (AO Controller). The downstream flange was improperly assembled (no gasket) and is allowing large quantities of contaminated steam to flow into the Component Cooling Water (CCW) Room and out of its "Jail House Doors" (AO Controller). Visibility in the CCW Room is zero. 1% Failed fuel (due to PCP shaft debris) occurs (RC-22 @ 1.0) causing some local radiation monitors to begin to reflect elevated radiation indications. If the crew asks for the Failed Fuel monitor "up scaled", controllers will report it done but not perform the action. Attempts to obtain Primary Coolant System (PCS) samples via Post Accident Sample Panel (PASM Panel) may be made but will result in significant dose to participants. (Extent of fuel damage is not otherwise discernable). Off Gas and Containment Area Monitors (RIA 1805, 1806, 1807, and 1808) are trending higher. Controllers will raise the background radiation levels on these detectors for about an hour before allowing them to begin to lower/decay.**

**Action expected:**

Operators continue the actions and notifications of the Emergency Implementation Procedure. When the Excess Steam Demand Event occurs, Operators exit any "optimal recovery" procedures that they might have been in (EOP 5.0) and enter Emergency Operating Procedure (EOP) 9.0 if they were not already using this "functional recovery" procedure. **Main steam line gamma monitors (RIA 2323 and 2324), the corridor monitor outside the Control Room (RIA 2309), the Containment area monitor (RIA 2315), and the Component Cooling Upper Level area monitor (penetration and fan room RIA 5710) radiation readings begin to raise slightly.** The Component Cooling Room (CCW) room is uninhabitable due to steam, visibility, high radiation, and heated unlagged metal structures. Failed Fuel Monitor (if Letdown is in service) alarms and indicates at the top of its scale. Entry into the Failed Fuel Procedure Off Normal Procedure (ONP) 11.1 is delayed due to "symptoms" not yet matching conditions. the time it takes for plant conditions to match the "Symptoms" for entry.

Scenario: . . . **Palex 96**      Date 22 October 1996      Time 1045

Message No: 12      Scenario time 0245

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

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**For Controller use only**

**Controller Notes:**

First field team radiation readings detected at  $\frac{1}{2}$  **mile from the site** indicate that an off site release is in progress.

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures 9.0 and Emergency Implementation Procedure. The Emergency Off Site Facility (EOF) Director declares a **General Emergency (GE)**. **Protective Action Recommendations** given to the State of Michigan for **shelter within 2 miles and a radius 5 miles for the downwind sector**. First field team radiation readings detected at  $\frac{1}{2}$  mile from the site indicate that an off site release is in progress.

Scenario: **Palex 96** Date 22 October 1996 Time 1100

Message No: 13 Scenario time 0300

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

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**For Controller use only**

**Controller Notes:**

Field team data indicates that the **Protective Action Guidelines are exceeded** at 2 miles.

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure. Field team data indicates that the **Protective Action Guidelines are exceeded** at 2 miles.

Scenario: **Palex 96** Date 22 October 1996 Time 1115

Message No: 14 Scenario time 0315

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

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**For Controller use only**

**Controller Notes:**

Steam, Heat, and Visibility are yet preventing entry into the Component Cooling Water Room. The Air Monitoring Alarm system outside the Control Room (in the plume area) does not alarm (though its read out continues to elevate) because of its background substitution feature. The approximate 4 to 5 mR/hr field is detectable on **RIA 2310 which elevates to its 5 mR/hr alarm** in the near future.

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure. **Protective Action Recommendations** are generated (5 evacuation to miles in all sectors and 10 miles in down wind sectors).

Scenario: **Paléx 96** Date 22 October 1996 Time 1130

Message No: 15 Scenario time 0330

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure.



Scenario: **Palex 96** Date 22 October 1996 Time 1145

Message No: 16 Scenario time 0345

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**

Control Room personnel

**Simulated Plant Conditions:**

See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

A media identified vehicle ignores/breaches Emergency Off Site Facility (EOF) perimeter security. The media team then attempts to access Emergency Off Site Facility (EOF) posing to film and interview the Site Emergency Director (SED).

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure. Security within the Emergency Off Site Facility (EOF) is notified to anticipate an encounter with the media reported by the perimeter security. Emergency Off Site Facility (EOF) security detains the media team and makes the appropriate notifications.

Scenario: **Palex 96** Date 22 October 1996 Time 1200

Message No: 17 Scenario time 0400

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure.

Scenario: **Palex 96** Date 22 October 1996 Time 1215

Message No: 18 Scenario time 0415

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure.

Scenario: **Palex 96** Date 22 October 1996 Time 1230

Message No: 19 Scenario time 0430

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure.

Scenario: **Palex 96** Date 22 October 1996 Time 1245

Message No: 20 Scenario time 0445

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure.

Scenario: **Palex 96** Date 22 October 1996 Time 1300

Message No: 21 Scenario time 0500

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure.

Scenario: **Palex 96** Date 22 October 1996 Time 1315

Message No: 22 Scenario time 0515

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure.

Scenario: **Palex 96** Date 22 October 1996 Time 1330

Message No: 23 Scenario time 0530

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure.



Scenario: **Palex 96** Date 22 October 1996 Time 1345

Message No: 24 Scenario time 0545

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

**Action expected:**

Operators continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure.

Scenario: **Palex 96** Date 22 October 1996 Time 1400

Message No: 25 Scenario time 0600

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**

Control Room personnel

**Simulated Plant Conditions:**

See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

At 1405 "**Time jump**" conditions (24 hours) are announced in **each facility** as follows: "Plant is in Cold Shutdown and depressurized on Shutdown Cooling System flow (**no steam being formed and no plume being released**). All electrical and Safety Train equipment is operable. Maintenance has closed **RV-0707** steam generator relief valve in the middle level Component Cooling Room." **The EOF Director should make this announcement to the Plant over the P.A. system.** The conclusion of the scenario is eminent at the "time jump" announcement.

**Action expected:**

Operators initially continue the actions and notifications of Emergency Operating Procedures EOP 9.0 and Emergency Implementation Procedure until the "time jump".

Scenario: **Palex 96** Date 22 October 1996 Time 1415

Message No: 26 Scenario time 0615

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

The last set of data sheets reflect the "Cold Shut Down" conditions of the 24 hour "time jump".

**Action expected:**

Scenario **concluded**, Conclusion announced.

Scenario: **Palex 96** Date 22 October 1996 Time 1415

Message No: 26 Scenario time 0615

**Palisades Nuclear Plant**  
**Emergency Preparedness Exercise Form**

**Message For:**  
Control Room personnel

**Simulated Plant Conditions:**  
See the attached data sheets.

**Message:**

---

**For Controller use only**

**Controller Notes:**

The last set of data sheets reflect the "Cold Shut Down" conditions of the 24 hour "time jump".

**Action expected:**

Scenario **concluded**, Conclusion announced.

Site Emergency Planning Exercise  
Plant Status Report

10/23/1996 14:15

20

PANEL C-13 INSTRUMENTS

CMDSATE STO TANK LVL	78.75 percent
CNMT BLDG DOME TEMP	82.48 Deg F
SIRW TANK LEVEL	96.85 percent
CNMT WR PRESS 1805A	.00 psig
CNMT SUMP WATER LVL	585.01 feet
CNMT FLOOR WATER LVL	590.30 feet
SAFETY INJ T-82A LVL	84.56 percent
SAFETY INJ T-82B LVL	84.30 percent
SAFETY INJ T-82C LVL	84.24 percent
SAFETY INJ T-82D LVL	84.27 percent
SAFETY INJ T-82A PRS	216.90 psig
SAFETY INJ T-82B PRS	215.93 psig
SAFETY INJ T-82C PRS	216.99 psig
SAFETY INJ T-82D PRS	216.80 psig
SIAS SIGNAL STATUS	Normal

ANNUCIATOR PANEL K-13

HI PRES SIG STAT	Normal
MT HI RAD SIG STAT	Normal

PANEL C-12 INSTRUMENTS

BOR ACID TK T-53A LVL	98.00 percent
BOR ACID TK T-53B LVL	98.00 percent
PRI COOLT PMP A amps	.00 amps
PRI COOLT PMP B amps	.00 amps
PRI COOLT PMP C amps	.00 amps
PRI COOLT PMP D amps	.00 amps
HOT LEG LP 1 TEMP	124.47 Deg F
HOT LEG LP 2 TEMP	124.49 Deg F
COLD LEG LP 1A TEMP	113.31 Deg F
COLD LEG LP 2A TEMP	100.69 Deg F
COLD LEG LP 1B TEMP	113.31 Deg F
COLD LEG LP 2B TEMP	100.69 Deg F
SUBCOOLED MAR LOOP A	89.77 Deg F
SUBCOOLED MAR LOOP B	89.76 Deg F
PZR WIDE RNG PRESS	15.41 psia
PZR SI CHANNEL PRESS	***** psia
STM GEN E-50A LVL	71.72 percent
STM GEN E-50A PRESS	14.28 psia
STM GEN E-50A STM FLO	.00 Mlbm/hr
FW FLOW SGA	.00 Mlbm/hr
STM GEN E-50B LVL	.00 percent
STM GEN E-50B PRESS	14.28 psia
STM GEN E-50B STM FLO	.00 Mlbm/hr
FW FLOW SGB	.00 Mlbm/hr

Site Emergency Planning Exercise  
Plant Status Report

21

10/23/1996 14:15

PANEL C-01 INSTRUMENTS

STM GEN FD P-1A DISCH	14.99	psig
STM GEN FD P-1B DISCH	14.99	psig
SG AUX FD PMP C DISCH	16.90	psig
AUX FW PMP TURB STM P	.00	psig
SG AUX FD PP DISC HDR	16.90	psig
CNDR HOTWELL LEVEL	170.85	percent
CNDR VACUUM WR	.00	inHg
SG E50B ATMOS RV 779	Closed	
AUX FW PMP P-8A MOTOR	Stopped	
TURB DR AUX FW P-8B	Off	
AUX FW PMP P-8C	Stopped	
HTR DRAIN PMP P-10A	Stopped	
HTR DRAIN PMP P-10B	Stopped	
CONDENSATE PMP P2A	Off	
CONDENSATE PMP P2B	Off	

PANEL C-11 INSTRUMENTS

FW FLOW STM E-50A	.00	gpm
FW FLOW STM E-50A	.00	gpm
FW FLOW STM E-50B	.00	gpm
AUX FW FLOW STM E-50B	.00	gpm
CNDR VACUUM PRESSURE	.00	inHg

PANELS C-11 AND BACK OF C-11A

CNMT RAD ISO RI1805	.62E+00	rem/hr
CNMT RAD ISO RI1806	.70E+00	rem/hr
CNMT RAD ISO RI1807	.61E+01	rem/hr
CNMT RAD ISO RI1808	.30E+01	rem/hr
CNMT HI R GAM RIA2321	.16E-01	rem/hr
CNMT HI R GAM RIA2322	.15E-01	rem/hr
CNMT H2 CONC RIGHT	.00E+00	percent
CNMT H2 CONC LEFT	.00E+00	percent
STM GEN A GAM RIA2324	.33E+02	rem/hr
STM GEN B GAM RIA2323	.17E+02	rem/hr

DATALOGGER ONLY INPUTS

GEN GROSS OUTPUT	.00	Mw
STAT NET ELEC OUTPUT	.00	Mw
GRP 1 GRP TARGET ROD	.00	inches
GRP 2 GRP TARGET ROD	.00	inches
GRP 3 GRP TARGET ROD	.00	inches
GRP 4 GRP TARGET ROD	.00	inches
GRP A GRP TARGET ROD	.00	inches
GRP B GRP TARGET ROD	.00	inches
AVG CET TEMP	128.43	Deg F

Site Emergency Planning Exercise  
Plant Status Report

10/23/1996 14:15

## PANEL C-08 INSTRUMENTS

SERVICE WTR PMP P-7A	Started
SERVICE WTR PMP P-7B	Started
SERVICE WTR PMP P-7C	Started
PUMP CLG PMP P-52A	Started
PUMP CLG PMP P-52B	Stopped
PUMP CLG PMP P-52C	Started
ENMT AIR CLR FAN V-1A	Stopped
ENMT AIR CLR FAN V-2A	Stopped
ENMT AIR CLR FAN V-3A	Started
ENMT AIR CLR FAN V-4A	Started

## PANEL C-03 INSTRUMENTS

PSI PUMP P-66A	Stopped
PSI PUMP P-66B	Stopped
PSI PUMP P-67A	Stopped
PSI PUMP P-67B	Started
ENMT SPRAY PMP P-54A	Stopped
ENMT SPRAY PMP P-54B	Stopped
ENMT SPRAY PMP P-54C	Stopped
ENMT & REF TK CV-3057	Closed
ENMT SUMP CV-3029	Closed
ENMT & REF TK CV-3031	Closed
ENMT SUMP CV-3030	Closed

## PANEL C-02 INSTRUMENTS

SDC HX PCS OUT TEMP	100.80	Deg F
VOLUME CNTRL TK TEMP	68.83	Deg F
VOLUME CNTRL TK PRESS	35.28	psig
VOLUME CNTRL TK LEVEL	70.00	percent
PRI CLT LETDOWN FLOW	.00	gpm
CHARGING LINE FLOW	.00	gpm
QUENCH TK T-73 PRESS	.01	psig
QUENCH TK T-73 LEVEL	64.16	percent
PZR SI CHANNEL PRESS	15.41	psig
PZR T-72 LEVEL	66.11	percent
PZR WR LEVEL IND	43.23	percent
PZR HTR TRANS amps	.00	amps
PZR HTR TRANS amps	.00	amps
PCS LOOP1 TAVG	118.89	Deg F
PCS LOOP2 TAVG	112.58	Deg F
STUP CNT RATE X NI001	19.09	cps
STUP CNT RATE Y NI002	19.38	cps
WIDE RNG POWER NI003	.00	percent
WIDE RNG POWER NI004	.00	percent
POWER RNG CHANNEL A	.00	percent
POWER RNG CHANNEL B	.00	percent
PZR PWR REL PRV-1042B		Closed
PZR POR BLK VLV 1042A		Open
PZR PWR REL PRV-1043B		Closed
PZR POR BLK VLV 1043A		Open
CHARGING PUMP P-55A		Stopped
CHARGING PUMP P-55B		Stopped
CHARGING PUMP P-55C		Stopped
PRI COOLANT P-50A		Stopped
PRI COOLANT P-50B		Stopped
PRI COOLANT P-50C		Stopped
PRI COOLANT P-50D		Stopped

Site Emergency Planning Exercise  
Meteorological Report

10/23/1996 14:15

351

Temperture  
8.5 C

Height 60 Meters  
Wind Direction 230. Circular Degrees  
Std Deviation 7. Circular Degrees  
Wind Speed 9. mph

Stability

E

Height 10 Meters  
Wind Direction 230. Circular Degrees  
Std Deviation 7. Circular Degrees  
Wind Speed 7. mph



Site Emergency Planning Exercise  
Radiological Report

10/23/1996 14:15

52

Fuel Handling

Mon 1 1.00E-01 mr/hr

Mon 2 1.00E-01 mr/hr

Liquid RAD Monitors

CW	0915	1.30E-01	cpm
W	0833	3.80E+01	cpm
AD Waste	1049	4.54E+02	cpm
G Blow dn	0707	1.30E+03	cpm
ix basin	1323	2.80E-01	cpm
ailed Fuel	0202B	1.00E+02	cpm
ain stm A	2324	3.28E+01	cpm
ain stm B	2323	1.72E+01	cpm

Containment

RIA1805	6.16E-01	r/hr
RIA1806	6.98E-01	r/hr
RIA1807	6.08E+00	r/hr
RIA1808	3.02E+00	r/hr
Hi rng L	1.56E-02	r/hr
Hi rng R	1.46E-02	r/hr

Stack Monitors

RIA2326	6.07E+01	cpm
RIA2327	1.10E-01	mr/hr
RIA2318	8.37E+03	cpm
RIA2319	8.37E+01	cpm

Dirty Waste Drain	Control room	Monitor	9.77E-02	mr/hr
T-60W	14.2	%		
T-60E	8.9	%		
Cnd off gas	2.50E+01	cpm		
EESG RAD	2.50E+02	cpm		
WESG RAD	2.20E+02	cpm		
RAD WSTE VNT	3.80E+01	cpm		
SFP North	1.00E-01	mr/hr		
SFP South	1.20E-01	mr/hr		

K-01

1	2	3	4	5	6	7	8	9	10	11	12
ON				ON			ON	ON		ON	
			ON				ON	ON			
									ON	ON	
	ON						ON		ON		
	ON								ON		
							ON	ON	ON	ON	

K-02

1	2	3	4	5	6	7	8	9	10	11	12

1				
2	ON		ON	
3				
4			ON	
5			ON	
6		ON		

K-05

1									
2									
3									
4									
5									
6									

```

.. 1 .. 2 .. 4 ..
:   :   :   :   :
1   :   : ON  :   :
:   :   :   :   :
:   :   :   :   :
2   :   : ON  :   :
:   :   :   :   :
:   :   :   :   :

```

K-06B

```

.. 1 .. 2 .. 3 .. 4 ..
:   :   :   :   :
1 ON : ON : ON :   :
:   :   :   :   :
:   :   :   :   :
2 ON : ON : ON :   :
:   :   :   :   :
:   :   :   :   :

```

K-06C

```

.. 1 .. 2 .. 3 .. 4 ..
:   :   :   :   :
1 ON :   :   :   :
:   :   :   :   :
:   :   :   :   :
2 ON :   :   :   :
:   :   :   :   :
:   :   :   :   :

```

K-06D

```

.. 1 .. 2 .. 3 .. 4 ..
:   : ON : ON : ON :
:   :   :   :   :
:   :   :   :   :
2   :   : ON : ON :
:   :   :   :   :
:   :   :   :   :

```

1	2	3	4	5	6	7	8	9	10	11
						ON			ON	ON
						ON			ON	
						ON			ON	
ON						ON			ON	ON
					ON			ON		
								ON		

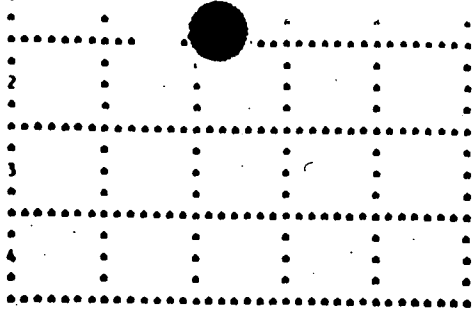
K-09

1	2	3	4	5	6	7	8	9	10	11	12
	ON					ON	ON	ON			ON
	ON					ON	ON	ON			ON
	ON					ON	ON	ON			ON
	ON					ON	ON	ON			ON
		ON	ON	ON	ON	ON	ON				
			ON	ON	ON	ON					ON

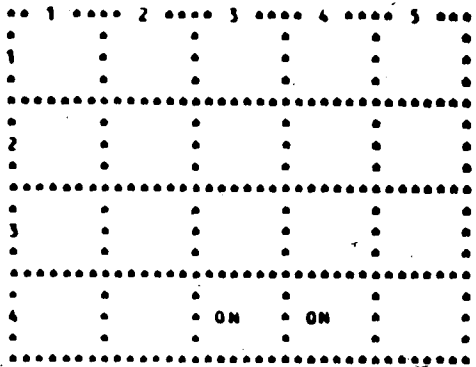
1	2	3	4	5	6	7	8	9	10	11

K-13

1	2	3	4	5	6	7	8	9	10	11	12	13
						ON						
						ON						
						ON					ON	



K-22



K-33

1	2	3	4	5	6	7	8	9	10
1									
2									
3									
4									

K-34

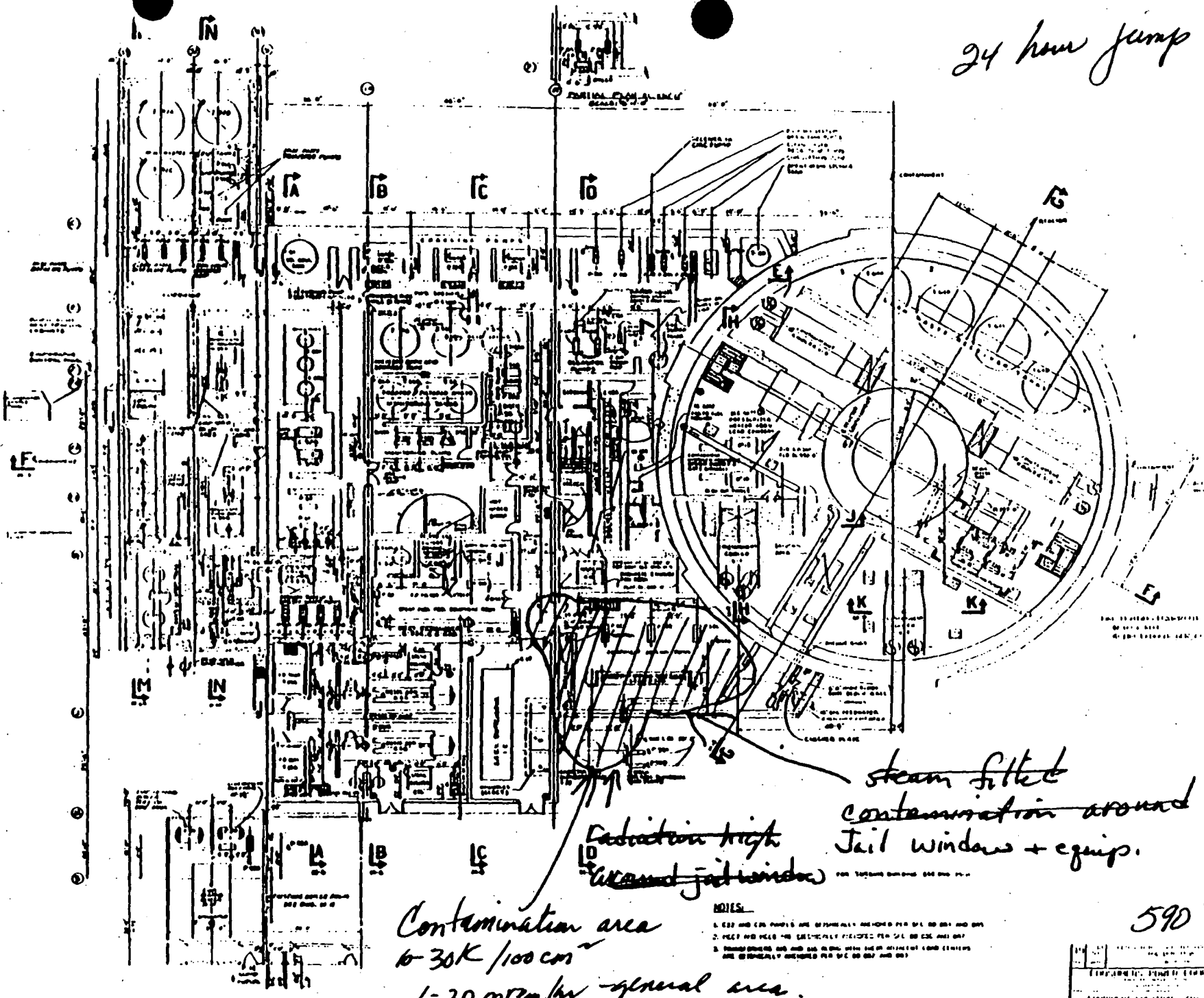
1	2	3	4	5	6
1					
2					

K-35

1	2	3	4	5	6	7
1		ON				
2						
3						
4						
5						



24 hour jump



Exhaust high  
around tail window

steam fitted  
contamination around  
tail windows + equip.

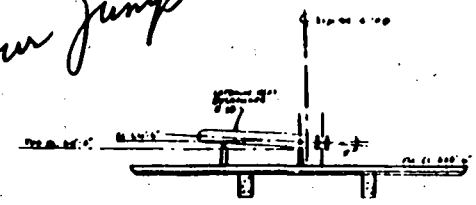
Contamination area  
10-30K / 100 cm<sup>3</sup>  
1-20 mrem/hr general area.

- NOTES:
1. E22 AND E24 PANELS ARE GENERALLY ASSEMBLED PER SCL 80 001 AND 002
  2. PCE2 AND PCE4 ARE GENERALLY ASSEMBLED PER SCL 80 001 AND 002
  3. TRANSFORMER 001 AND 002 IN ROOM 0010 ARE IN ATTACHED LOAD CENTER AND ARE GENERALLY ASSEMBLED PER SCL 80 001 AND 002

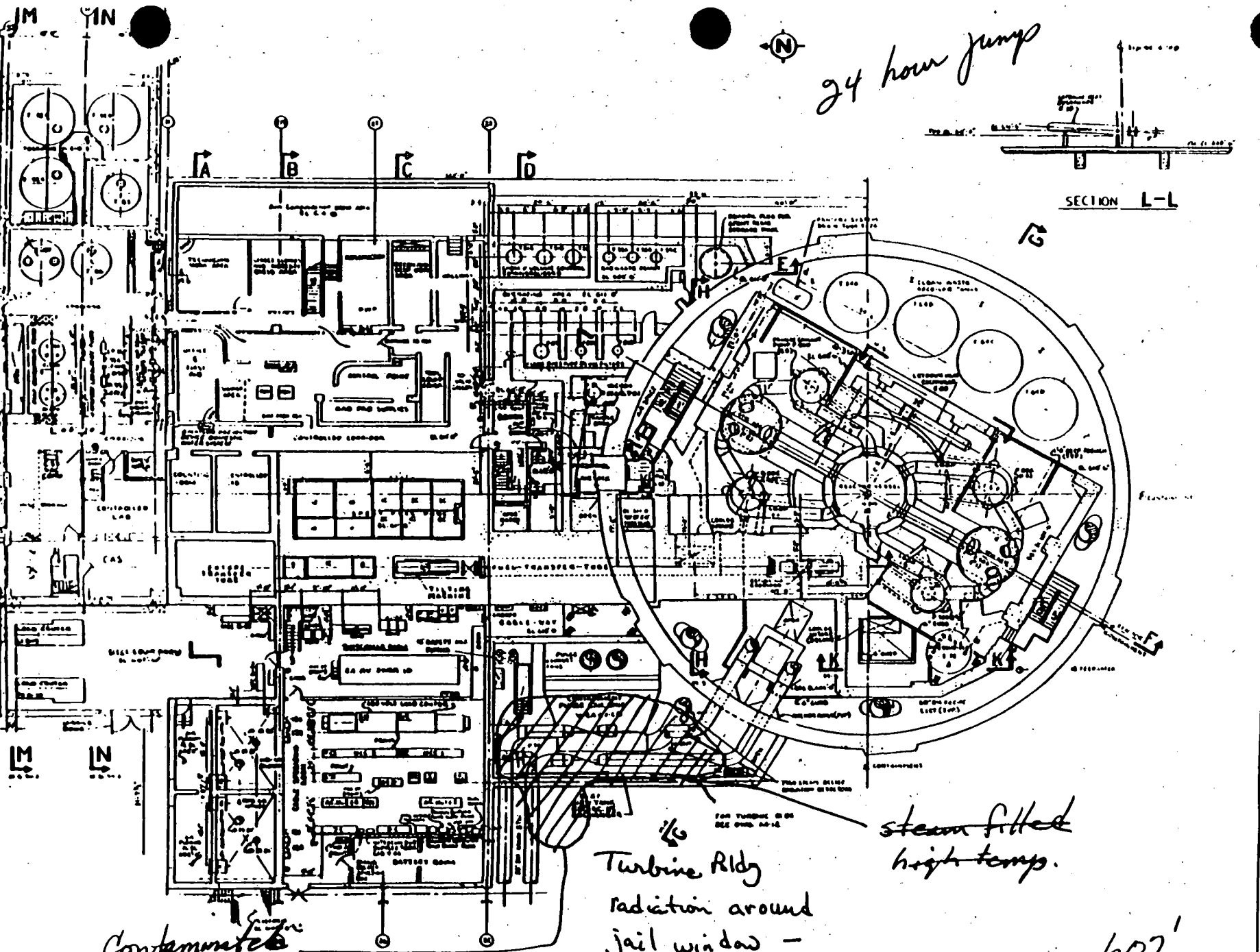
590'




24 hour jump



SECTION L-L



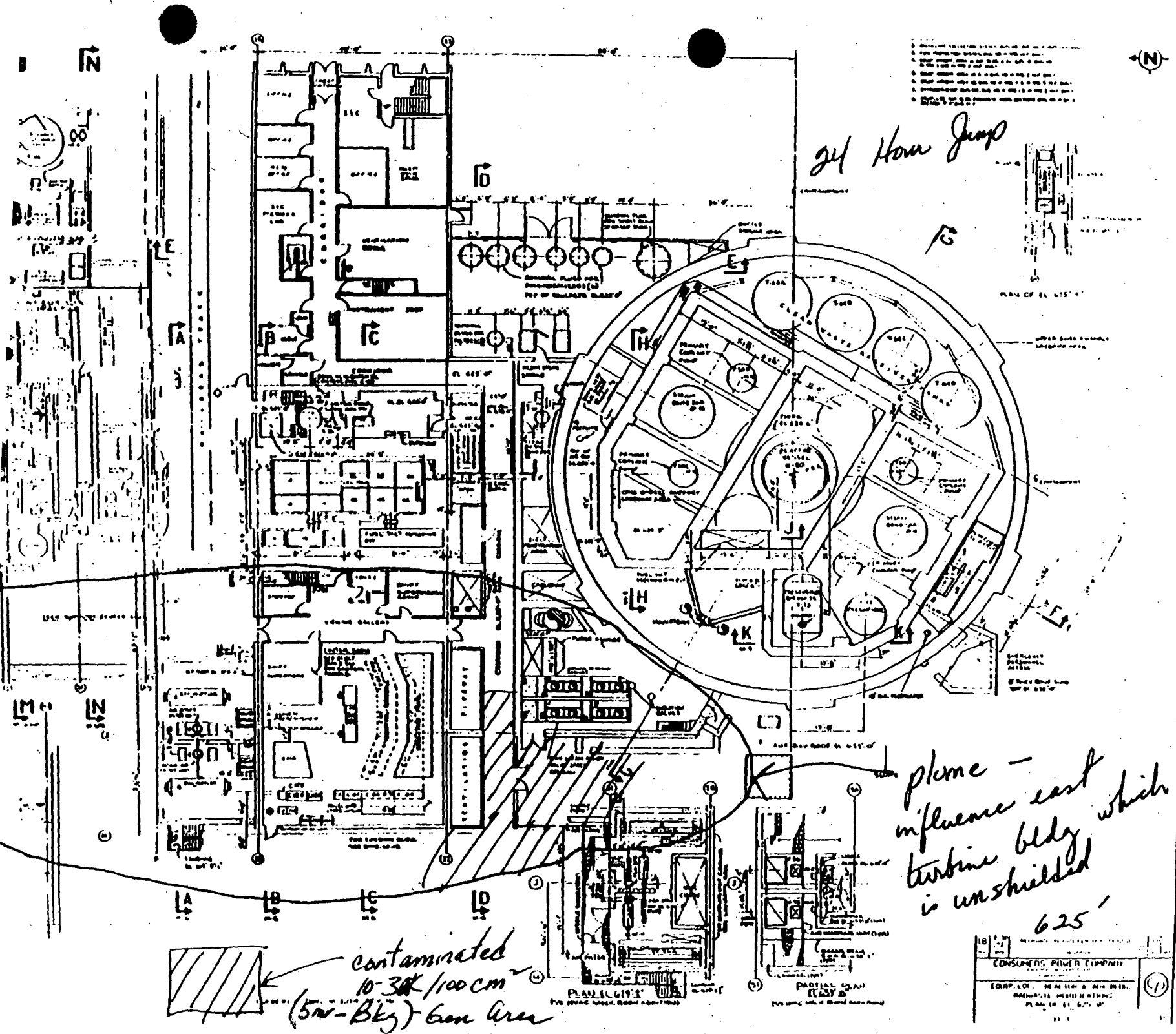
Contaminated area  
30-50K/100' diam  
20-50 mrem/hr - general area

1/6  
Turbine Bldg  
radiation around  
jail window -  
Contamination on  
east turbine bldg  
steam filled  
high temp.

607'

CONSUMERS POWER COMPANY	
EQUIPMENT LOCATION, AUXILIARY AND REACTOR BLDG. RADWASTE PURIFICATION	
PL. NO. 10. 607. 1.	

DRAWING WAS FORMERLY M-603 REV. 12



- 1. Scale 1/4" = 1'-0"
- 2. All dimensions are in feet and inches.
- 3. All elevations are in feet above sea level.
- 4. All areas are in square feet.
- 5. All areas are in square feet.
- 6. All areas are in square feet.
- 7. All areas are in square feet.
- 8. All areas are in square feet.

*24 Hour Jump*

*plume - influence east turbine bldg which is unshielded*

*contaminated 10-30x100cm (5m-Bkg) Gen Area*

10	CONSUMERS POWER COMPANY
ENGR. CO. DESIGN & CONSTRUCTION 1000 15th St. S.W. ALBUQUERQUE, N.M. 87102	
PROJECT NO. 1000 DRAWING NO. 1000	

6/45

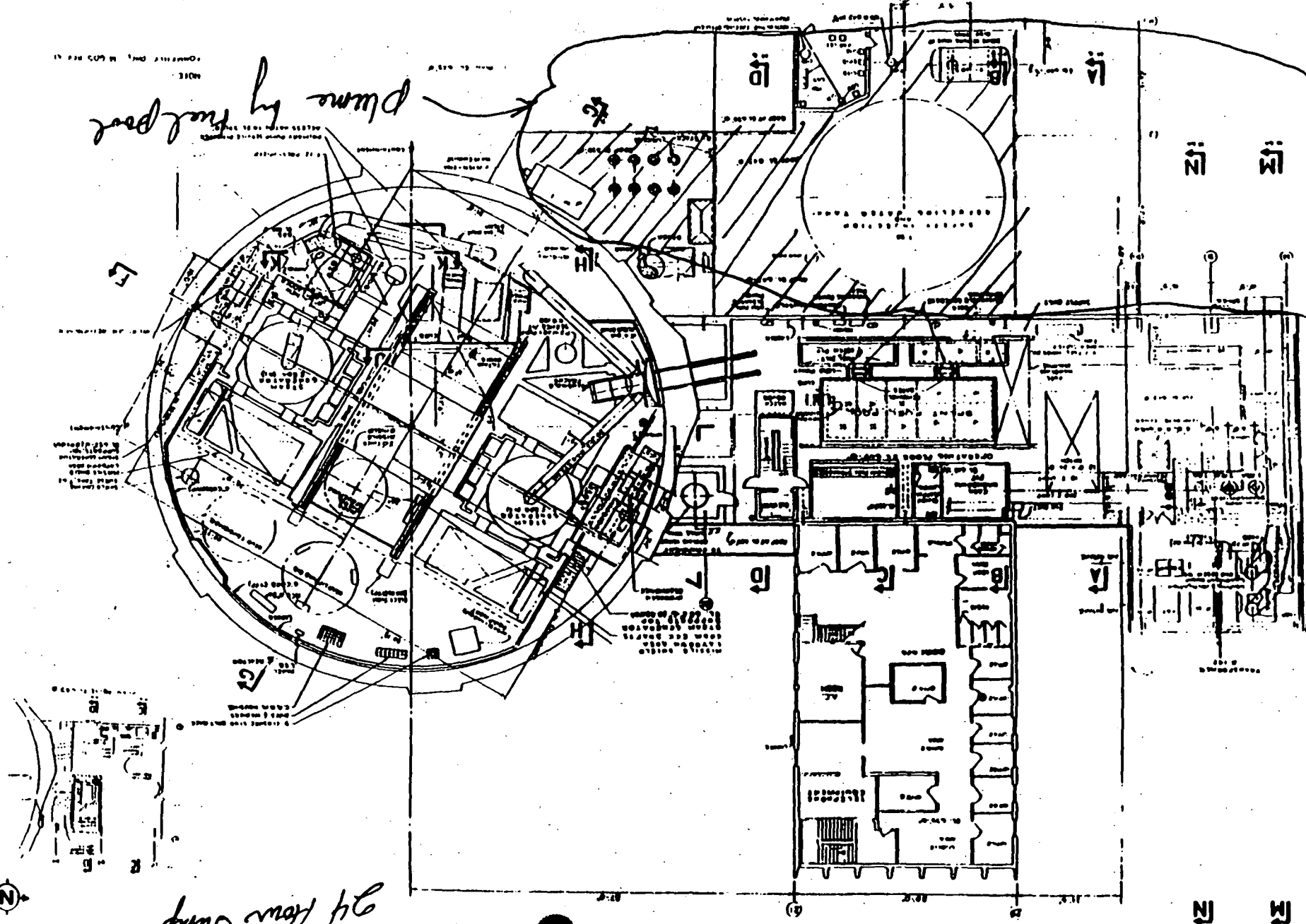
COMPARISON POINTS

NOTE

GOVERNMENT OF INDIA

Contaminated R-30K/100 cm  
 (5m - Bkg) - center area

plume by fuel pool

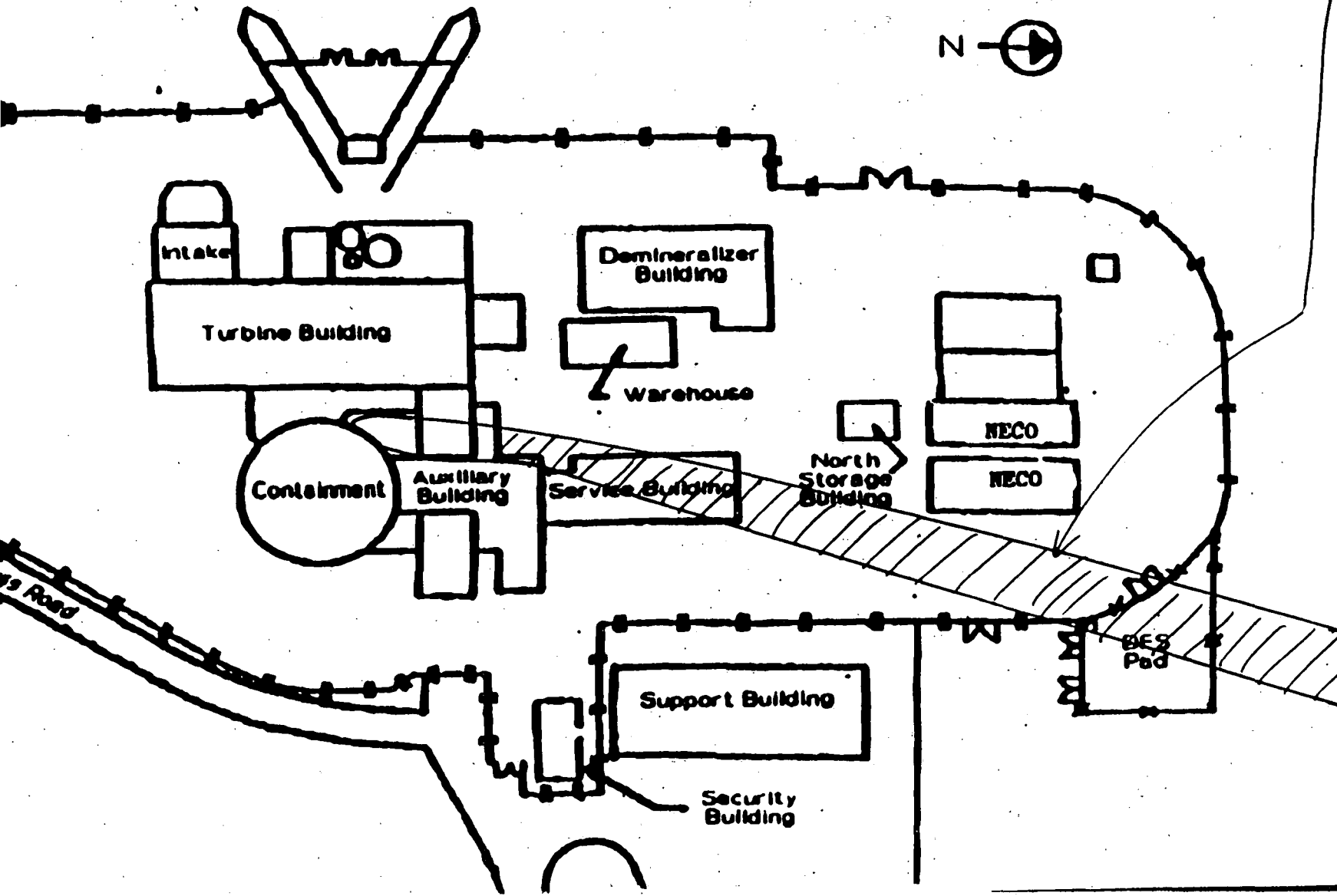


24 hour dump

24

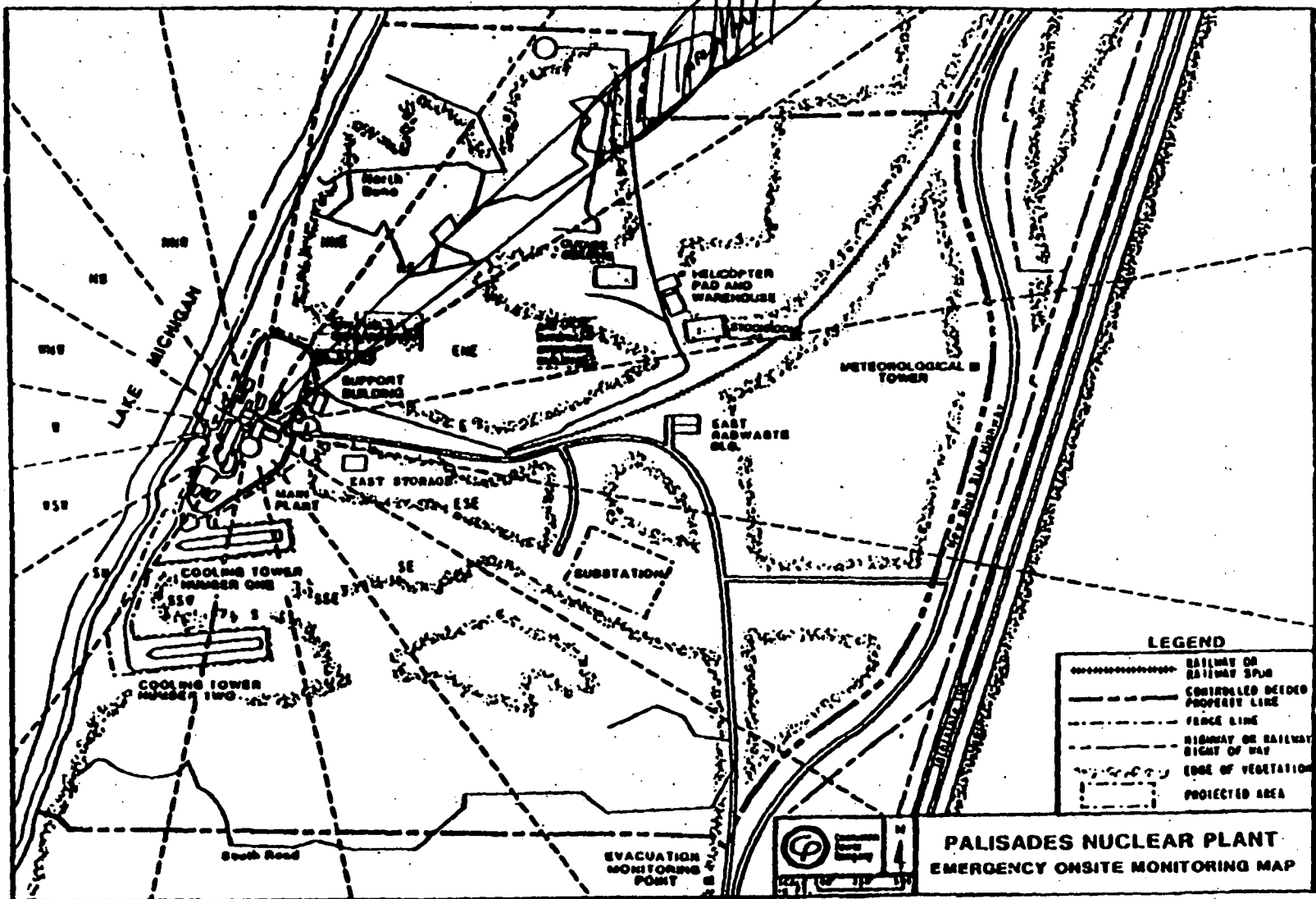
LAKE MICHIGAN

24 hour jump  
5K → 10K / 100 cm<sup>2</sup>  
Contaminated area



PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2-2  
PALISADES PLANT FACILITIES

2000-5000 dpm  
 Contaminant  
 Pump



**LEGEND**

	RAILWAY OR RAILWAY SPUR
	CONTROLLED DEEDED PROPERTY LINE
	FENCE LINE
	HIGHWAY OR RAILWAY RIGHT OF WAY
	EDGE OF VEGETATION
	PROTECTED AREA



**PALISADES NUCLEAR PLANT  
 EMERGENCY ONSITE MONITORING MAP**

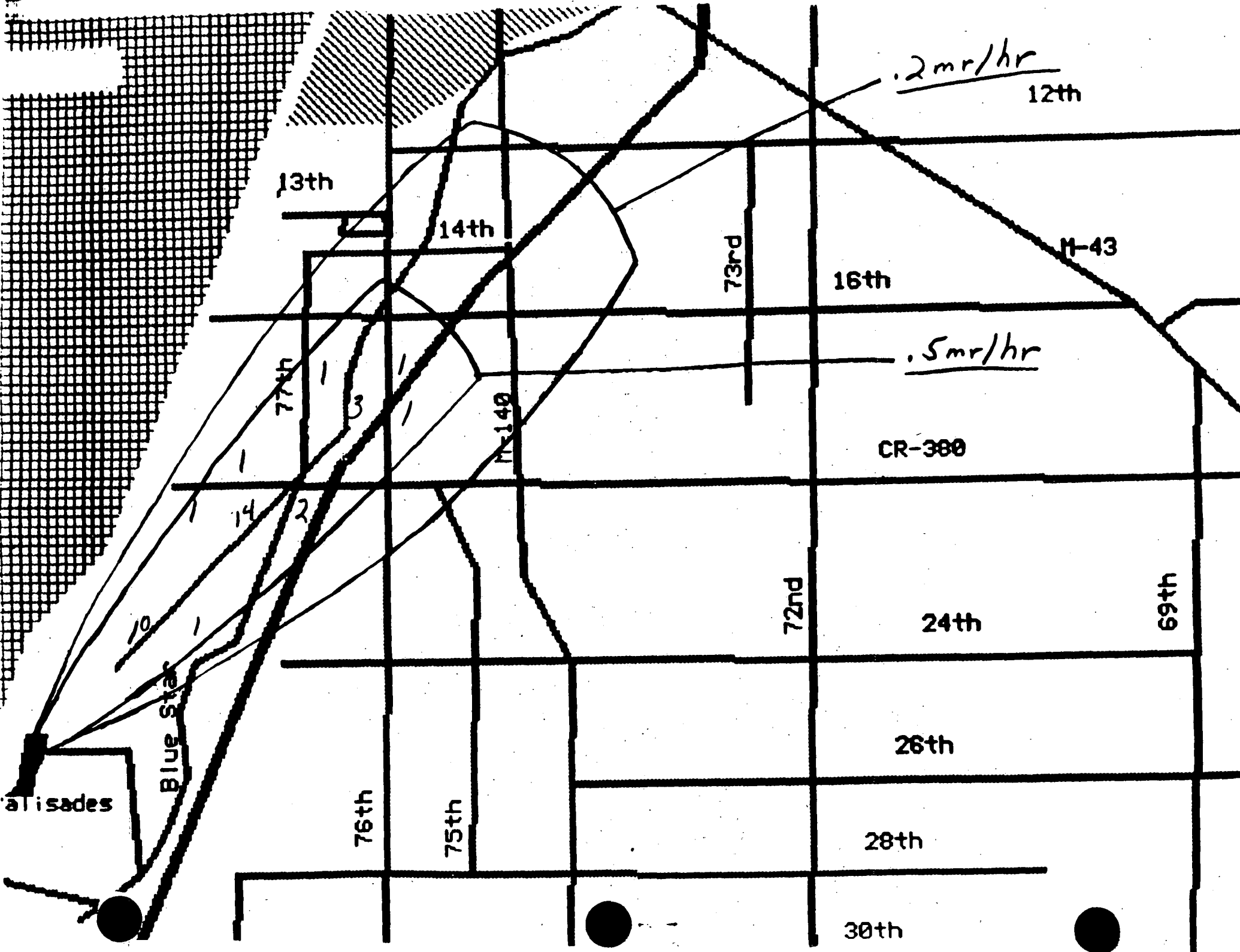
**PALISADES NUCLEAR PLANT SITE**

**FIGURE 2.3**

**PALISADES NUCLEAR PLANT  
 SITE EMERGENCY PLAN**

## 24 HOUR TIME JUMP ENVIRONMENTAL DATA

The following map shows the boundary of the ground deposition. The survey data was collected over the last 24 hours. Isotopic analysis is unavailable.



.2 mr/hr  
12th

13th

14th

73rd

16th

N-43

.5 mr/hr

77th

N-140

CR-380

Blue Star

72nd

24th

69th

26th

Alisades

76th

75th

28th

30th



CHEMISTRY ANALYSIS

RX WATER SAMPLE

OCTOBER 22, 1996

0800-1035

I-131=2.1E-02 uCi/ml  
DEI =8.5E-02 uCi/ml

1040-1230

PASM ONLY

I-131=1.30E00 uCi/ml  
DEI =5.26E00 uCi/ml

\* STEAM GENERATOR SAMPLES

NOT ABLE TO OBTAIN AFTER TRIP

0900 →  
TURBINE SUMP 3.8 E-05  $\mu$ ci/ml

Use this table to provide the CFMS Met. Data, onsite Met Tower data, and/or the WSI hourly met data.

Met Data for Palex '96								
Scenario Time	Temp ©	Stab. Class (Pas/dT)	Wind Speed (10 m)	Wind Dir. (10 m)	Std. Dev. (10 m)	Wind Speed (60 m)	Wind Dir. (60 m)	Std. Dev. (60 m)
0800	3.0	E/-0.4	13	227	7.2	17	227	7.2
0815	3.2	D/-0.9	13	222	11.2	17	222	11.2
0830	3.5	D/-1.1	18	229	9.5	23	229	9.5
0845	3.5	D/-1.2	22	221	12.0	28	221	12.0
0900	3.7	D/-1.3	19	219	10.4	24	219	10.4
0915	4.0	D/-1.1	15	225	9.2	20	225	9.2
0930	4.5	D/-0.9	13	230	7.9	17	230	7.9
0945	4.6	D/-0.8	15	224	8.3	20	224	8.3
1000	4.9	D/-0.7	12	219	8.1	16	219	8.1
1015	5.2	E/-0.3	8	224	7.2	10	224	7.2
1030	5.5	E/-0.2	9	223	7.0	11	223	7.0
1045	6.0	E/-0.4	7	221	6.9	9	221	6.9
1100	6.2	E/-0.5	5	226	7.0	7	226	7.0
1115	6.8	E/-0.4	4	227	7.0	5	227	7.0
1130	7.1	E/-0.3	5	223	6.8	7	223	6.8
1145	7.3	E/-0.2	6	228	6.5	8	228	6.5
1200	7.3	E/-0.3	5	225	7.0	7	225	7.0
1215	7.5	E/-0.5	3	229	6.7	4	229	6.7
1230	8.2	E/-0.3	5	225	6.9	7	225	6.9
1245	8.5	E/-0.3	8	223	6.0	10	223	6.0
1300	8.7	E/-0.4	9	219	6.2	11	219	6.2
1315	9.3	E/-0.3	8	230	5.5	10	230	5.5
1330	9.2	D/-0.6	11	225	8.2	14	225	8.2
1345	9.5	D/-0.8	10	228	8.9	13	228	8.9
1400	9.1	D/-0.6	12	221	8.2	16	221	8.2
1415	8.9	D/-0.7	13	223	8.1	17	223	8.1
1430	8.8	E/-0.5	7	226	7.1	9	226	7.1
1445	8.8	E/-0.4	9	225	7.2	11	225	7.2
1500	8.5	E/-0.4	7	230	7.2	9	230	7.2
1515	8.7	E/-0.3	5	225	7.0	7	225	7.0
1530	8.9	E/-0.4	4	221	6.4	5	221	6.4
1545	8.8	E/-0.1	5	226	5.3	7	226	5.3

METEOROLOGICAL FORECAST DATA

INTERPOLATED MOS FOR PAL 4219N, 8619W USING ORD, SBN, GRR:

DY/HR	22/23	23/05	23/11	23/17	23/23	24/05	24/11	24/17	GMT
DY/HR	22/18	23/00	23/06	23/12	23/18	24/00	24/06	24/12	EST
WIND-MP	2709	2703	2804	2908	3011	2914	3115	3312	
CLDS-.1	5	9	9	3	2	1	2	1	
HGT-FT	3750	4550	4550	>7500	>7500	>7500	>7500	>7500	
PAS	C	D	D	C	D	E	D	C	

DETECTOR POWER SUPPLIES

<u>Power Supply</u>	<u>Radiation Element</u>	<u>Location</u>
Y10-14	RE-1805	Containment Air Cooler V1
Y20-14	RE-1806	Containment Air Cooler V2
Y30-14	RE-1807	Containment Air Cooler V3
Y40-14	RE-1808	Containment Air Cooler V4
Y01-35	RE-2300	East Engineered Safeguards Room
Y01-35	RE-2301	East Service Corridor E1 - 590'-0"
Y01-35	RE-2302	Radwaste Control Area
Y01-35	RE-2303	Corridor 106A
Y01-35	RE-2304	Controlled Lab Corridor
Y01-35	RE-2305	Access Control Station
Y01-35	RE-2306	E1 607' - Air Lock Auxiliary Building
Y01-35	RE-2307	Containment Purge Unit Room
Y01-35	RE-2308	Radwaste Demin Room Roof
Y01-35	RE-2309	E1 625' - Corridor 340
Y01-35	RE-2310	Main Control Room
Y01-35	RE-2311	Turbine Operating Floor
Y01-35	RE-2312	Lunchroom
Y01-35	RE-2313	Spent Fuel Pool Area (South)
Y01-35	RE-2314	Air Room
Y01-35	RE-2315	Air Lock - Containment Building
Y10-14	RE-2316	Fuel Handling Area, Containment Building
Y20-14	RE-2317	Fuel Handling Area, Containment Building
Y10-11	RE-2321	Elevation 674' - Containment Building
Y20-15	RE-2322	Elevation 674' - Containment Building
Y01-35	RE-5701	Decontamination Room
Y01-35	RE-5702	Evaporator A
Y01-35	RE-5703	Evaporator B
Y01-35	RE-5704	Evaporator Control Panel
Y01-35	RE-5705	Radwaste Decay Tanks
Y01-35	RE-5706	Controlled Lab Corridor
Y01-35	RE-5707	Radwaste Packaging Area East
Y01-35	RE-5708	Radwaste Packaging Area West
Y01-35	RE-5709	Spent Fuel Pool Area (North)
Y01-35	RE-5710	Penetration and Fan Room

10/22/96	E. Safe	Rm	RW	2.4 kV	Control	Access	Pers	Cont	RW	Outside	Crtl Rm	East	Old	Spent Fuel Pool Rm	
	grds	Serv	Control	Switch	'D'	Control	Airlock	Purge	Demin	Crtl Rm	Main	Turb Op	Lunch	NFP	SFP
	Corridor	Area	Gear	Lab	Corr	Station	Outside	Unit Rm	Rm Roof	Corridor	Entrance	Floor	Room	mr/h	mr/h
mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h
2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	5709	2313	
TIME															
08:00 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.10	0.4	0.4	0.12	0.1
08:15 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.10	0.4	0.4	0.12	0.1
08:30 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.10	0.4	0.4	0.12	0.1
08:45 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.10	0.4	0.4	0.12	0.1
09:00 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.10	0.4	0.4	0.12	0.1
09:15 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.10	0.4	0.4	0.12	0.1
09:30 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.10	0.4	0.4	0.12	0.1
09:45 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.10	0.4	0.4	0.12	0.1
10:00 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.10	0.4	0.4	0.12	0.1
10:15 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.10	0.4	0.4	0.12	0.1
10:30 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.10	0.4	0.4	0.12	0.1
10:45 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	1.0	0.3	.54	60	0.4	50	50
11:00 AM	7	0.8	0.8	1.5	0.9	0.2	.07	.11	1.0	0.5	.78	90	0.4	70	70
11:15 AM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	2.3	4.7	520	0.4	430	430
11:30 AM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	5.2	10.3	1100	0.4	930	930
11:45 AM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	4.9	9.7	1050	0.4	880	880
12:00 AM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	3.3	6.6	1000	0.4	600	600
12:15 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	2.7	5.3	750	0.4	480	480
12:30 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	2.2	4.4	600	0.4	400	400
12:45 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	1.8	3.5	520	0.4	320	320
01:00 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	1.6	3.1	460	0.4	275	275
01:15 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	1.4	2.7	400	0.4	245	245
01:30 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	1.3	2.7	310	0.4	245	245
01:45 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	1.1	2.2	220	0.4	200	200
02:00 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.9	1.8	180	0.4	160	160
02:15 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.7	1.4	150	0.4	130	130
02:30 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.6	1.1	120	0.4	100	100

10/22/96	590' Air Room	Airlock Inside Cont	Cont Rad Mon	Cont Rad Mon	Cont Rad Mon	Cont Rad Mon
	mr/h	mr/h	R/h	R/h	R/h	R/h
	2314	2315	1805	1806	1807	1808
TIME						
08:00 AM	3.1	2.7	.021	.026	.178	.090
08:15 AM	3.1	2.7	.021	.026	.178	.090
08:30 AM	3.1	2.7	.021	.026	.178	.090
08:45 AM	3.1	2.7	.021	.026	.178	.090
09:00 AM	3.1	2.7	.021	.026	.178	.090
09:15 AM	3.1	2.7	.021	.026	.178	.090
09:30 AM	3.1	2.7	.021	.026	.178	.090
09:45 AM	3.1	2.7	.021	.026	.178	.090
10:00 AM	3.1	2.7	.021	.026	.178	.090
10:15 AM	3.1	2.7	.021	.026	.178	.090
10:30 AM	3.1	2.7	.021	.026	.178	.090
10:45 AM	7	2.7	.698	.698	6.08	3.02
11:00 AM	10	2.7	.798	.798	7.08	3.52
11:15 AM	12	2.7	.898	.898	8.08	4.02
11:30 AM	14	2.7	.998	.998	9.08	4.52
11:45 AM	15	2.7	1.10	1.10	10.1	5.02
12:00 PM	14	2.7	1.10	1.10	10.1	5.02
12:15 PM	13	2.7	.998	.998	9.08	4.52
12:30 PM	12	2.7	.898	.898	8.08	4.02
12:45 PM	11	2.7	.798	.798	7.08	3.52
01:00 PM	10	2.7	.698	.698	6.08	3.02
01:15 PM	10	2.7	.698	.698	6.08	3.02
01:30 PM	9	2.7	.698	.698	6.08	3.02
01:45 PM	9	2.7	.698	.698	6.08	3.02
02:00 PM	8	2.7	.698	.698	6.08	3.02
02:15 PM	8	2.7	.698	.698	6.08	3.02
02:30 PM	8	2.7	.698	.698	6.08	3.02

10/22/96	Decon Rm	"A" Evap	"B" Evap	Evap Control Panel	RW Decay Tanks	Control 'D' Lab Corr	RW Packaging Area No	RW Packaging Area West	Spent Fuel Pool Criticality	Exhaust Fan Duct	RW Addition Vent	Fuel Handling Rm Vent
	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h	mr/h
	5701	5702	5703	5704	5705	5706	5707	5708	5709	5710	5711	5712
TIME												
08:00 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.1	.1	15	75
08:15 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.1	.1	15	75
08:30 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.1	.1	15	75
08:45 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.1	.1	15	75
09:00 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.1	.1	15	75
09:15 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.1	.1	15	75
09:30 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.1	.1	15	75
09:45 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.1	.1	15	75
10:00 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.1	.1	15	75
10:15 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.1	.1	15	75
10:30 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.1	.1	15	75
10:45 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	50	.1	10,000	10,000
11:00 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	70	.1	15,000	15,000
11:15 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	430	.1	OSH	OSH
11:30 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	930	.1	OSH	OSH
11:45 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	880	.1	OSH	OSH
12:00 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	600	.1	OSH	OSH
12:15 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	480	.1	OSH	OSH
12:30 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	400	.1	OSH	OSH
12:45 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	320	.1	OSH	OSH
01:00 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	275	.1	OSH	OSH
01:15 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	245	.1	OSH	OSH
01:30 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	245	.1	OSH	OSH
01:45 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	200	.1	OSH	OSH
02:00 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	160	.1	OSH	OSH
02:15 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	130	.1	OSH	OSH
02:30 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	100	.1	OSH	OSH

10/22/96	Service Water Discharge	Steam Generator Blowdown	Component Cooling Water	Circ Water Discharge	Liquid RW Monitor	Turbine Bldg Sump
	cpm	cpm	cpm	cpm	cpm	cpm
	0833	0707	0915	1323	1049	5211
TIME						
08:00 AM	380	1300	130	280	454	150
08:15 AM	380	1300	130	280	454	150
08:30 AM	380	1300	130	280	454	150
08:45 AM	380	2.28E04	130	280	454	1200
09:00 AM	380	2.55E04	130	280	454	1300
09:15 AM	380	Fail (OSH)	130	280	454	1800
09:30 AM	380	Fail (OSH)	130	280	454	1800
09:45 AM	380	Fail (OSH)	130	280	454	1800
10:00 AM	380	Fail (OSH)	130	280	454	1800
10:15 AM	380	Fail (OSH)	130	280	454	1800
10:30 AM	380	Fail (OSH)	130	280	454	1800
10:45 AM	380	Fail (OSH)	OSH	280	454	1800
11:00 AM	380	Fail (OSH)	OSH	280	454	1800
11:15 AM	380	Fail (OSH)	OSH	280	454	1800
11:30 AM	380	Fail (OSH)	OSH	280	454	1800
11:45 AM	380	Fail (OSH)	OSH	280	454	1800
12:00 PM	380	Fail (OSH)	OSH	280	454	1800
12:15 PM	380	Fail (OSH)	OSH	280	454	1800
12:30 PM	380	Fail (OSH)	OSH	280	454	1800
12:45 PM	380	Fail (OSH)	OSH	280	454	1800
01:00 PM	380	Fail (OSH)	OSH	280	454	1800
01:15 PM	380	Fail (OSH)	OSH	280	454	1800
01:30 PM	380	Fail (OSH)	OSH	280	454	1800
01:45 PM	380	Fail (OSH)	OSH	280	454	1800
02:00 PM	380	Fail (OSH)	OSH	280	454	1800
02:15 PM	380	Fail (OSH)	OSH	280	454	1800
02:30 PM	380	Fail (OSH)	OSH	280	454	1800



10/22/96	Stack Gas Gross Activity	Stack Gas Single Isotope	RW Vent	East Safeguards Vent	West Safeguards Vent	Cont Bldg Gas Monitor	Waste Gas Monitor	Condenser Offgas	Blowdown Tank Vent Monitor
	cpm	cpm	cpm	cpm	cpm	cpm	cpm	cpm	cpm
	2318	2319	1809	1810	1811	1817	1113	0631	2320
TIME									
08:00 AM	OOS	OOS	38	220	220	3900	<100	2.5E01	400
08:15 AM	OOS	OOS	38	220	220	3900	<100	2.5E01	400
08:30 AM	OOS	OOS	38	220	220	3900	<100	2.5E01	400
08:45 AM	OOS	OOS	38	220	220	3900	<100	2.30E06	400
09:00 AM	OOS	OOS	38	220	220	3900	<100	5.95E06	400
09:15 AM	OOS	OOS	38	220	220	3900	<100	2.5E03	400
09:30 AM	OOS	OOS	38	220	220	3900	<100	2.5E03	400
09:45 AM	OOS	OOS	38	220	220	3900	<100	2.5E03	400
10:00 AM	OOS	OOS	38	220	220	3900	<100	2.5E03	400
10:15 AM	OOS	OOS	38	220	220	3900	<100	2.5E03	400
10:30 AM	OOS	OOS	38	220	220	3900	<100	2.5E03	400
10:45 AM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
11:00 AM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
11:15 AM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
11:30 AM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
11:45 AM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
12:00 PM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
12:15 PM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
12:30 PM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
12:45 PM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
01:00 PM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
01:15 PM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
01:30 PM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
01:45 PM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
02:00 PM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
02:15 PM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400
02:30 PM	OOS	OOS	38	220	220	3900	<100	EEEEEEEE	400

10/22/96	Iodine/Part Gas Eff	Normal Noble Gas Eff	High Range Noble Gas	Main Steam Gamma B	Main Steam Gamma A	Cont High Range	Cont High Range	Failed Fuel Monitor	High Range Effluent Monitor
	cpm	cpm	cpm	cpm	cpm	cpm	cpm	cpm	cpm
	2325	2326	2327	2323	2324	2321	2322	0202	(Rad Gun)
TIME									
08:00 AM	OOS	6.07E01	1.10E-01	20	40	1.55E-02	1.45E-02	2.47E04	BKG
08:15 AM	OOS	6.12E01	1.10E-01	20	40	1.55E-02	1.45E-02	2.47E04	BKG
08:30 AM	OOS	6.17E01	1.10E-01	20	40	1.55E-02	1.45E-02	2.47E04	BKG
08:45 AM	OOS	6.21E01	1.10E-01	400-48	40	1.55E-02	1.45E-02	2.38E04	BKG
09:00 AM	OOS	6.38E01	1.10E-01	48	40	1.55E-02	1.45E-02	1.17E04	BKG
09:15 AM	OOS	6.24E01	1.10E-01	48	40	1.54E-02	1.45E-02	2.46E04	BKG
09:30 AM	OOS	6.16E01	1.10E-01	48	40	1.54E-02	1.45E-02	2.45E04	BKG
09:45 AM	OOS	6.24E01	1.10E-01	47	40	1.54E-02	1.45E-02	2.44E04	BKG
10:00 AM	OOS	6.06E01	1.10E-01	47	40	1.54E-02	1.45E-02	1.36E04	BKG
10:15 AM	OOS	6.17E01	1.10E-01	47	40	1.54E-02	1.45E-02	2.42E04	BKG
10:30 AM	OOS	6.05E01	1.10E-01	47	40	1.54E-02	1.45E-02	2.41E04	BKG
10:45 AM	OOS	6.05E01	1.10E-01	7550	50	1.54E-02	1.46E-02	1.00E05	5
11:00 AM	OOS	6.09E01	1.10E-01	9050	140	1.54E-02	1.46E-02	9.00E05	7
11:15 AM	OOS	6.10E01	1.10E-01	12000	165	1.54E-02	1.46E-02	OSH	9
11:30 AM	OOS	6.10E01	1.10E-01	15000	190	1.54E-02	1.46E-02	OSH	10
11:45 AM	OOS	6.12E01	1.10E-01	13000	140	1.54E-02	1.46E-02	OSH	10
12:00 PM	OOS	6.31E01	1.10E-01	12000	130	1.54E-02	1.46E-02	OSH	9
12:15 PM	OOS	6.39E01	1.10E-01	11000	130	1.54E-02	1.46E-02	OSH	8.5
12:30 PM	OOS	6.39E01	1.10E-01	10000	130	1.54E-02	1.46E-02	OSH	8
12:45 PM	OOS	6.15E01	1.10E-01	9000	130	1.54E-02	1.46E-02	OSH	7.5
01:00 PM	OOS	6.25E01	1.10E-01	8500	130	1.54E-02	1.46E-02	OSH	7
01:15 PM	OOS	6.35E01	1.10E-01	8000	130	1.54E-02	1.46E-02	OSH	6.5
01:30 PM	OOS	6.29E01	1.10E-01	7500	130	1.54E-02	1.46E-02	OSH	6
01:45 PM	OOS	6.32E01	1.10E-01	7000	130	1.54E-02	1.46E-02	OSH	5.5
02:00 PM	OOS	6.10E01	1.10E-01	6500	130	1.54E-02	1.46E-02	OSH	5
02:15 PM	OOS	6.08E01	1.10E-01	6000	130	1.54E-02	1.46E-02	OSH	4.5
02:30 PM	OOS	6.04E01	1.10E-01	5500	130	1.54E-02	1.46E-02	OSH	4

CONVERSIONS

IODINE CONVERSION  
WHEN IN PLUME =  
GAMMA RDG X  $1.5E-08$

SERVICE BLDG=  
REDUCE GAMMA BY 10  
EACH FLOOR.

SHIELDS  
BLOCK WALL REDUCE  
BY 10

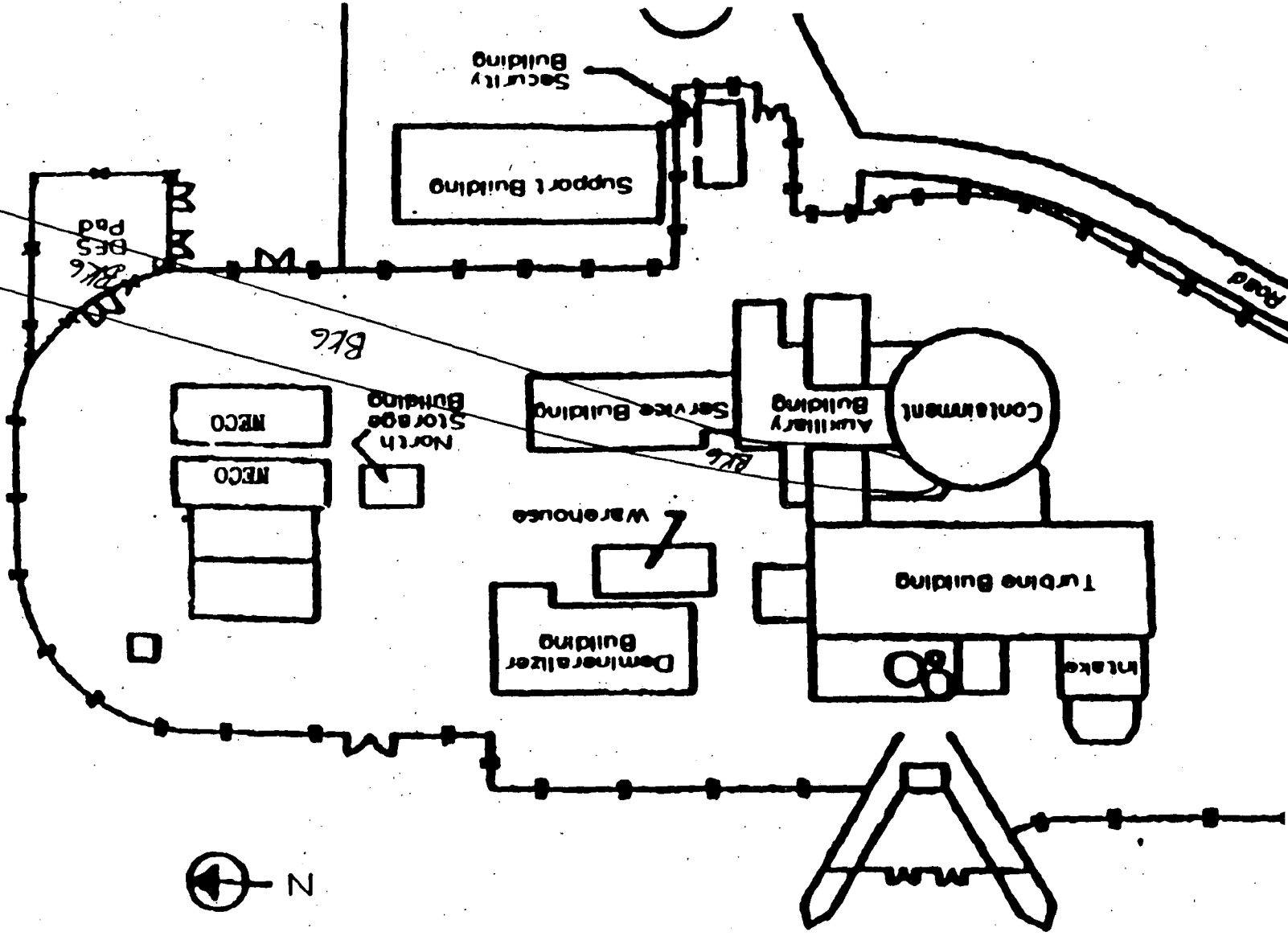
1 FT CONCRETE  
REDUCE BY 10  
2 FT CONCRETE  
REDUCE BY 100

NO CONTAMINATION  
UNLESS IN PLUME

WHEN IN PLUME  
ESTIMATE A  
CONTAMINATION  
VALUE

PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN

FIGURE 2-2  
PALISADES PLANT FACILITIES

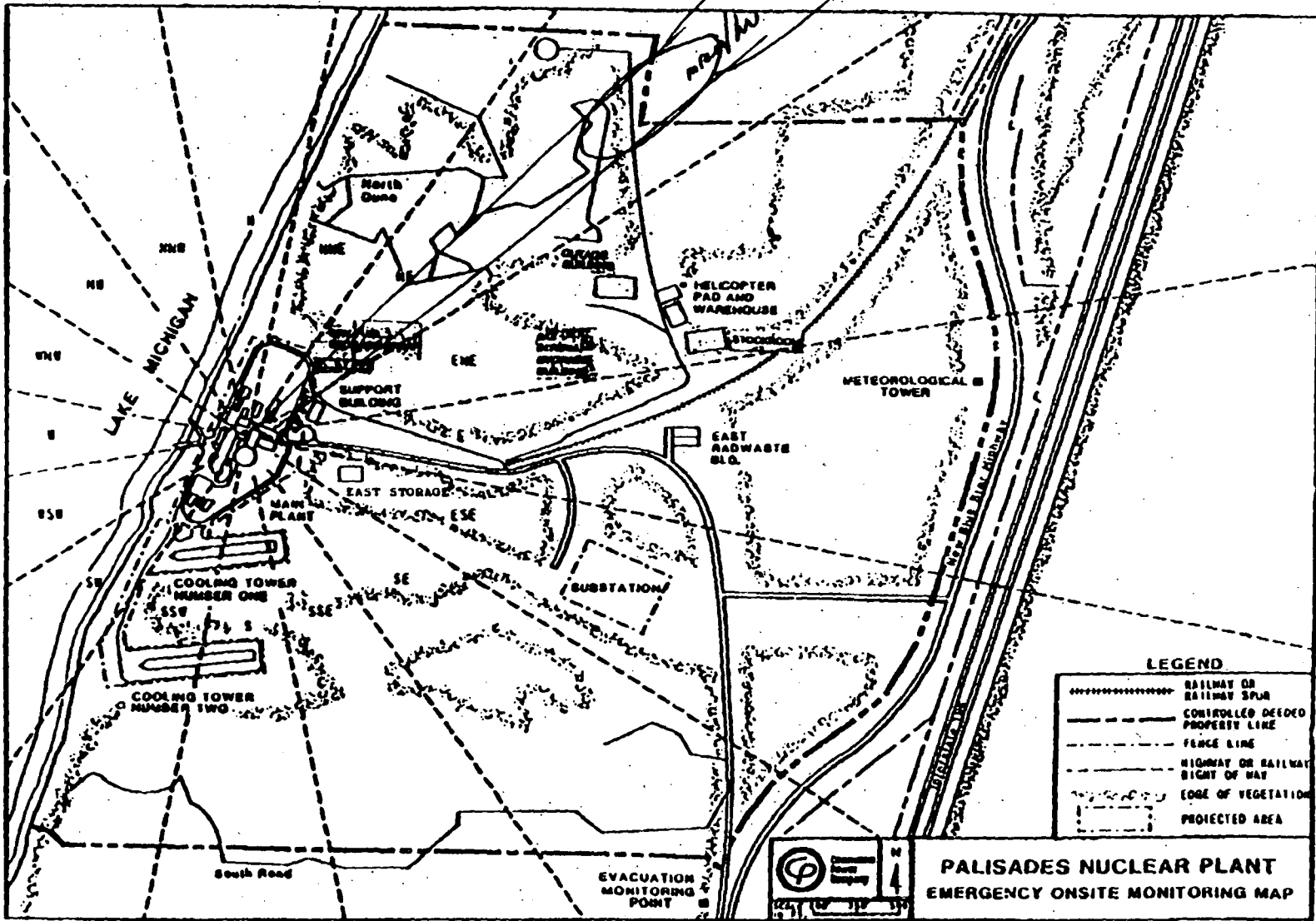


0800-1030

LAKE MICHIGAN

0800 - 1630  
1030

*Plume*

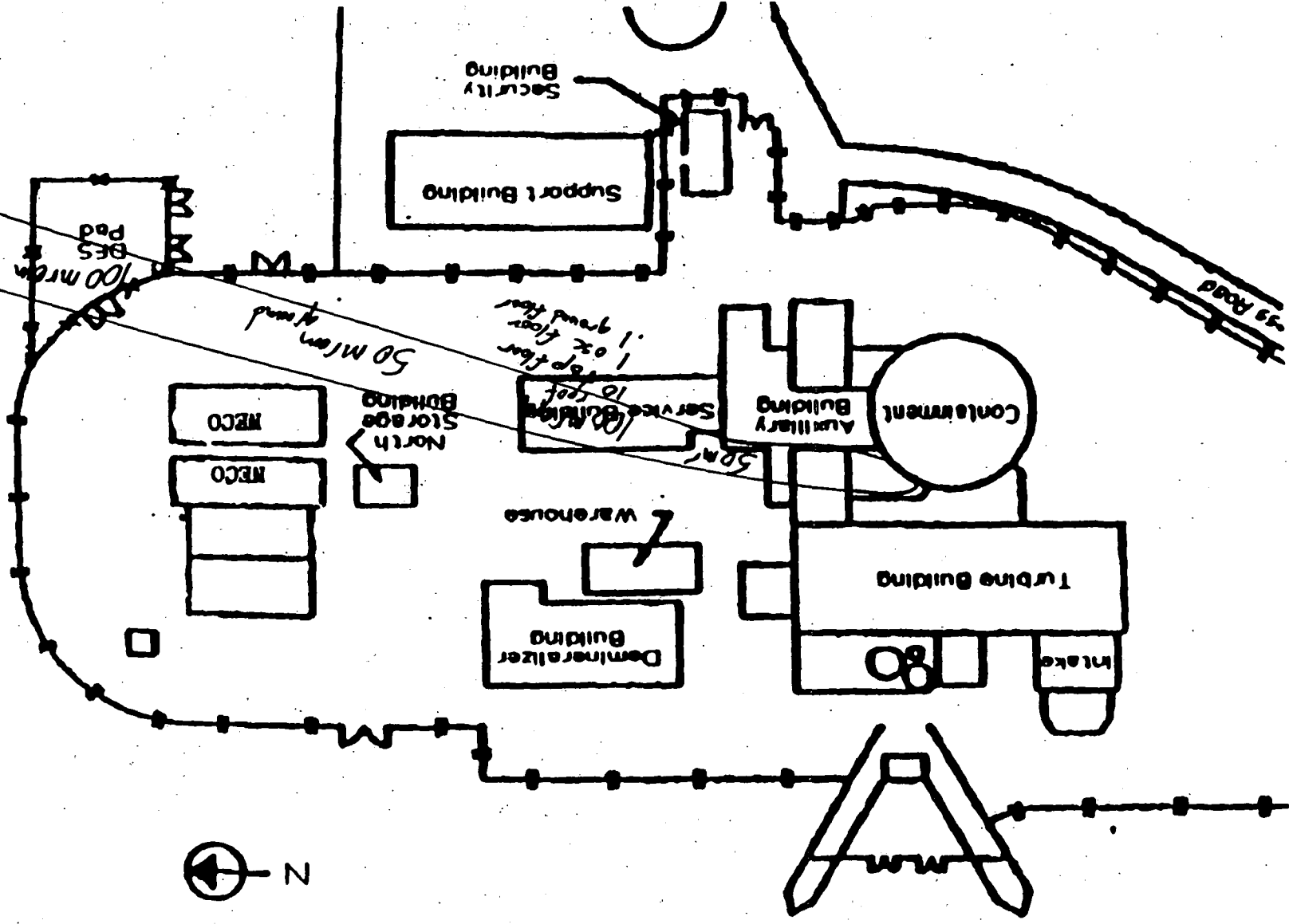


**PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN**

**FIGURE 2-3  
PALISADES NUCLEAR PLANT SITE**

PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN

FIGURE 2-2  
PALISADES PLANT FACILITIES



LAKE MICHIGAN

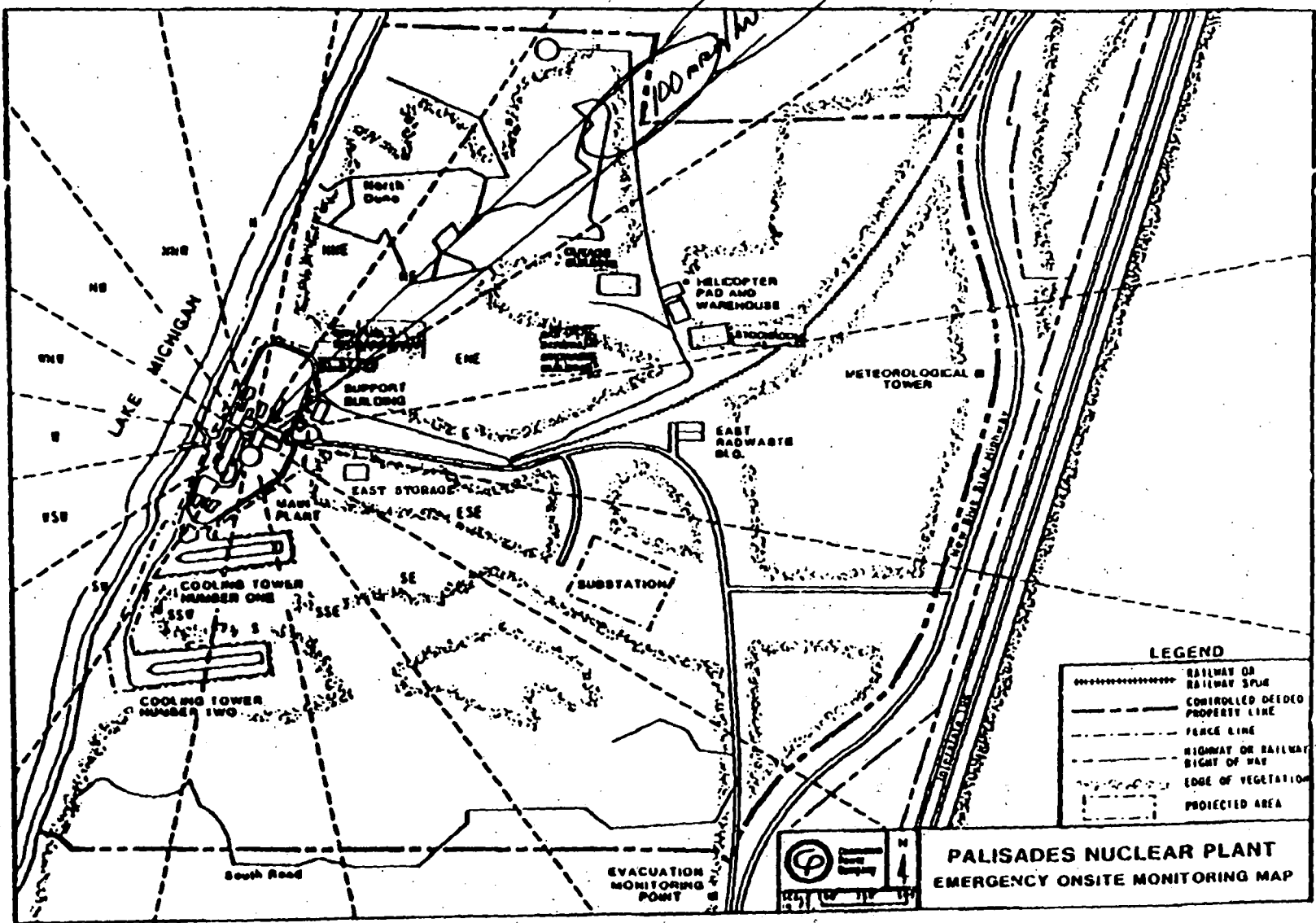
1045

1045

1045

*Plume*

*2100 n/w*

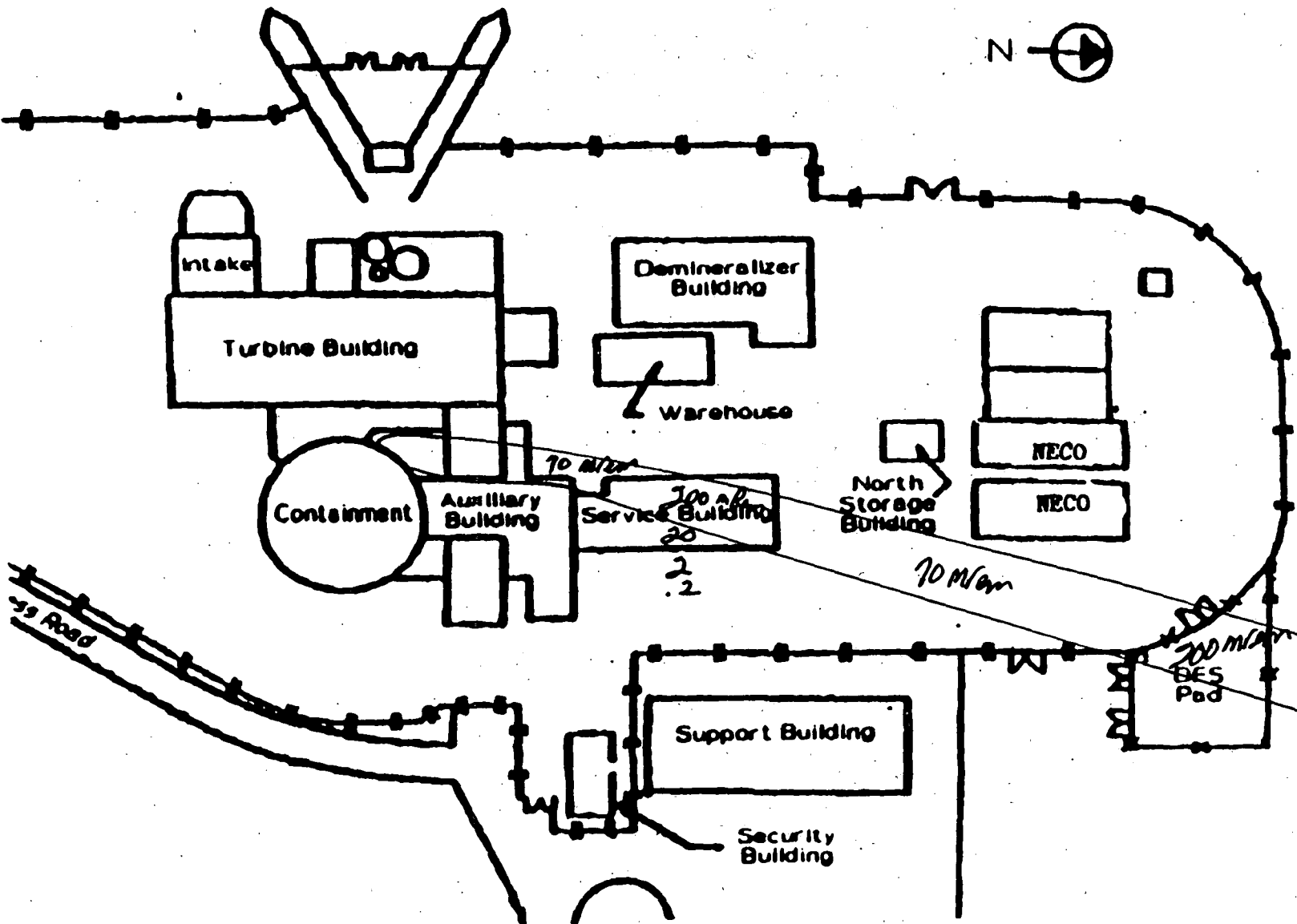


PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN

**FIGURE 2-3**  
**PALISADES NUCLEAR PLANT SITE**

110  
1100

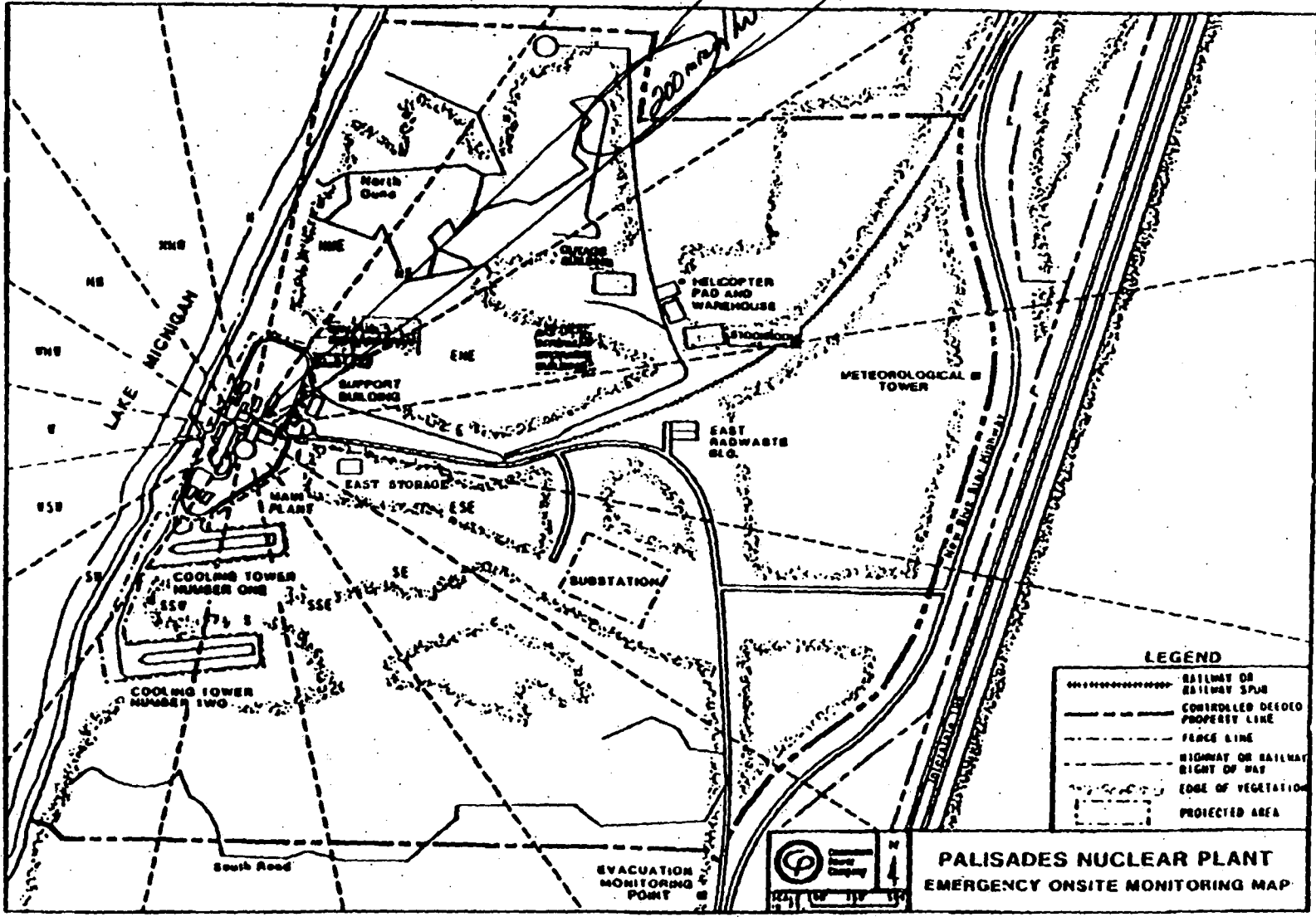
LAKE MICHIGAN



PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2.2  
PALISADES PLANT FACILITIES



1100



**LEGEND**

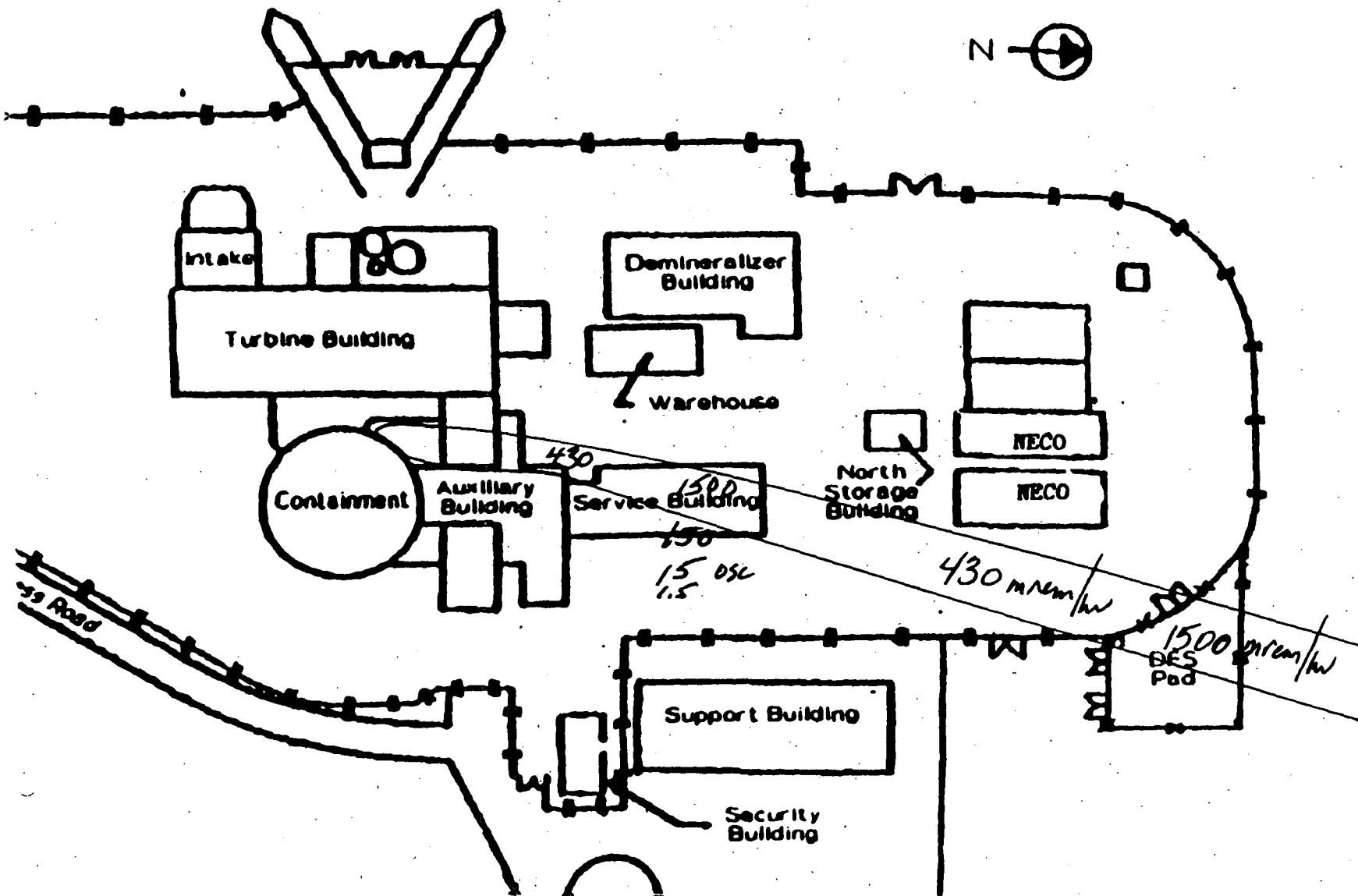
	RAILWAY OR RAILWAY SPUR
	CONTROLLED DECEDED PROPERTY LINE
	PLAGE LINE
	HIGHWAY OR RAILWAY RIGHT OF WAY
	EDGE OF VEGETATION
	PROTECTED AREA



**PALISADES NUCLEAR PLANT  
EMERGENCY ONSITE MONITORING MAP**

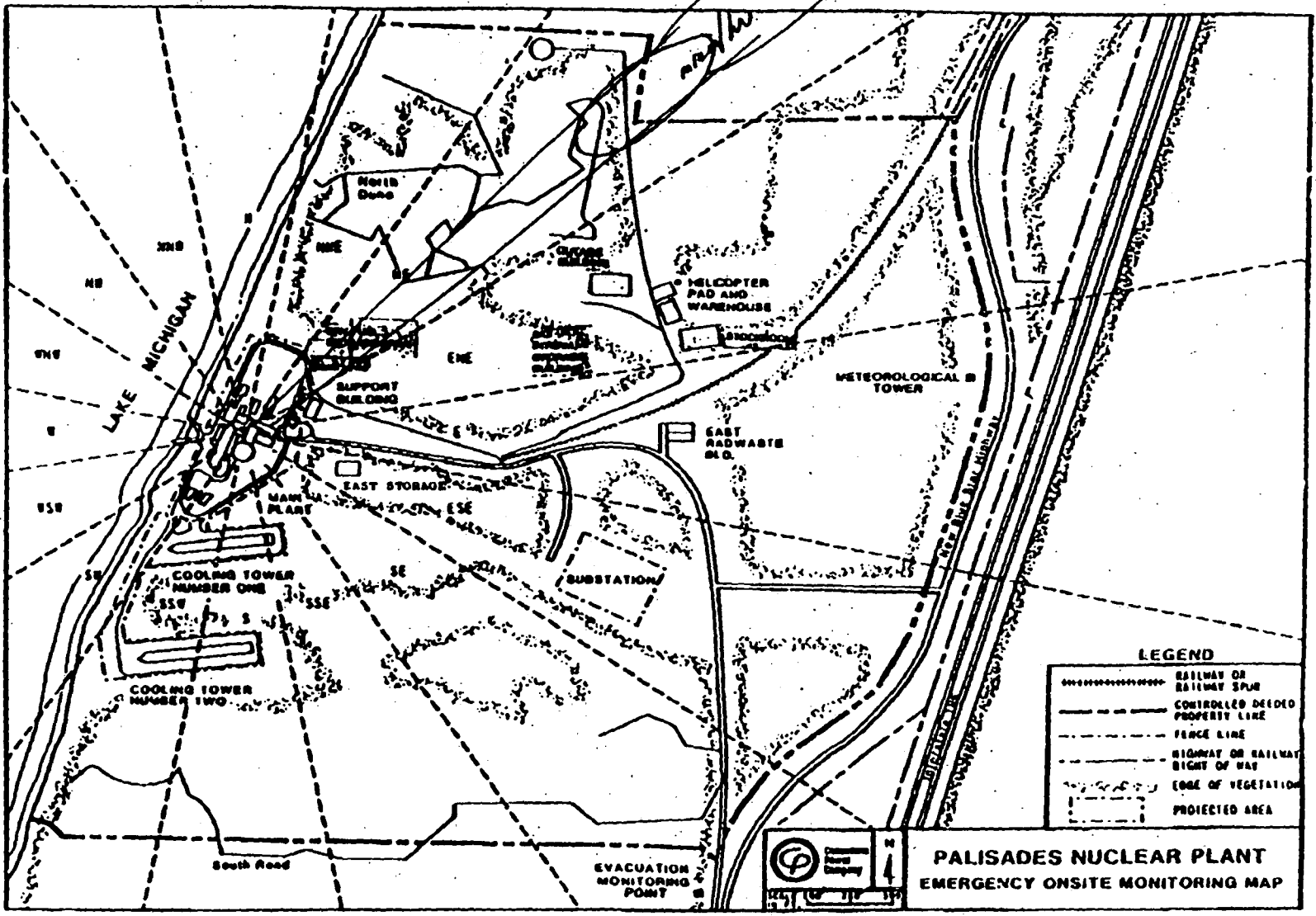
**PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2-3  
PALISADES NUCLEAR PLANT SITE**

LAKE MICHIGAN



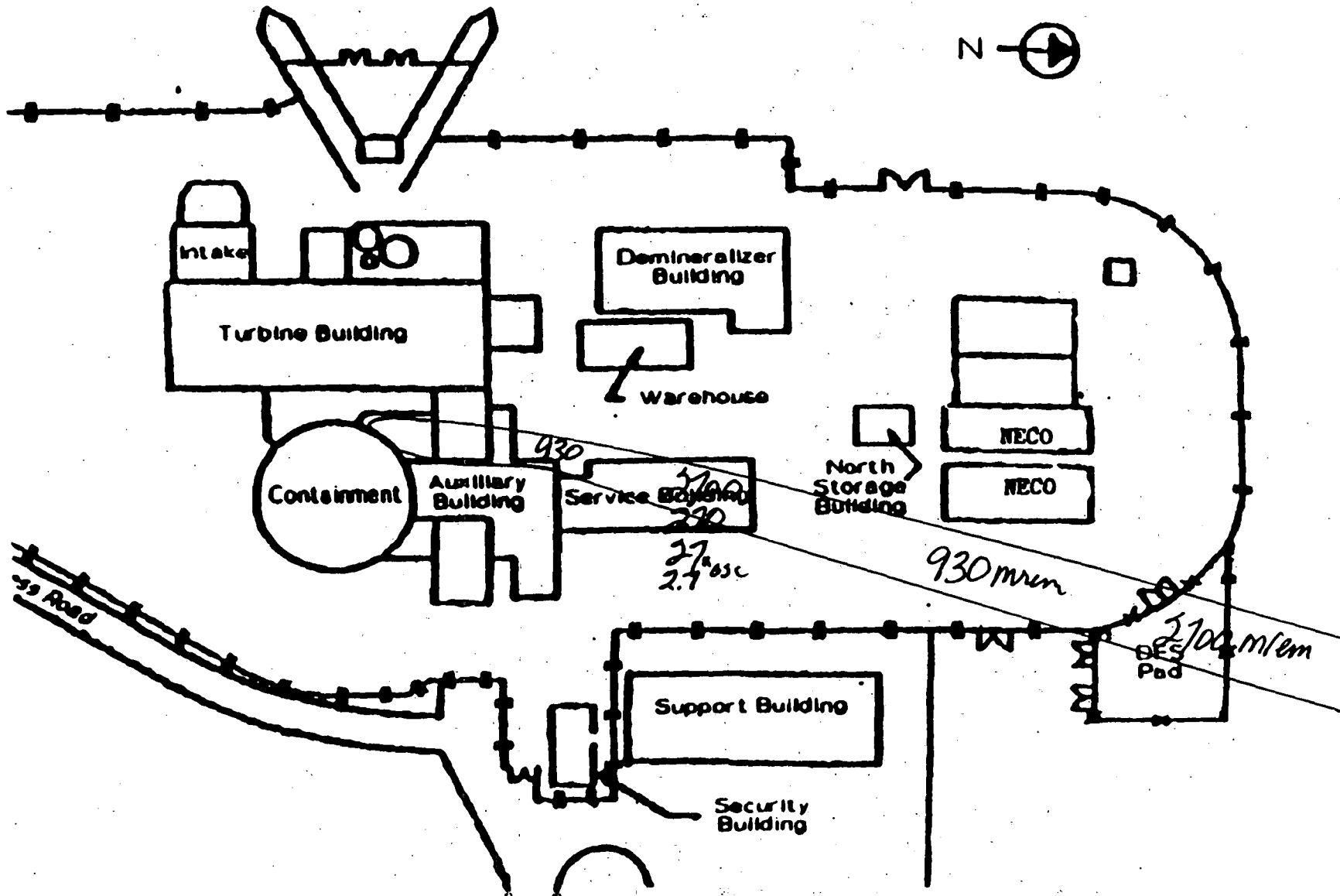
PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2-2  
PALISADES PLANT FACILITIES

15  
1115



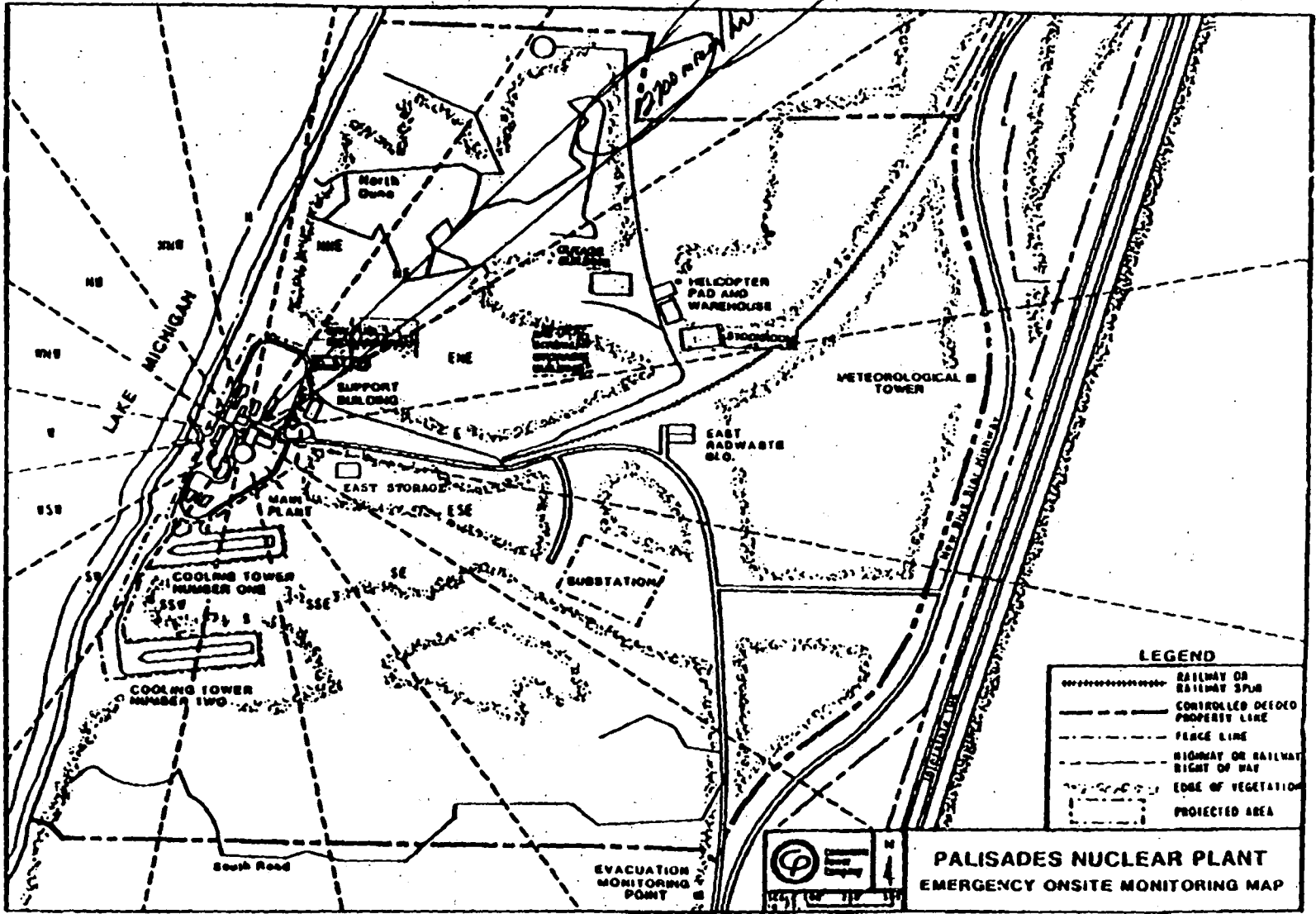
PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2-3  
PALISADES NUCLEAR PLANT SITE

# LAKE MICHIGAN



PALISADES NUCLEAR PLANT  
 SITE EMERGENCY PLAN  
 FIGURE 2.2  
 PALISADES PLANT FACILITIES

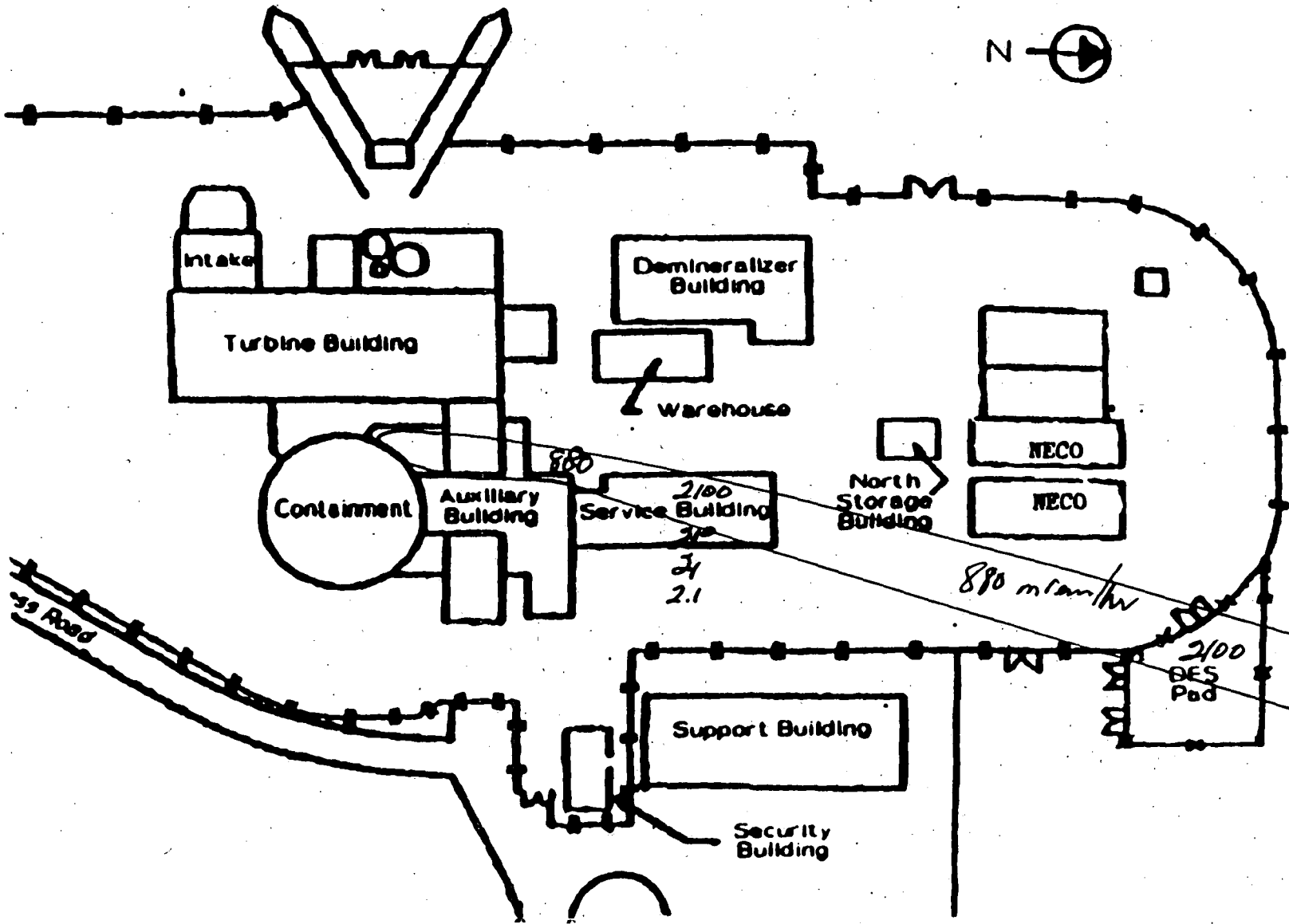
1.0  
1130



PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2-3  
PALISADES NUCLEAR PLANT SITE

PALISADES NUCLEAR PLANT  
EMERGENCY ONSITE MONITORING MAP

# LAKE MICHIGAN

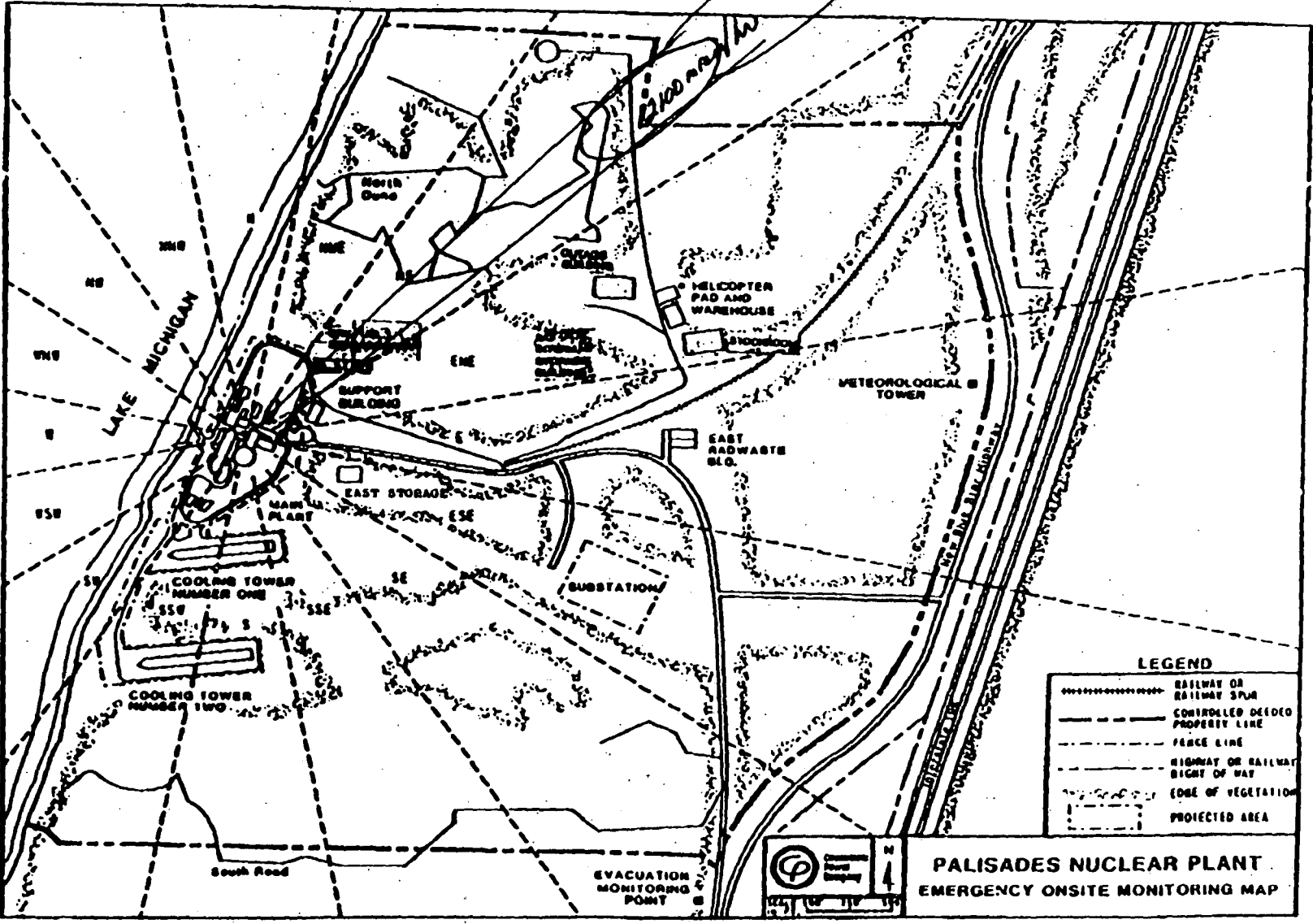


PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN

FIGURE 2.2  
PALISADES PLANT FACILITIES

1145

*Prume*

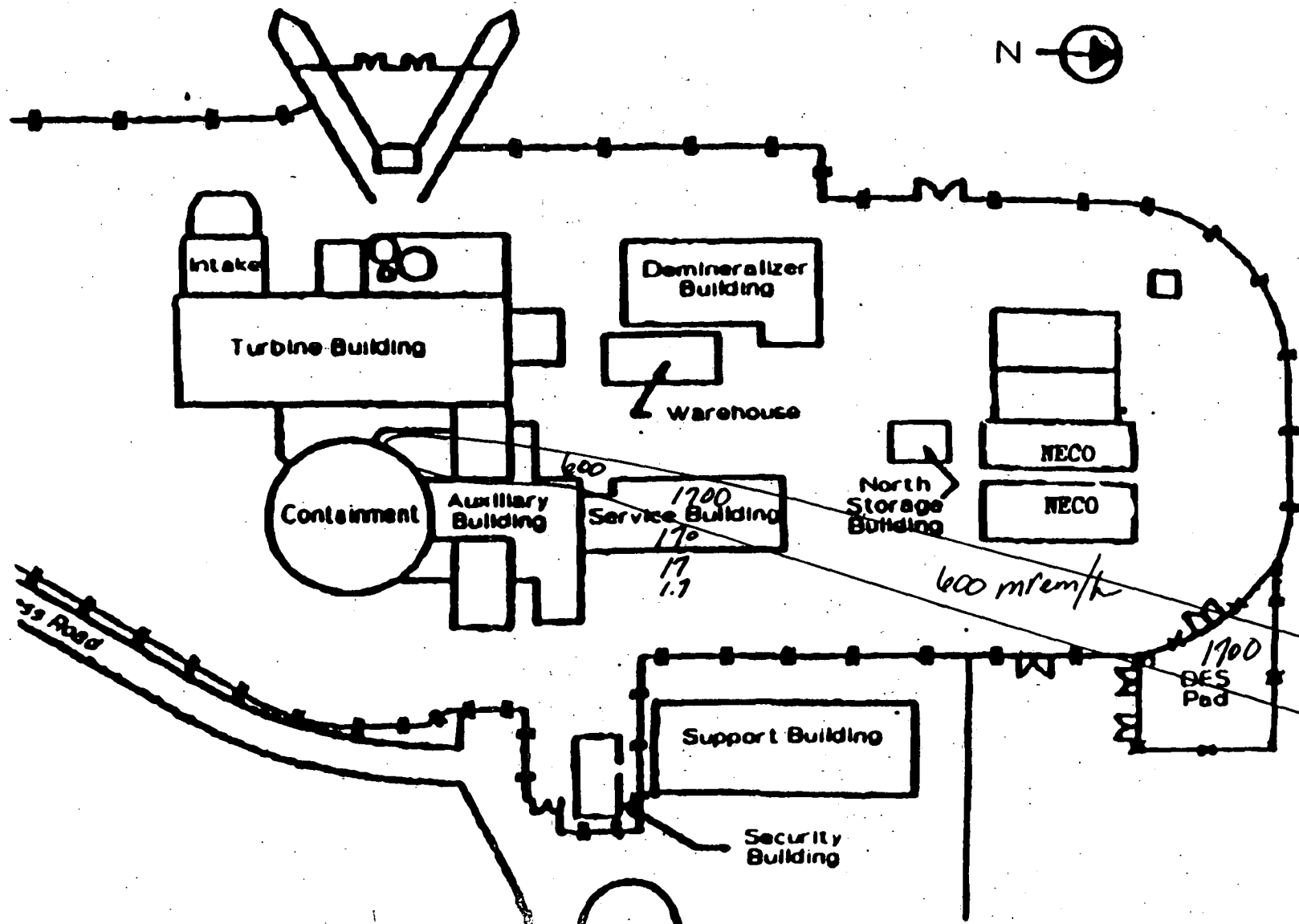


**PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN**

**FIGURE 2-3  
PALISADES NUCLEAR PLANT SITE**

200  
1200

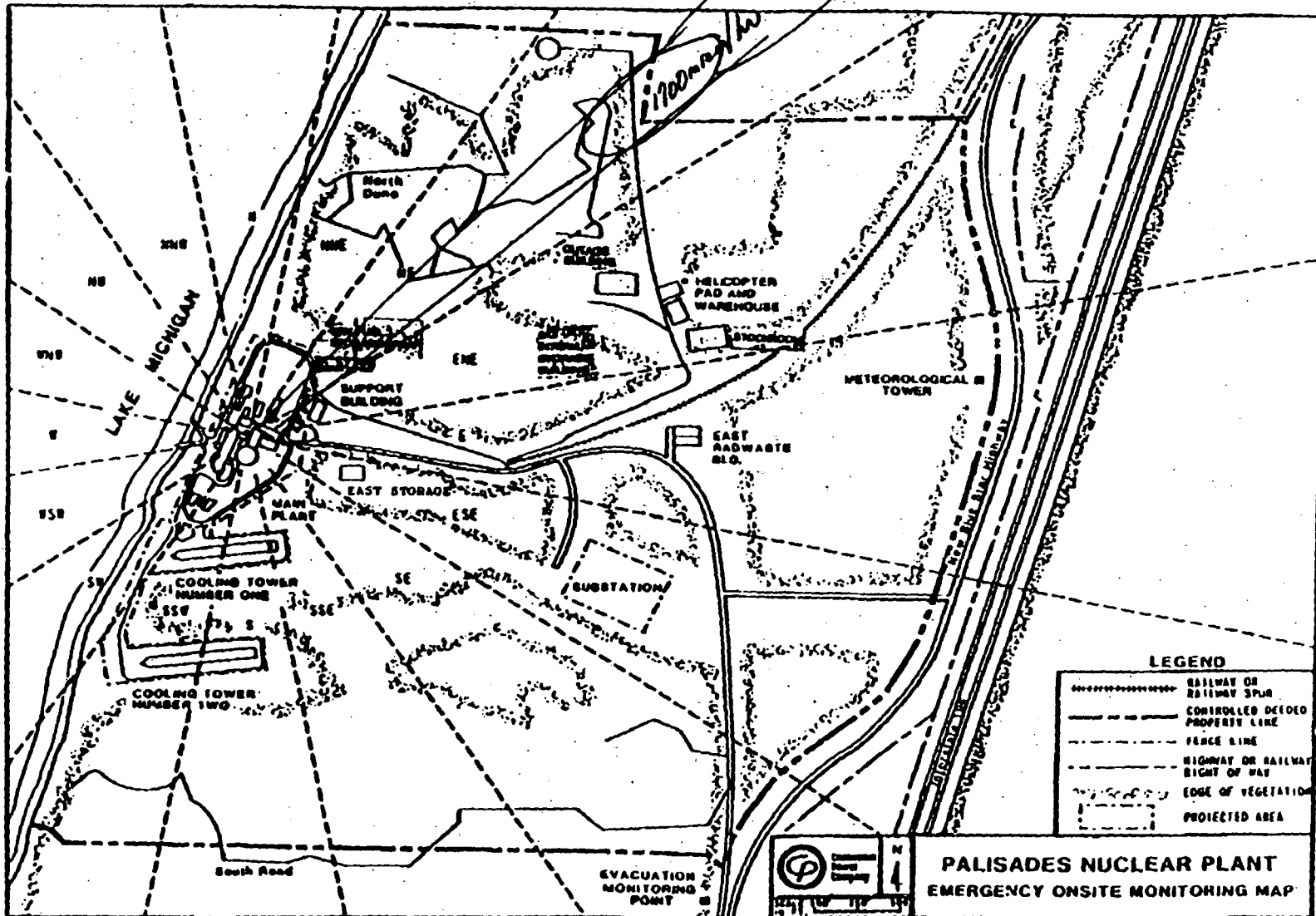
LAKE MICHIGAN



PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2.2  
PALISADES PLANT FACILITIES



00  
1200



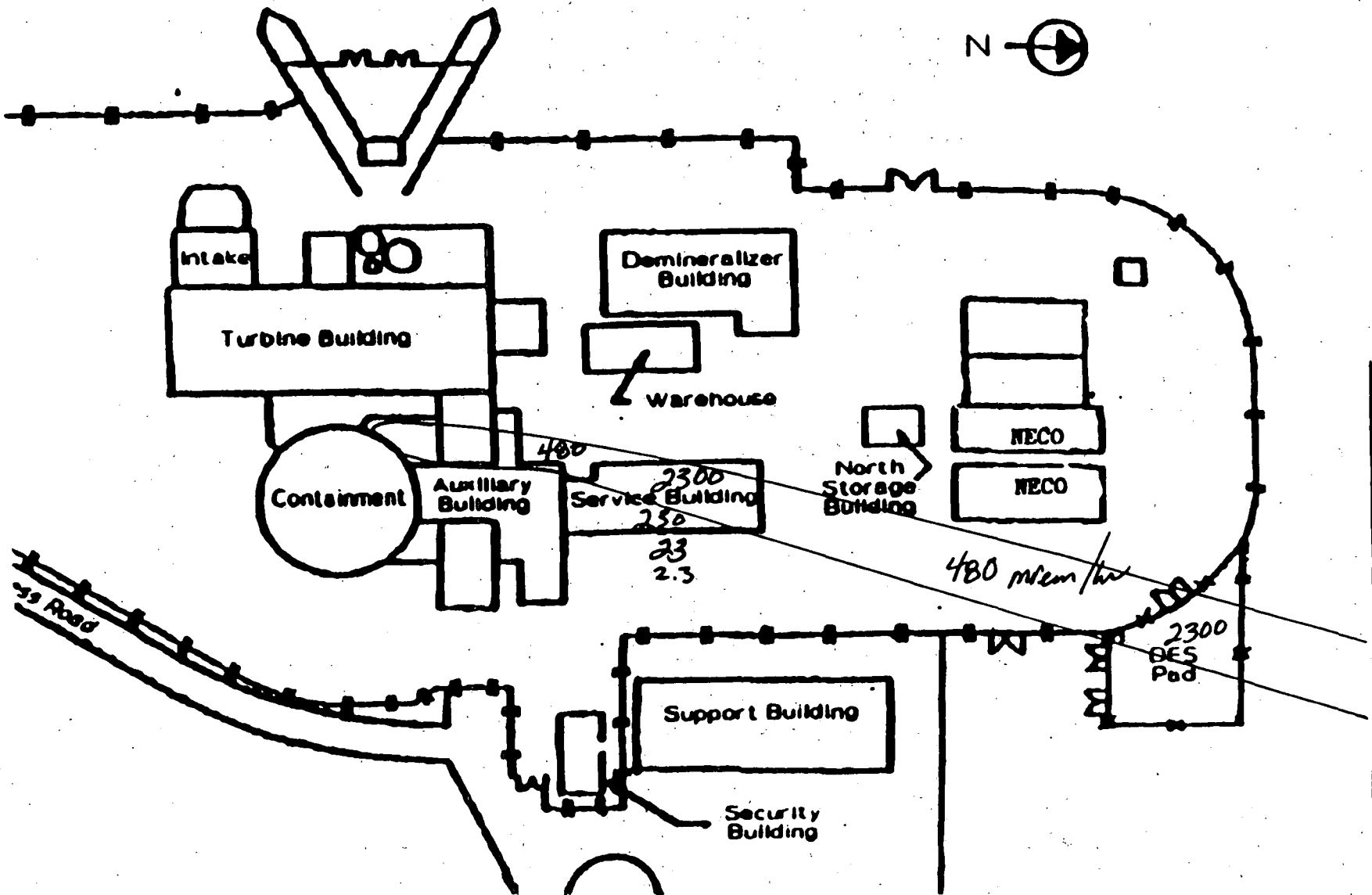
PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN

FIGURE 2-3  
PALISADES NUCLEAR PLANT SITE

**PALISADES NUCLEAR PLANT**  
**EMERGENCY ONSITE MONITORING MAP**

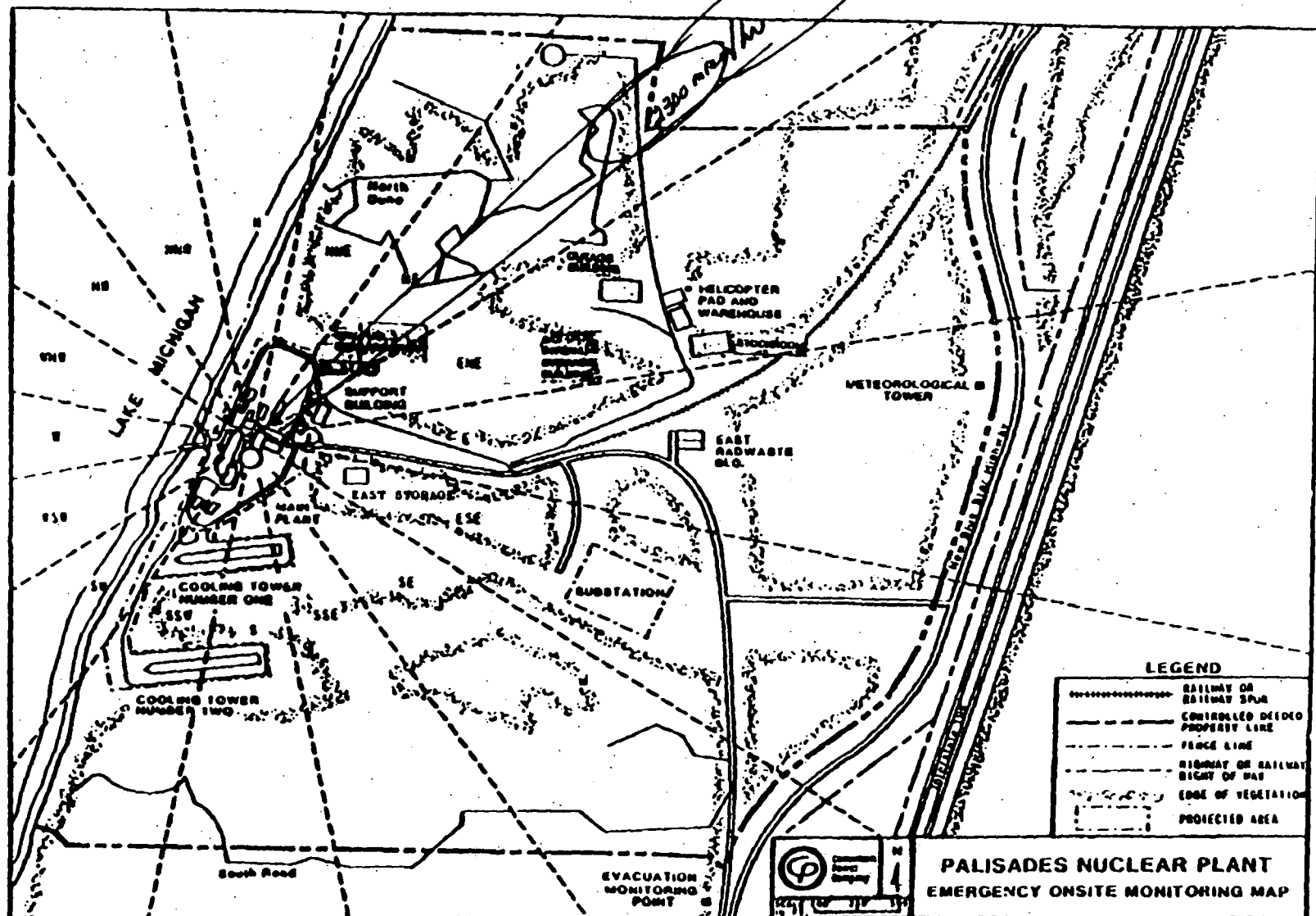
15  
1215

LAKE MICHIGAN



PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2-2  
PALISADES PLANT FACILITIES

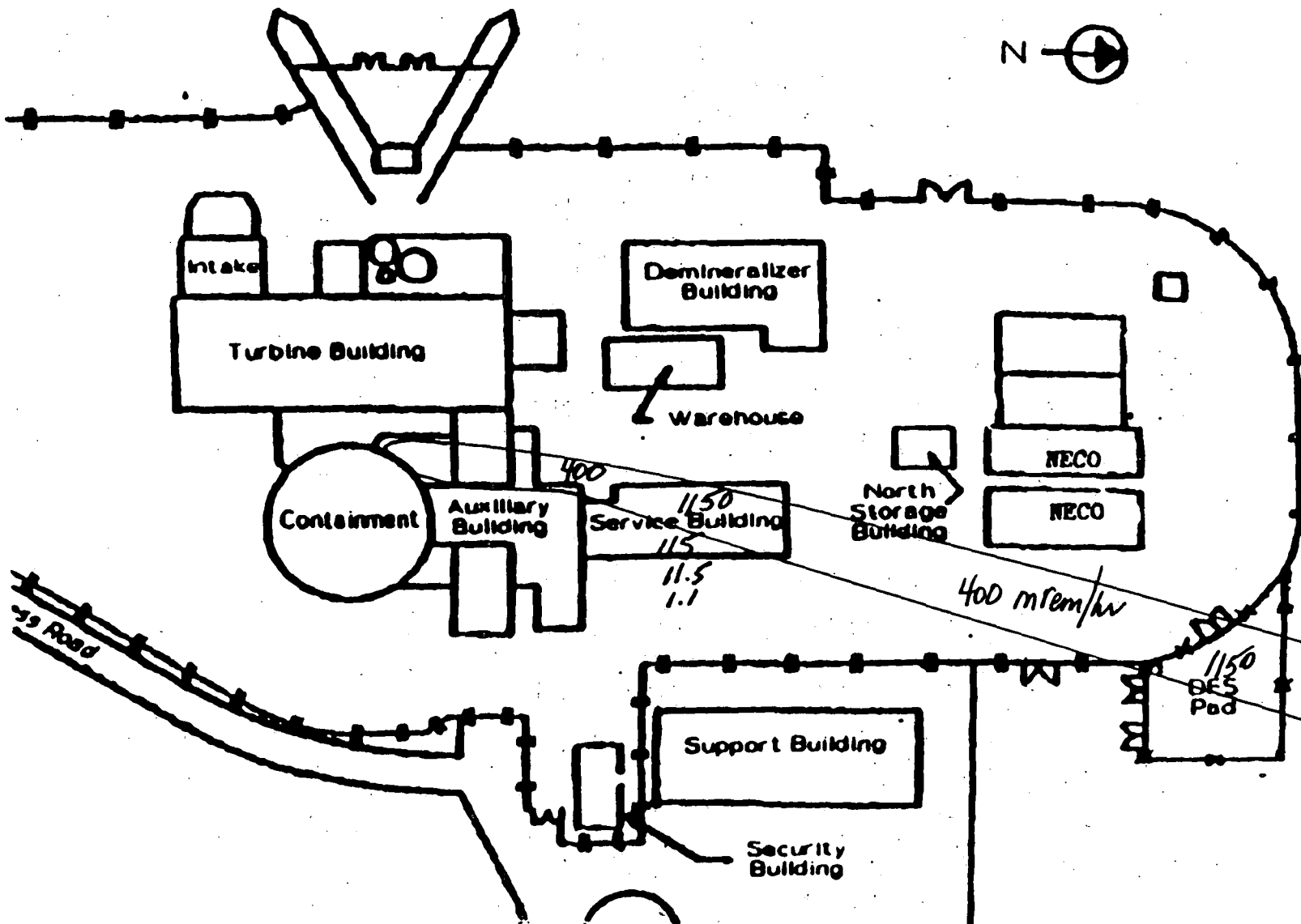
15  
1215



PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2.3  
PALISADES NUCLEAR PLANT SITE

12  
1230

LAKE MICHIGAN



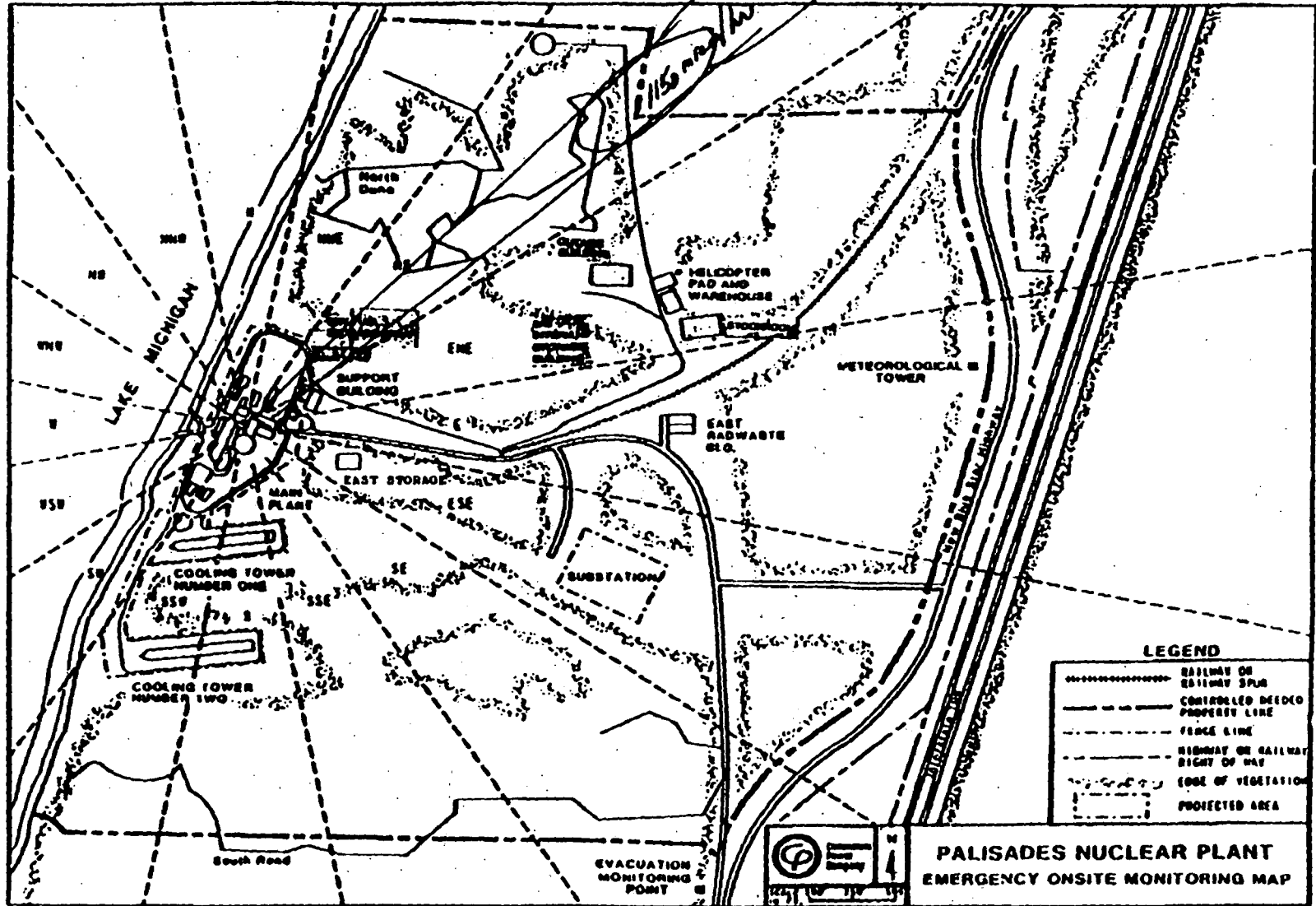
PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2-2  
PALISADES PLANT FACILITIES

230

1230

*Purme*

*2115 north*



**PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN**

**FIGURE 2-3  
PALISADES NUCLEAR PLANT SITE**

**LEGEND**

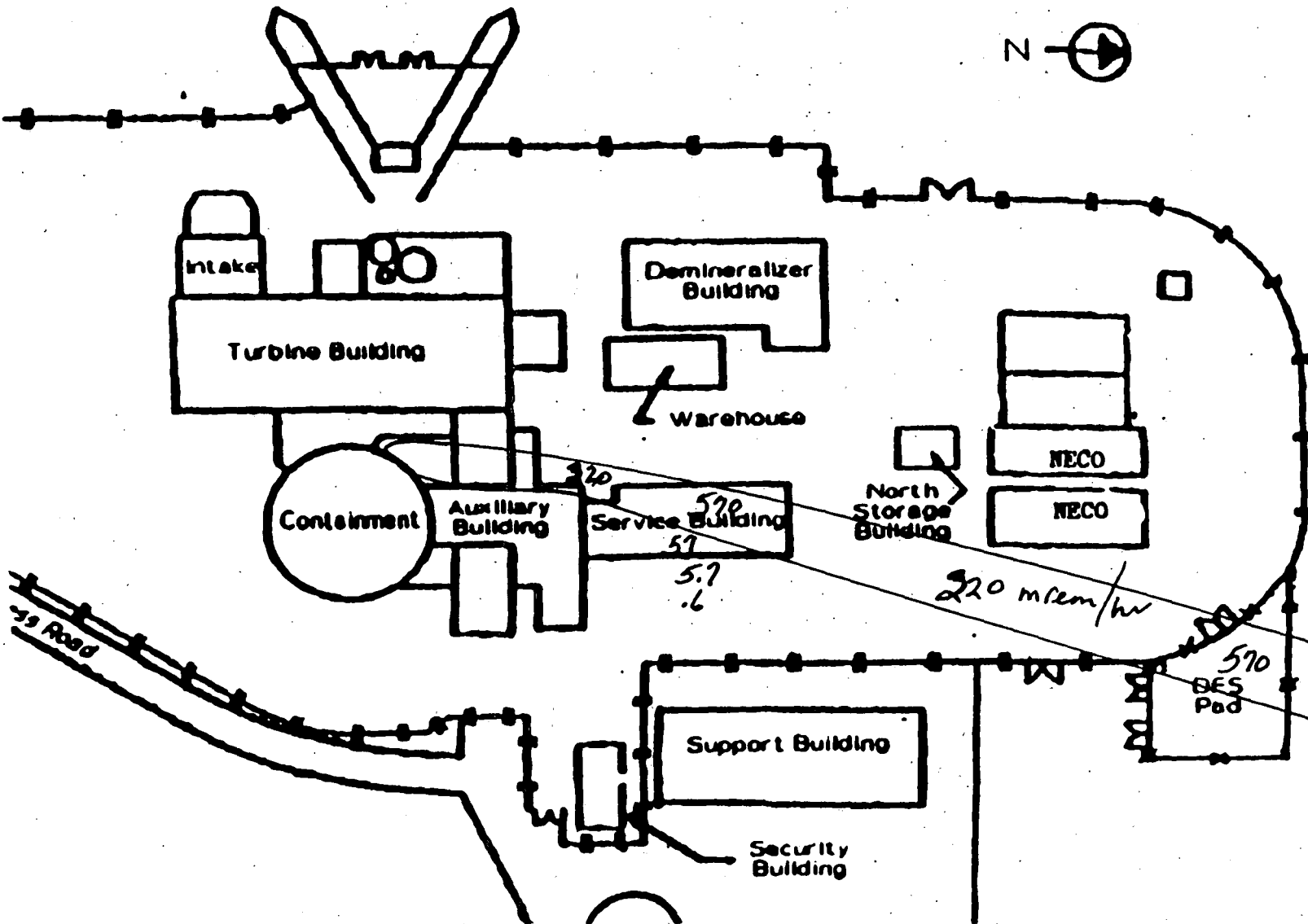
	RAILWAY OR HIGHWAY RIGHT OF WAY
	CONTROLLED DEEDED PROPERTY LINE
	FENCE LINE
	HIGHWAY OR RAILWAY RIGHT OF WAY
	EDGE OF VEGETATION
	PROJECTED AREA



**PALISADES NUCLEAR PLANT  
EMERGENCY ONSITE MONITORING MAP**

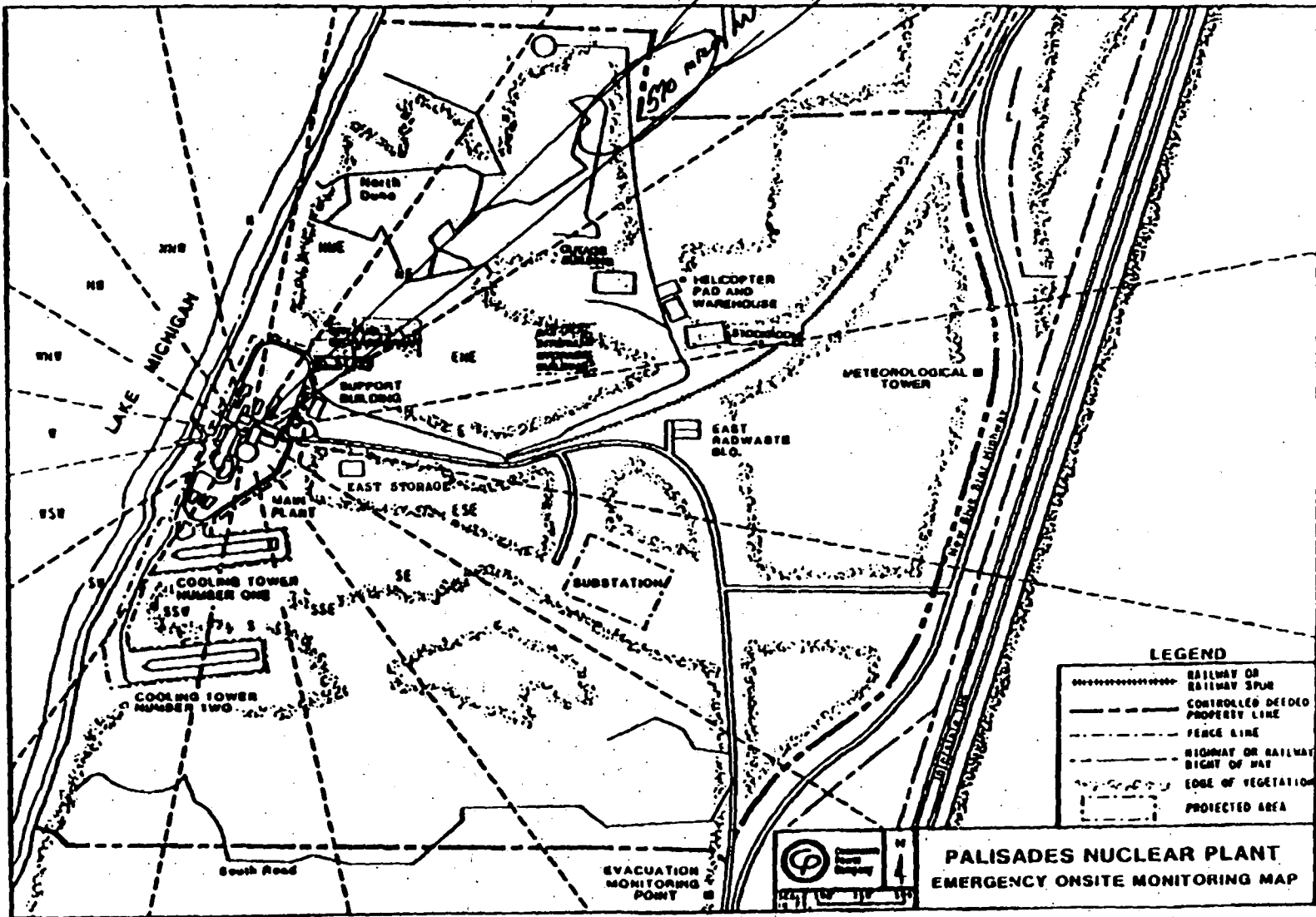
1245  
1245

LAKE MICHIGAN



PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2.2  
PALISADES PLANT FACILITIES

124  
1245

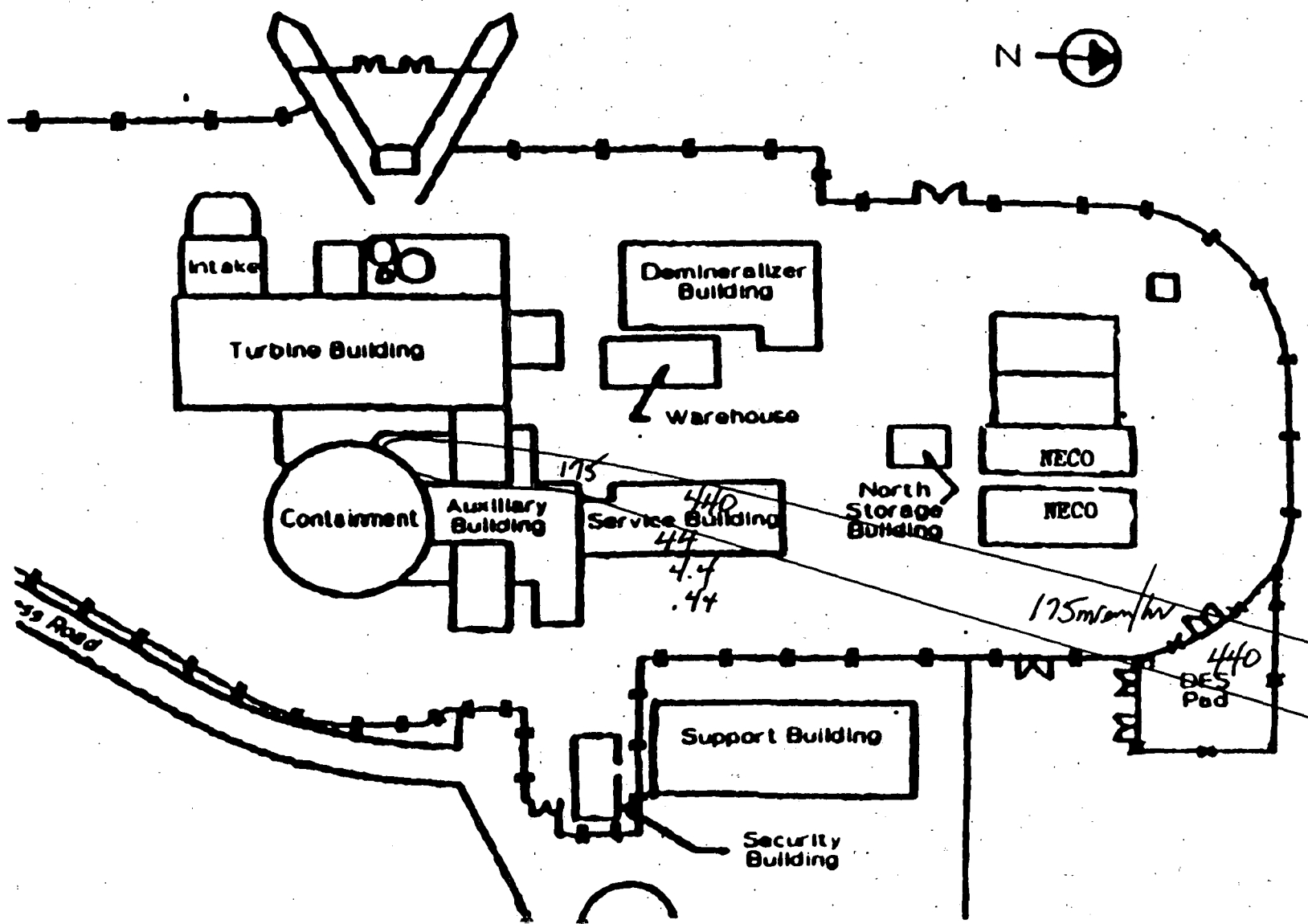


PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN

FIGURE 2-3  
PALISADES NUCLEAR PLANT SITE

130  
1300

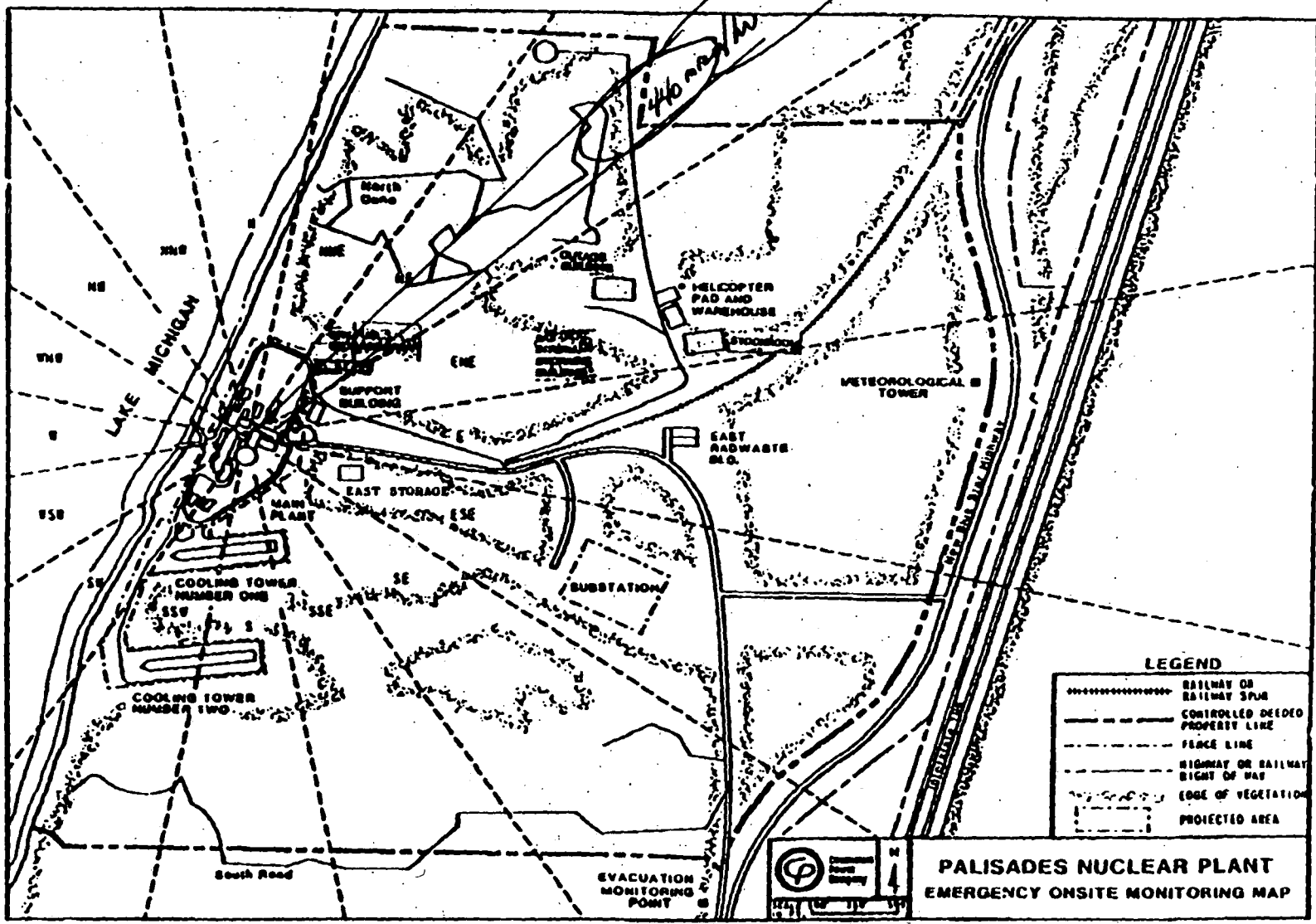
LAKE MICHIGAN



PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2.2  
PALISADES PLANT FACILITIES



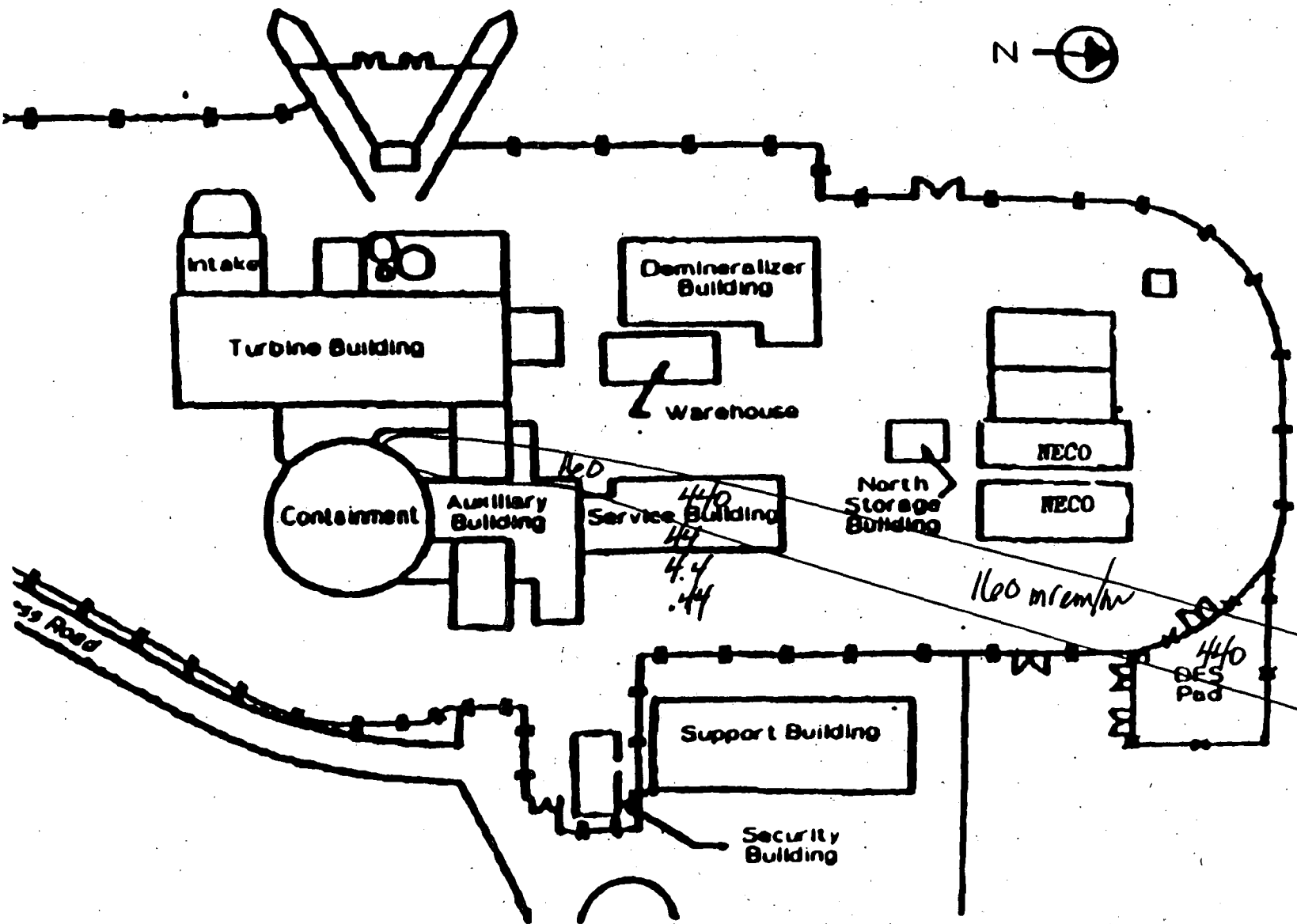
1300



PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2.3  
PALISADES NUCLEAR PLANT SITE

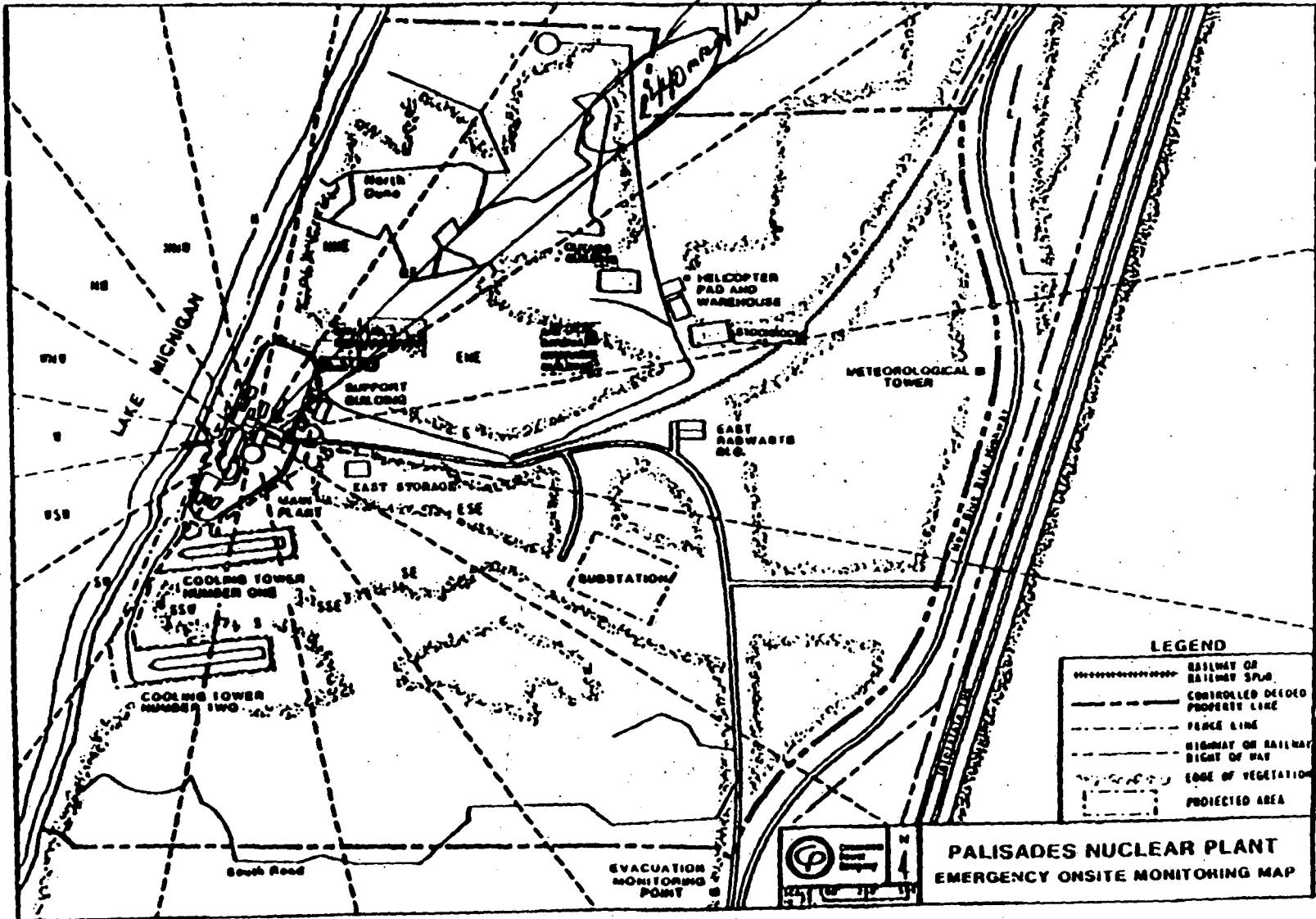
13.  
1315

LAKE MICHIGAN



PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2.2  
PALISADES PLANT FACILITIES

15  
1315



**LEGEND**

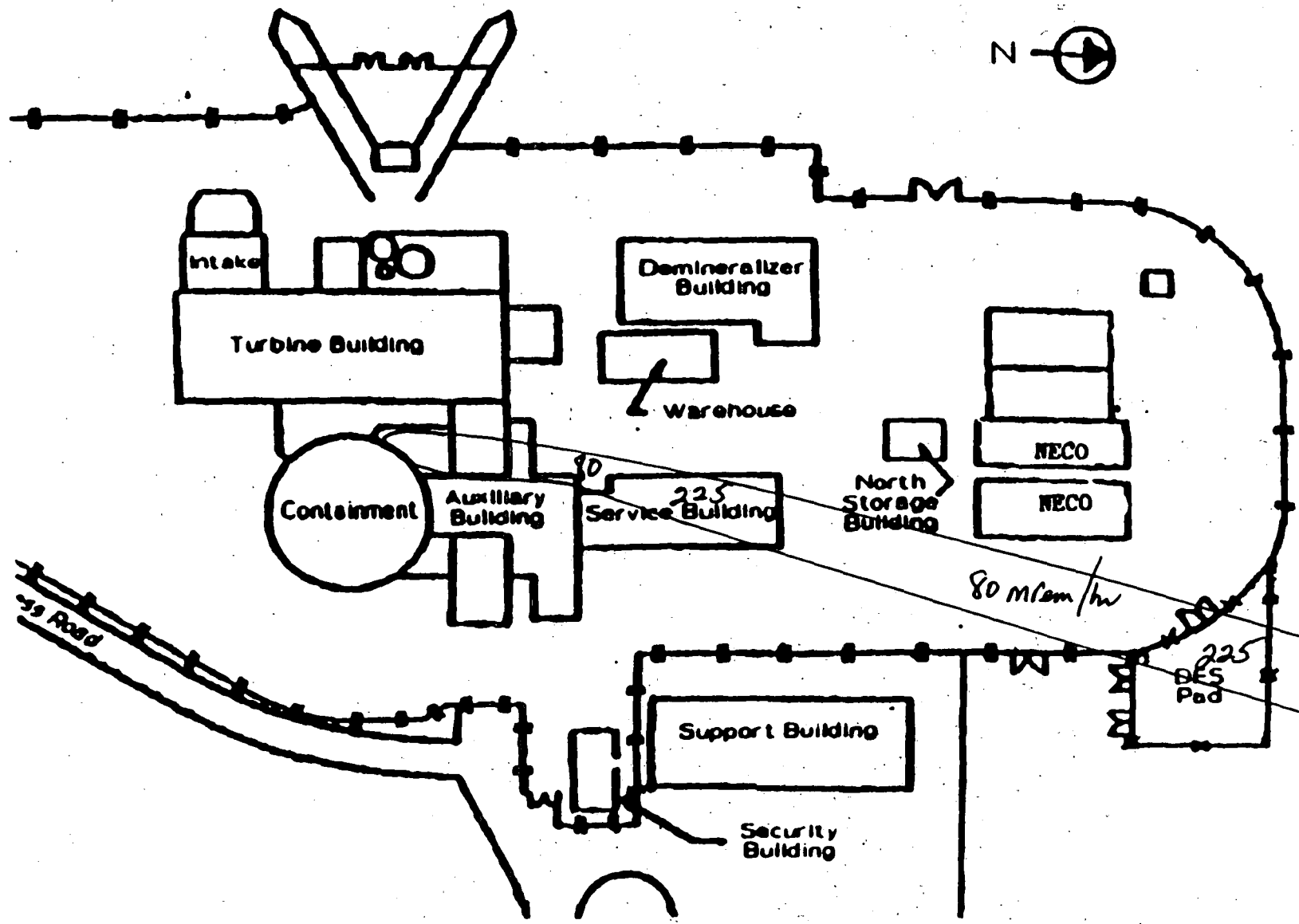
	RAILWAY OR RAILWAY SPUR
	CONTROLLED DEEDED PROPERTY LINE
	FENCE LINE
	HIGHWAY OR RAILWAY RIGHT OF WAY
	EDGE OF VEGETATION
	PROJECTED AREA



**PALISADES NUCLEAR PLANT  
EMERGENCY ONSITE MONITORING MAP**

**PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2.3  
PALISADES NUCLEAR PLANT SITE**

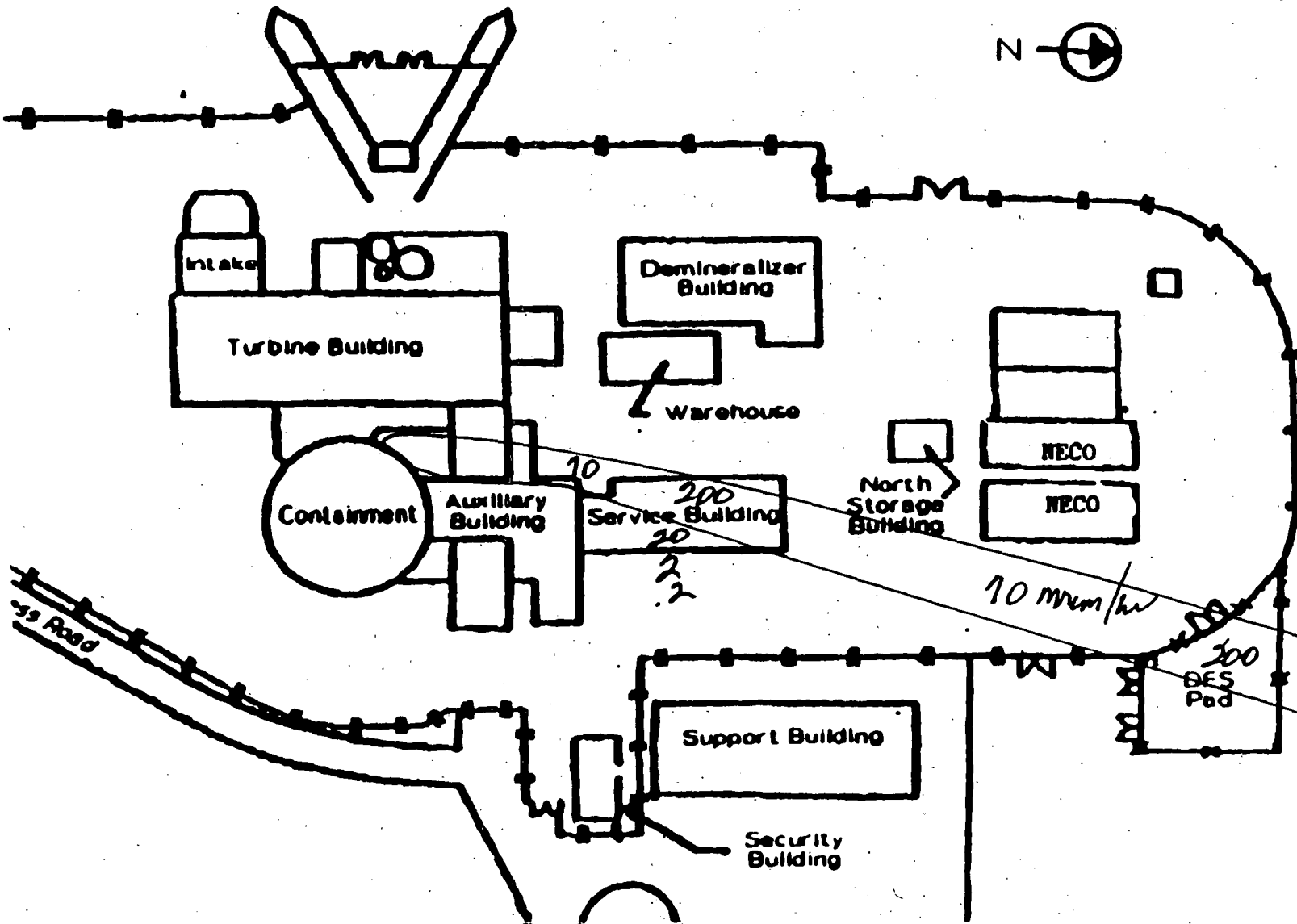
# LAKE MICHIGAN



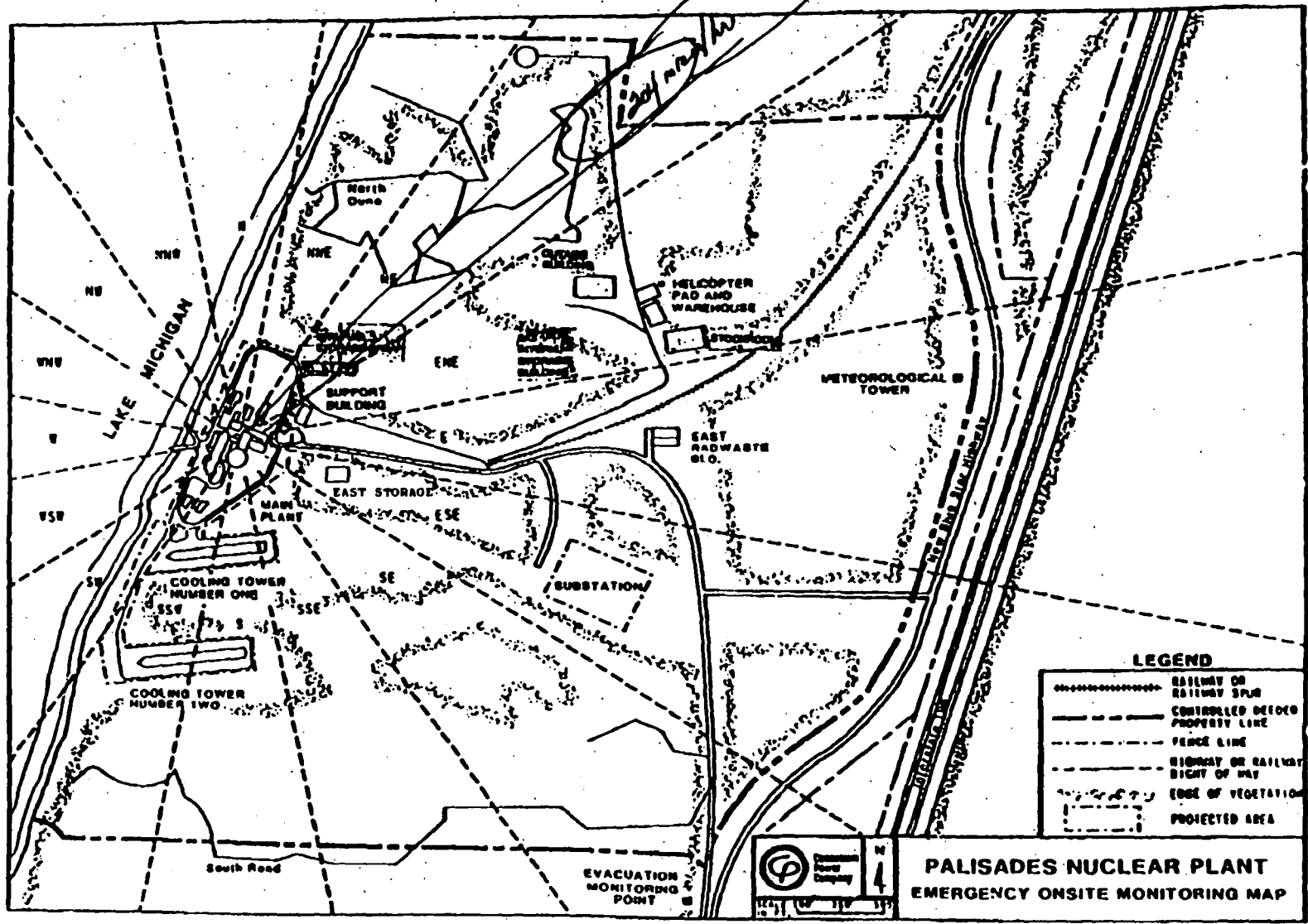
PALISADES NUCLEAR PLANT  
 SITE EMERGENCY PLAN  
 FIGURE 2.2  
 PALISADES PLANT FACILITIES

1345

LAKE MICHIGAN



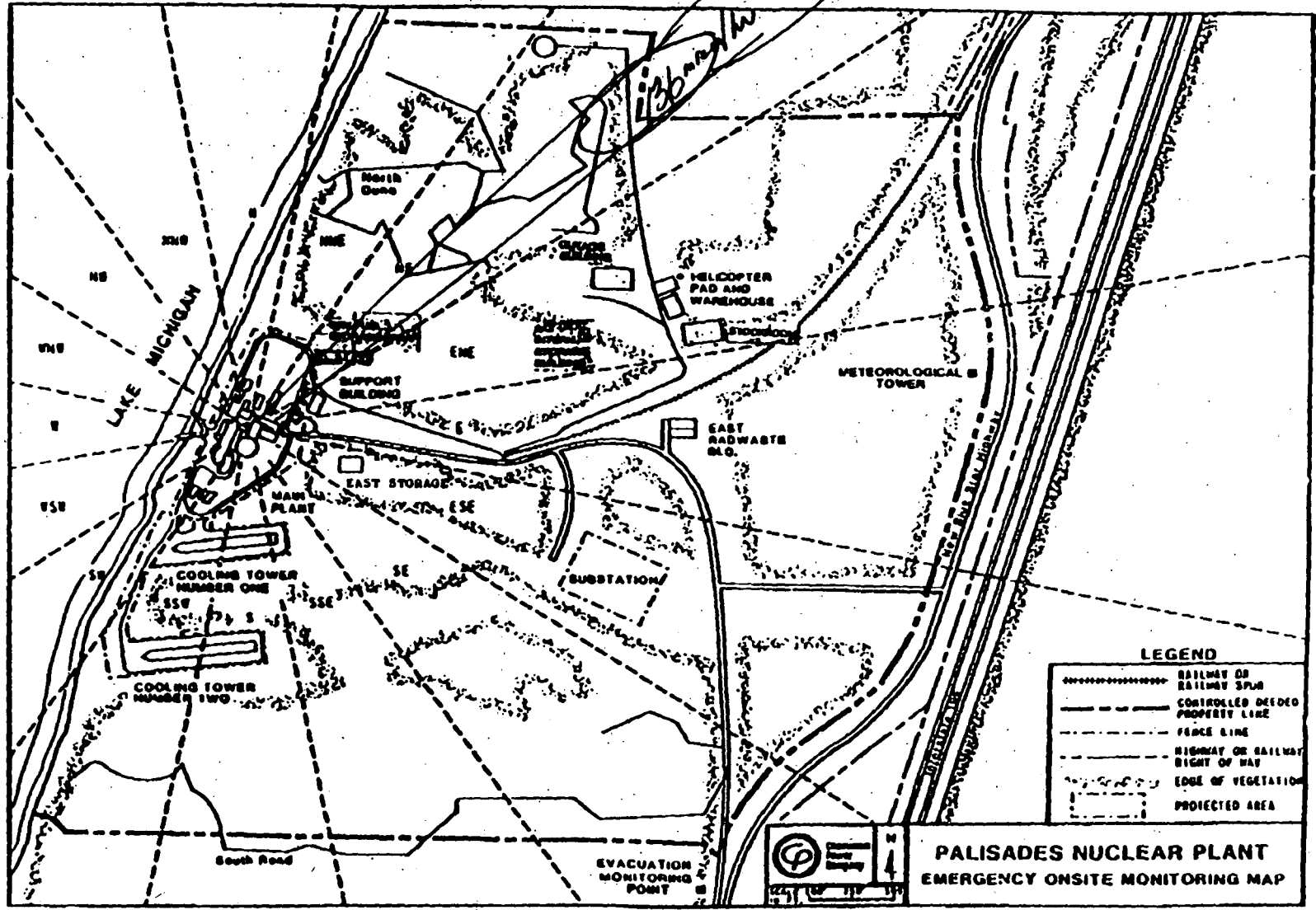
PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2.2  
PALISADES PLANT FACILITIES



1345  
1345

PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2.3  
PALISADES NUCLEAR PLANT SITE

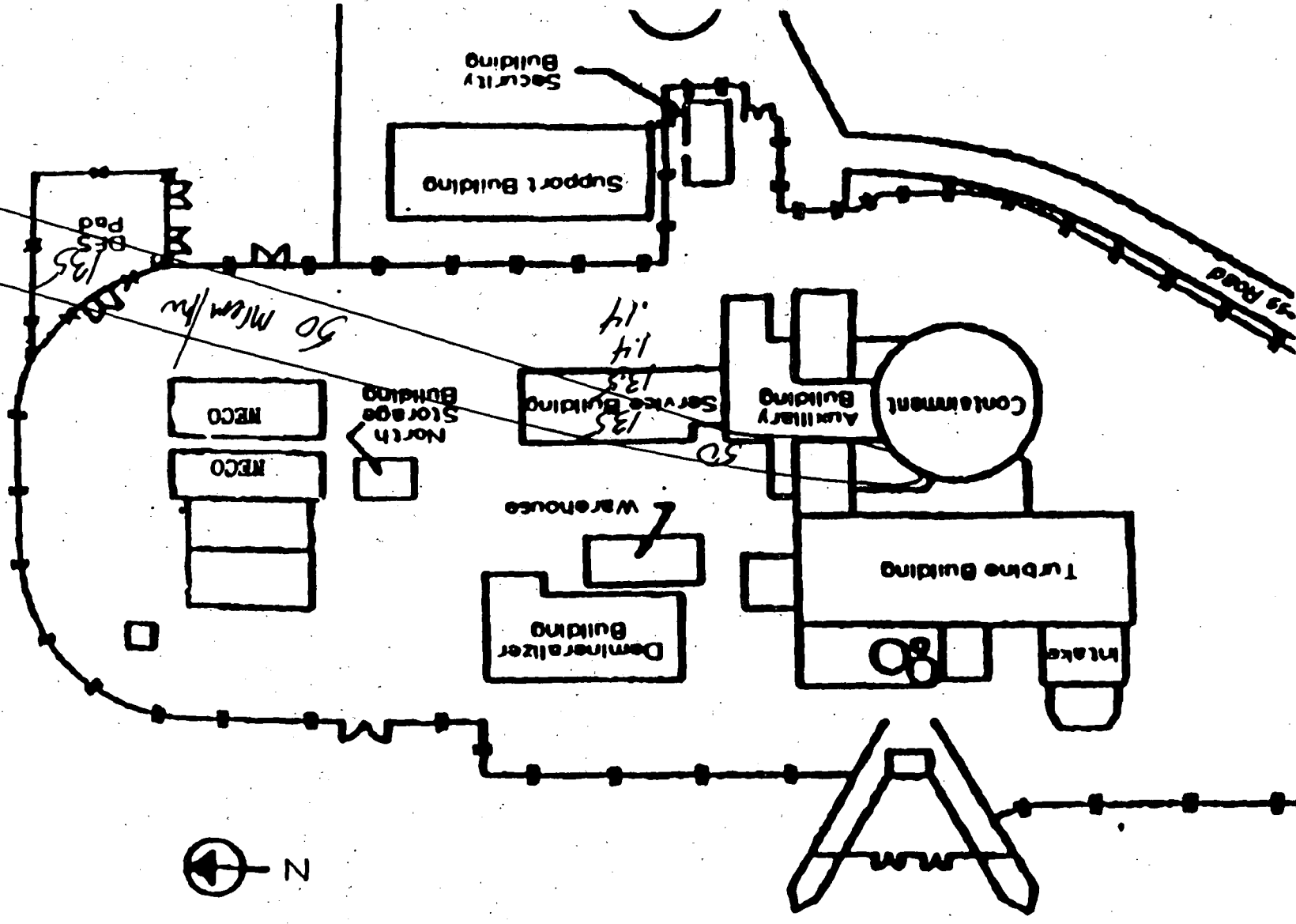
1.0  
1400



PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2.3  
PALISADES NUCLEAR PLANT SITE

PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN

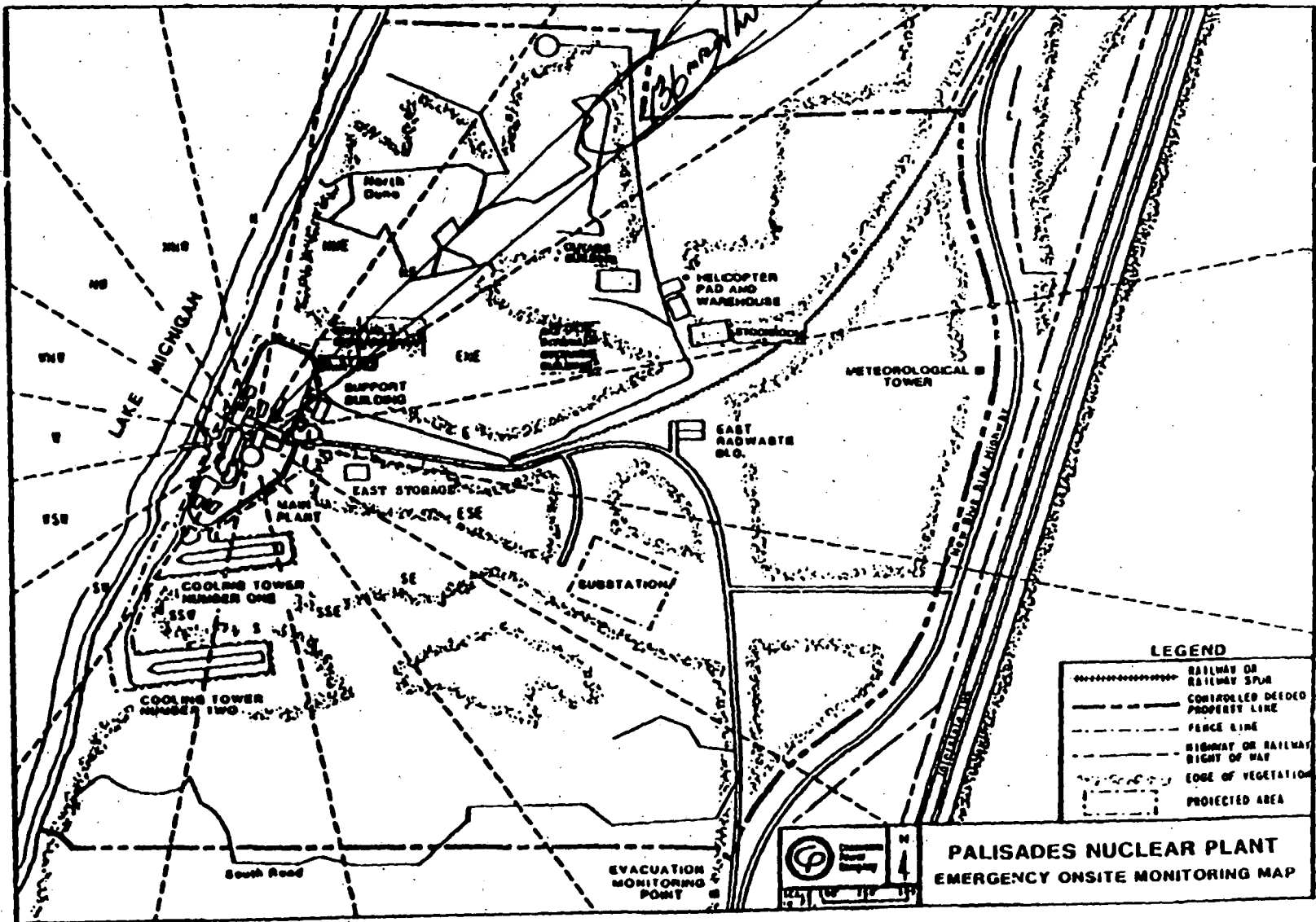
FIGURE 2-2  
PALISADES PLANT FACILITIES



LAKE MICHIGAN

1400





PALISADES NUCLEAR PLANT  
SITE EMERGENCY PLAN  
FIGURE 2-3  
PALISADES NUCLEAR PLANT SITE

CONVERSIONS

IODINE CONVERSION  
WHEN IN PLUME =  
GAMMA RDG X 1.5E-08

SERVICE BLDG=  
REDUCE GAMMA BY 10.  
EACH FLOOR.

SHIELDS  
BLOCK WALL REDUCE  
BY 10

1 FT CONCRETE  
REDUCE BY 10  
2 FT CONCRETE  
REDUCE BY 100

NO CONTAMINATION  
UNLESS IN PLUME

WHEN IN PLUME  
ESTIMATE A  
CONTAMINATION  
VALUE

10/23/96

0830

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above  
Blowdown Filter: mRem/hr BKG (<0.5)

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G) Contact mRem/hr BKG (<0.5)

b. South Steam Line (from 'A' S/G) Contact mRem/hr BKG (<0.5)

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A: Contact mRem/hr BKG (<0.5)

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house"  
doors.

4. Off gas line: Contact mRem/hr < 0.5 mrem

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes  
from the Turbine Building:

NONE

6. Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)

1/22/96  
0845

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above  
Blowdown Filter: mRem/hr BK6

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G) Contact mRem/hr 1

b. South Steam Line (from 'A' S/G) Contact mRem/hr < 0.5

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A: Contact mRem/hr 4

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house"  
doors.

4. Off gas line: Contact mRem/hr 0.8 mRem

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes  
from the Turbine Building:

None  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)

10/22/96  
0900

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above  
Blowdown Filter: mRem/hr 0.6

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G) Contact mRem/hr 1.5

b. South Steam Line (from 'A' S/G) Contact mRem/hr 20.5

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A: Contact mRem/hr 5

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house"  
doors.

4. Off gas line: Contact mRem/hr 1.0

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes  
from the Turbine Building:

None  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)

10/22/96  
09/5

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above  
Blowdown Filter: mRem/hr 0.7

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G) Contact mRem/hr 0.5

b. South Steam Line (from 'A' S/G) Contact mRem/hr <0.5

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A: Contact mRem/hr 3

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house"  
doors.

4. Off gas line: Contact mRem/hr 0.5

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes  
from the Turbine Building:

None  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)

10/22/86  
0930

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above  
Blowdown Filter: mRem/hr 0.7

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G) Contact mRem/hr 0.5

b. South Steam Line (from 'A' S/G) Contact mRem/hr <0.5

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A: Contact mRem/hr 3

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house"  
doors.

4. Off gas line: Contact mRem/hr 0.5

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes  
from the Turbine Building:

None  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)

12/22/96  
0945

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above  
Blowdown Filter: mRem/hr 0.7

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G) Contact mRem/hr 0.5

b. South Steam Line (from 'A' S/G) Contact mRem/hr <0.5

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A: Contact mRem/hr 3

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house"  
doors.

4. Off gas line: Contact mRem/hr 0.5

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes  
from the Turbine Building:

None

6. Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)



10/22/96  
1000

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above  
Blowdown Filter: mRem/hr 0.7

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G) Contact mRem/hr 0.5

b. South Steam Line (from 'A' S/G) Contact mRem/hr ≤0.5

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A: Contact mRem/hr 3

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house"  
doors.

4. Off gas line: Contact mRem/hr 0.5

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes  
from the Turbine Building:

None

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)

10/22/96  
115 1015

**STEAM GENERATOR TUBE RUPTURE**  
**PRELIMINARY AREA SURVEY**

**NOTE:** Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above  
Blowdown Filter: mRem/hr 0.7

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G) Contact mRem/hr 0.5

b. South Steam Line (from 'A' S/G) Contact mRem/hr 0.5

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A: Contact mRem/hr 3

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house"  
doors.

4. Off gas line: Contact mRem/hr 0.5

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes  
from the Turbine Building:

None  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)

12/9/6  
1030

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above  
Blowdown Filter: mRem/hr 0.7

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G) Contact mRem/hr 0.5

b. South Steam Line (from 'A' S/G) Contact mRem/hr <0.5

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A: Contact mRem/hr 3

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house"  
doors.

4. Off gas line: Contact mRem/hr 0.5

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes  
from the Turbine Building:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Return survey to Shift Supervisor.

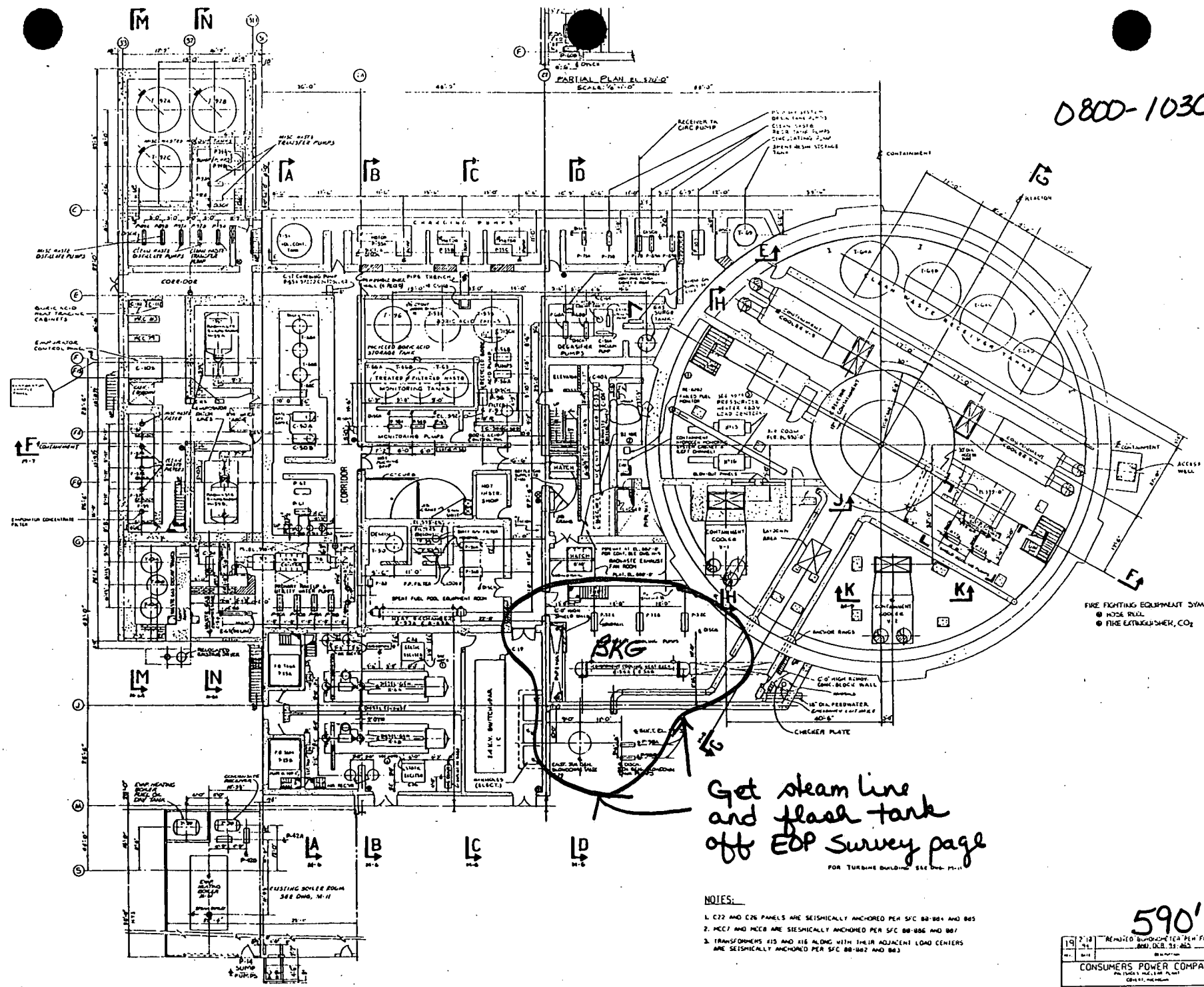
Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)



D800-1030

PARTIAL PLAN EL. 590'0"  
SCALE: 1/8" = 1'-0"



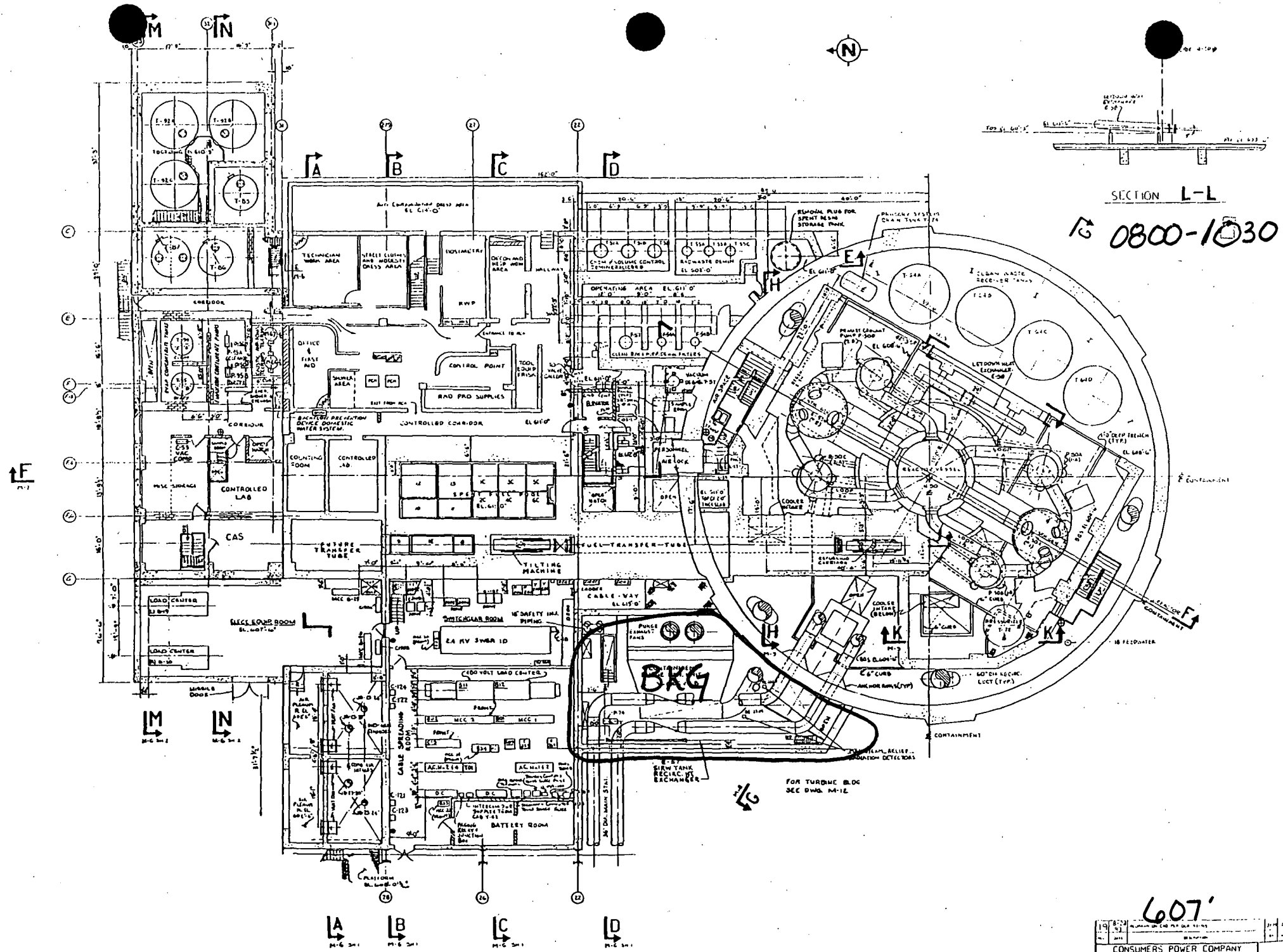
FIRE FIGHTING EQUIPMENT SYMBOLS:  
 ● HOSE REEL  
 ● FIRE EXTINGUISHER, CO<sub>2</sub>

Get steam line  
 and flash tank  
 off EOP Survey page  
 FOR TURBINE BUILDING SEE DWG. P-111

- NOTES:
1. C22 AND C26 PANELS ARE SEISMICALLY ANCHORED PER SFC 88-101 AND B15
  2. M2C7 AND M2C8 ARE SEISMICALLY ANCHORED PER SFC 88-106 AND B07
  3. TRANSFORMERS #15 AND #16 ALONG WITH THEIR ADJACENT LOAD CENTERS ARE SEISMICALLY ANCHORED PER SFC 88-107 AND B03

590'

19	31	REVISED SUBMITTER PER SFC 916	11/11
20	31	REVISED PER SFC 916	11/11
CONSUMERS POWER COMPANY <small>PO BOX 1000, ST. LOUIS, MO 63108</small>			
EQUIPMENT LOCATION - AUX. BLDG. RADWASTE MODIFICATIONS PLAN OF EL. 590'-0"			
M 2			



SECTION L-L

16 0800-1030

BKG

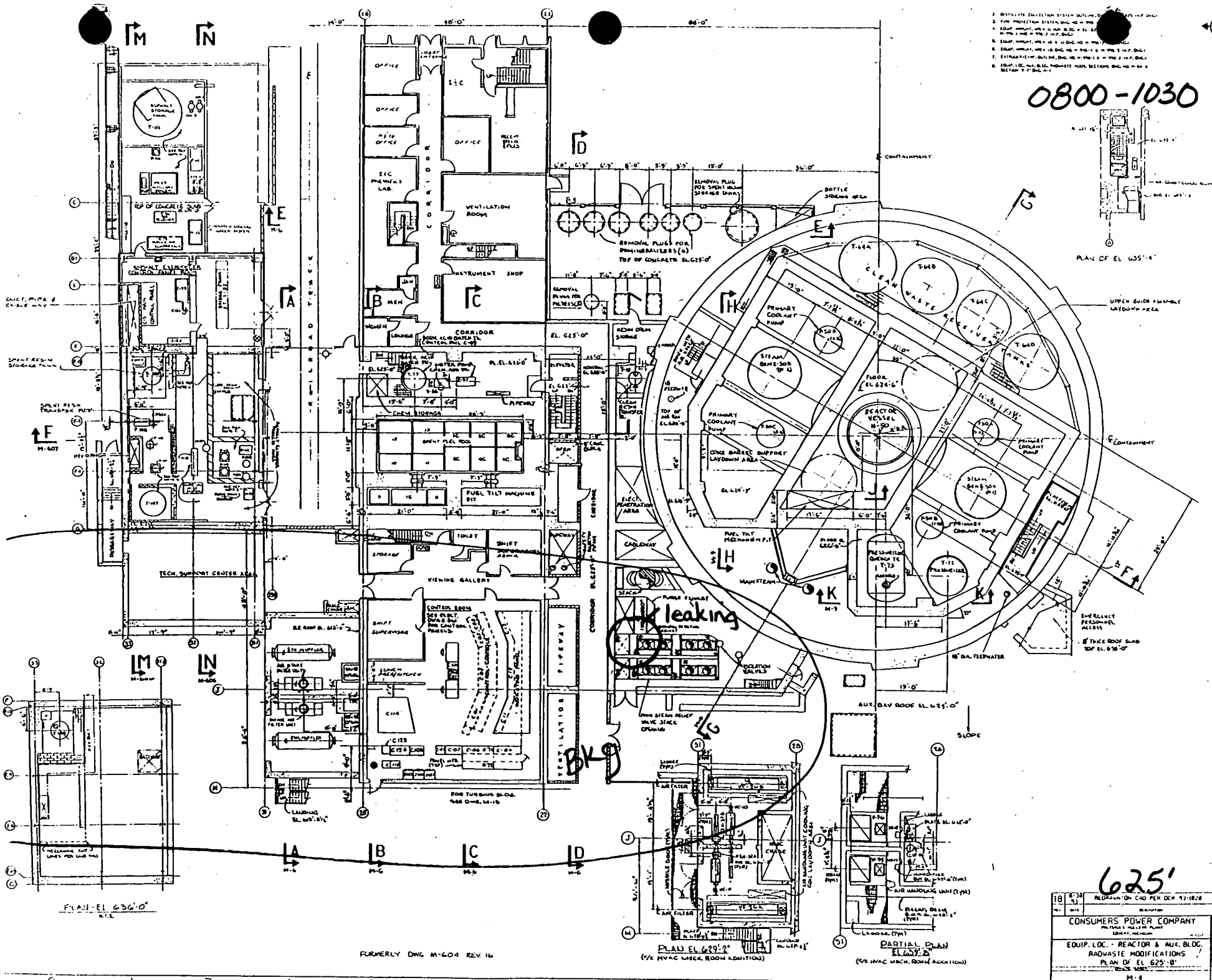
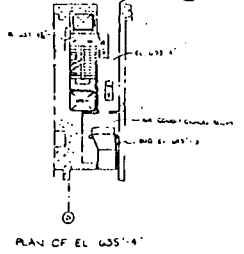
607'

19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																		
CONSUMERS POWER COMPANY																																																																																																			
EQUIPMENT LOCATION-AUXILIARY AND REACTOR BLDG. RADWASTE MODIFICATION PLAN OF EL. 607'-0"																																																																																																			
M-3																																																																																																			

THIS DRAWING WAS FORMERLY M-603 REV. 12

1. DISTRICT COLLECTION SYSTEM (SEE PLAN M-607)
2. FIRE PROTECTION SYSTEM (SEE DWG M-604)
3. EQUIP. ROOM, AREA 11 (SEE DWG M-604)
4. EQUIP. ROOM, AREA 12 (SEE DWG M-604)
5. EQUIP. ROOM, AREA 13 (SEE DWG M-604)
6. EQUIP. ROOM, AREA 14 (SEE DWG M-604)
7. EQUIP. ROOM, AREA 15 (SEE DWG M-604)
8. EQUIP. ROOM, AREA 16 (SEE DWG M-604)
9. EQUIP. ROOM, AREA 17 (SEE DWG M-604)
10. EQUIP. ROOM, AREA 18 (SEE DWG M-604)
11. EQUIP. ROOM, AREA 19 (SEE DWG M-604)
12. EQUIP. ROOM, AREA 20 (SEE DWG M-604)

0800-1030



PLAN, EL. 636'-0"

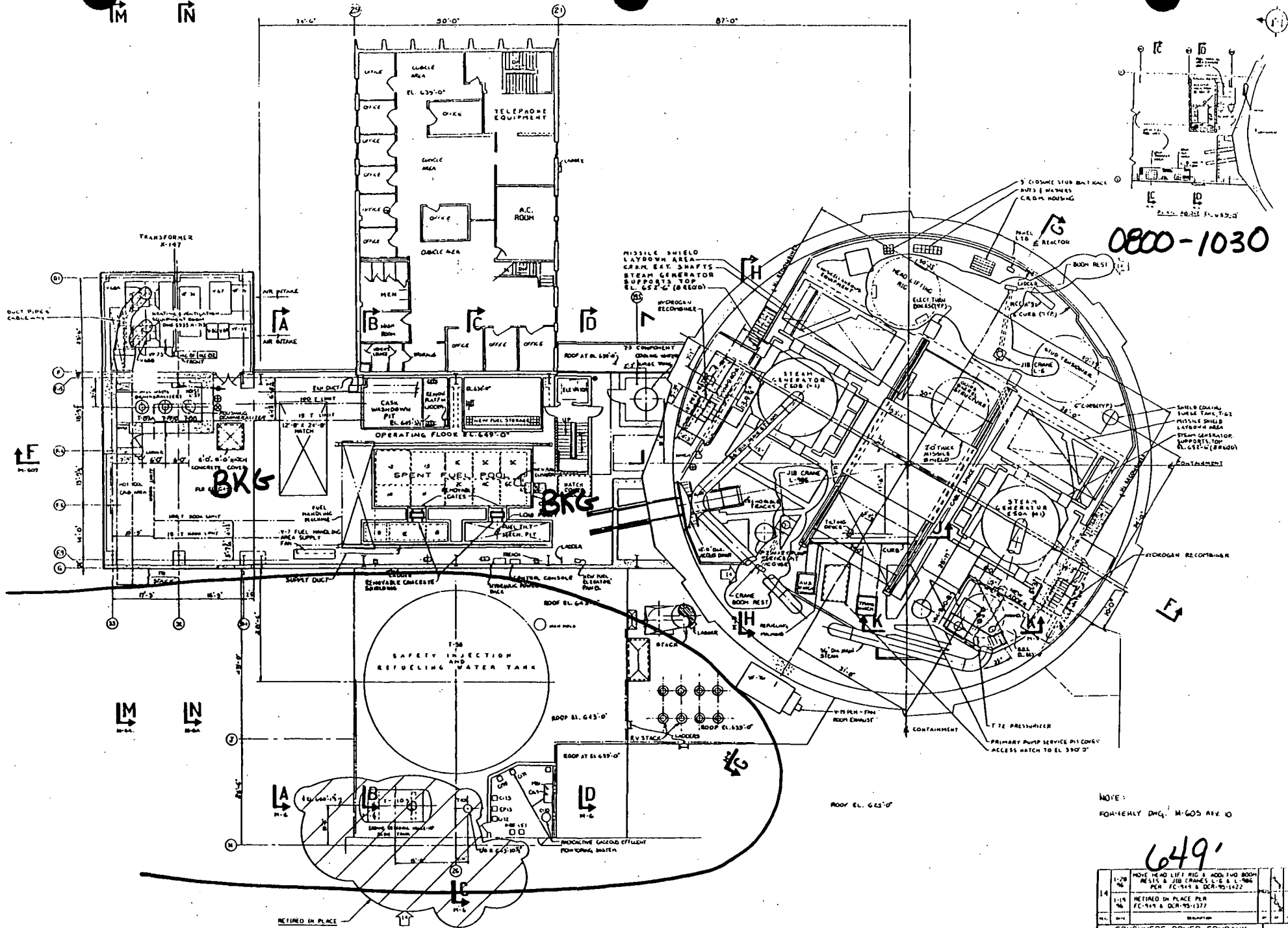
FORMERLY DWG M-604 REV. 16

PLAN, EL. 625'-0"  
(1/2 HVAC MECH. ROOM ADDITION)

PARTIAL PLAN  
(1/2 HVAC MECH. ROOM ADDITION)

625'

18	625'	REVISIONS	NO.	DATE	BY	CHKD.
CONSUMERS POWER COMPANY						
EQUIP. LOC. - REACTOR & AUX. BLDG.						
RADWASTE MODIFICATIONS						
PLAN OF EL. 625'-0"						
M-4						



0800-1030

NOTE:  
FOR TENDERLY DRG. M-605 REV. 10

649

14	11-28	MOVED HEAD LIFT M/C & ADD TWO BOOM RESTS & JIB CRANES L-6 & L-786
	NO.	REV. FC-949 & DCR-92-1422
	11-14	RETIRED IN PLACE PER FC-949 & DCR-92-1377
	NO.	REV. FC-949 & DCR-92-1377
CONSUMERS POWER COMPANY EQUIP. LOC. - AUX. BLDG. RADWASTE MODIFICATIONS PLAN UP. EL. 649-B		
M-5		

10/22/96  
1045

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

- 1. Blowdown Filter F-14 contact reading at floor grating above Blowdown Filter:

*Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

- 2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G)

*Steam plume*  
Contact mRem/hr \*

b. South Steam Line (from 'A' S/G)

Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating

- 3. Flash Tank T-29A:

*shine from jail house*  
Contact mRem/hr     

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house" doors.

*use room reading*

- 4. Off gas line:

Contact mRem/hr 5

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

- 5. Indicate the direction of travel and location of any steam plumes from the Turbine Building:

*Steam cloud coming out of jailhouse window.*  
*Vision poor. Steam being drawn out by roof*  
*exhauster up stair well and other penetrations.*

- 6. *#* Return survey to Shift Supervisor. *Use room reading ÷ 10 in plume*

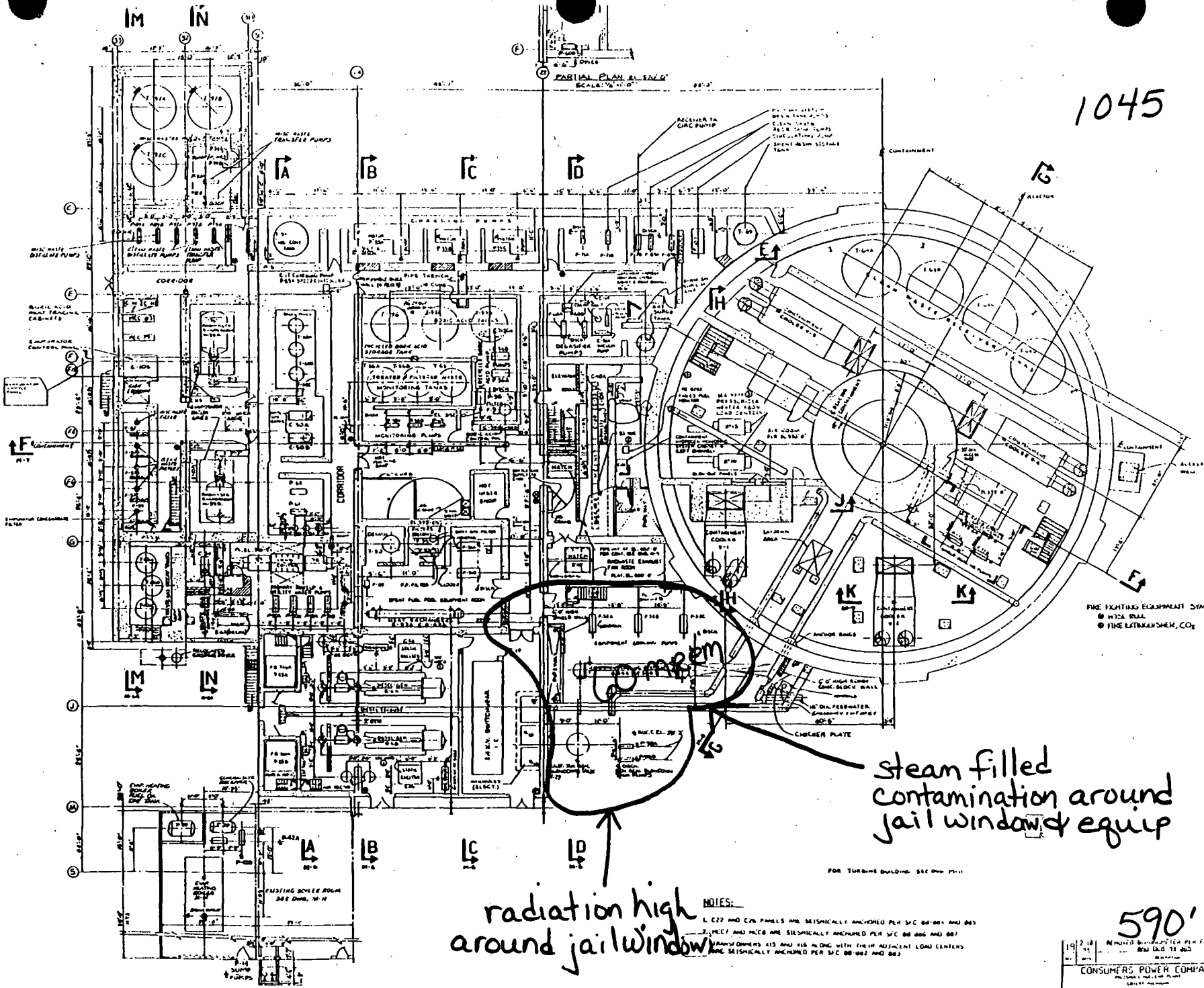
Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)





1045



FIRE FIGHTING EQUIPMENT SYMBOLS:  
 ● HYDRANT  
 ○ FIRE EXTINGUISHER, CO<sub>2</sub>

radiation high  
 around jail window

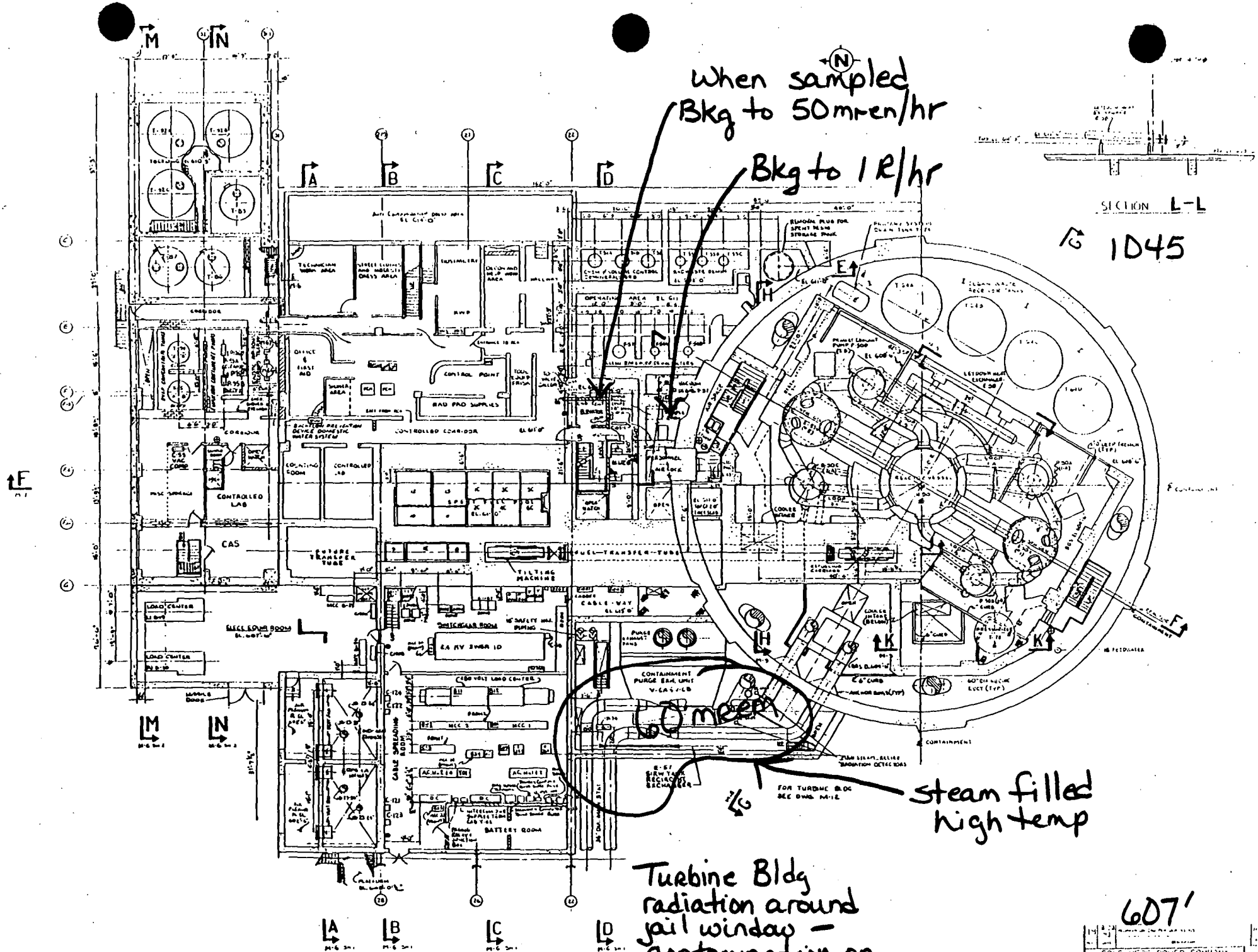
steam filled  
 contamination around  
 jail window & equip

NOTES:  
 1. C27 AND C28 PANELS ARE SEISMICALLY ANCHORED PER S/C 88-001 AND 88-002  
 2. M21 AND M22 ARE SEISMICALLY ANCHORED PER S/C 88-000 AND 88-001  
 3. MANHOLES 415 AND 416 ARE ALONG WITH THEIR ADJACENT LOAD CENTERS  
 AND SEISMICALLY ANCHORED PER S/C 88-002 AND 88-003

590'

19	2-18	REVISED DRAWING PER EC 910	
11	11	REVISED PER EC 910	
11	11	REVISED PER EC 910	
CONSUMERS POWER COMPANY			
EQUIPMENT LOCATION - ALL BLDG.			
RAI/WASTE WATER PLANTS			
PLAN UP E.L. 510.0'			
DATE: 5/87			
M. J.			

DRAWING NUMBER: M 88-001

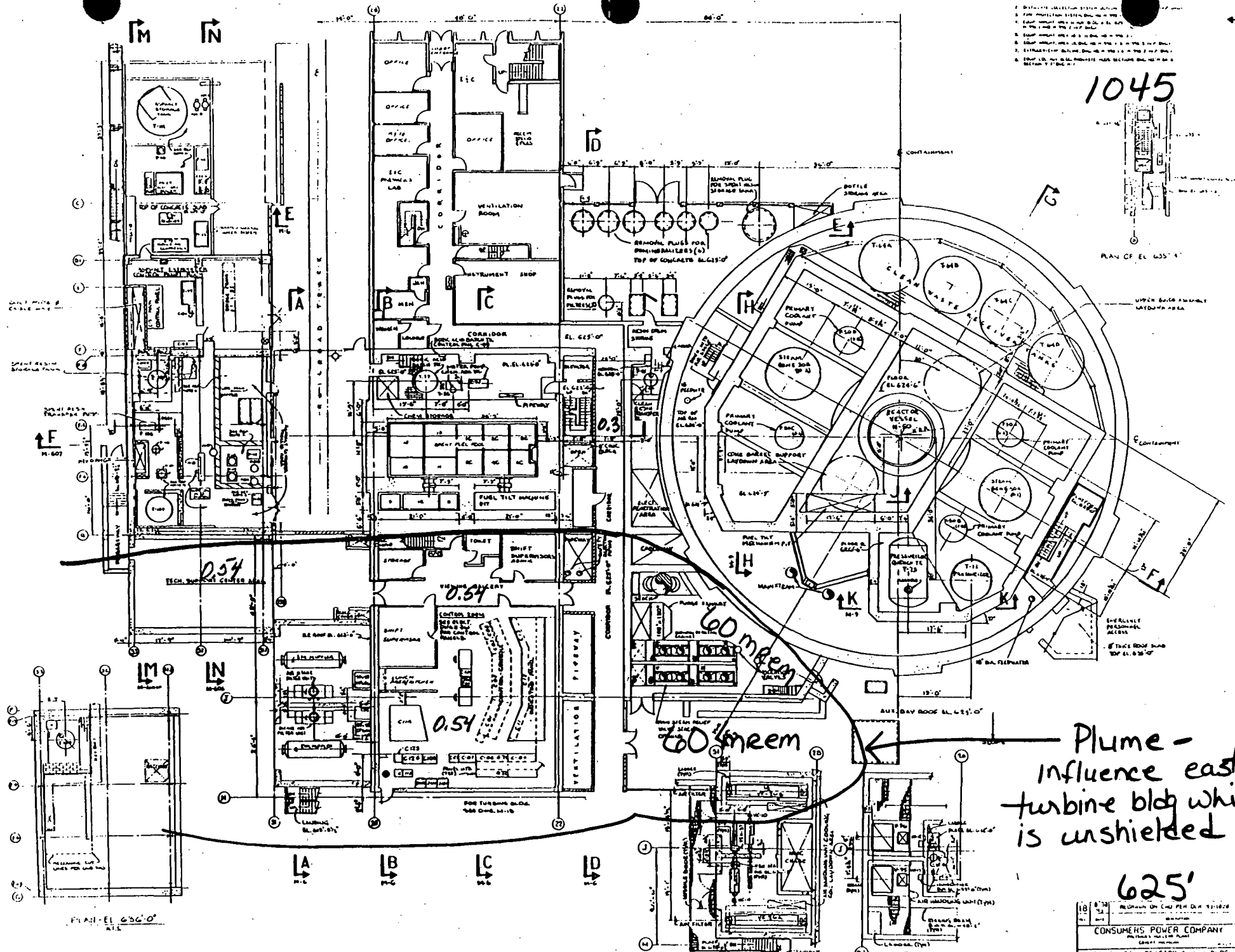


THIS DRAWING WAS FORMERLY  
M 603 REV. 12

607'	
CONSUMERS POWER COMPANY	
EQUIPMENT LOCATION, RADIATION AND REACTOR BUILDING WASTE PRODUCTION PLANT OF THE 607' BLDG M 603	

1. REACTOR VESSEL ROOM
2. FINE PARTICULATE FILTER ROOM
3. EQUIPMENT ROOM
4. EQUIPMENT ROOM
5. EQUIPMENT ROOM
6. EQUIPMENT ROOM
7. EQUIPMENT ROOM
8. EQUIPMENT ROOM

1045



PLAN - EL. 636'-0"

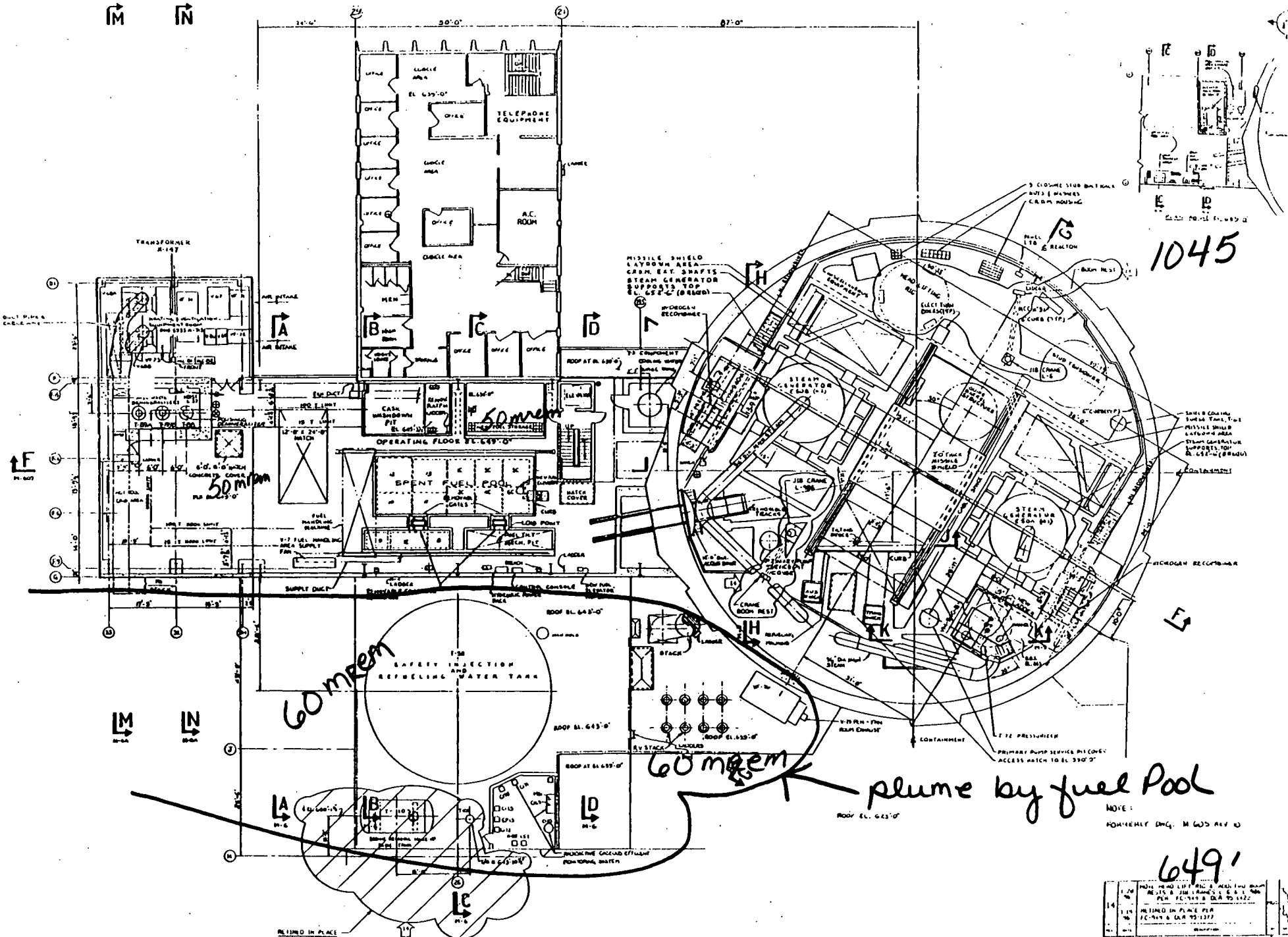
PLAN EL. 619'-0"

PARTIAL PLAN EL. 629'-0"

Plume - Influence east turbine bldg which is unshielded

625'

18	19	20	21	22	23	24	25	26	27	28	29	30	31
CONSUMERS POWER COMPANY													
EQUIP. BLDG. - REACTOR & AUX. BLDG.													
RADIOWASTE MODIFICATIONS													
PLAN OF EL. 629'-0"													
M.A.													



1045

plume by fuel pool

NOTE:  
POSITIONED BY M.G.S. REV. 10

649'

CONSUMERS POWER COMPANY	
EQUIP. LOC. - AUX. BLDG. WASTE PURIFICATION	
PLAN OF EL. 649'-0"	
DATE: 10/1/58	
DRAWN BY: [Signature]	
CHECKED BY: [Signature]	
APPROVED BY: [Signature]	

12/9/6  
1100

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above Blowdown Filter:

*Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G)

*Steam plume*  
Contact mRem/hr \*

b. South Steam Line (from 'A' S/G)

Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A:

*shine from jail house*  
Contact mRem/hr —

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house" doors.

*use room reading*

4. Off gas line:

Contact mRem/hr 5.5

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes from the Turbine Building:

*Steam cloud coming out of jailhouse window.*  
*Vision poor. Steam being drawn out by roof*  
*exhauster up stair well and other penetrations.*

6. *\** Use room reading ÷ 10 in plume  
Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)

CONSUMERS POWER COMPANY  
 EQUIPMENT LOCATION - ADVISORY  
 RECOMMENDED LOCATION  
 PLAN IN SET CHD. B.  
 M 2  
 590'

NOTES:  
 1. E22 AND C25 PANELS ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 2. E27 AND E28 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 3. E29 AND E30 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 4. E31 AND E32 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 5. E33 AND E34 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 6. E35 AND E36 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 7. E37 AND E38 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 8. E39 AND E40 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 9. E41 AND E42 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 10. E43 AND E44 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 11. E45 AND E46 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 12. E47 AND E48 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 13. E49 AND E50 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 14. E51 AND E52 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 15. E53 AND E54 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 16. E55 AND E56 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 17. E57 AND E58 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 18. E59 AND E60 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 19. E61 AND E62 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 20. E63 AND E64 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 21. E65 AND E66 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 22. E67 AND E68 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 23. E69 AND E70 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 24. E71 AND E72 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 25. E73 AND E74 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 26. E75 AND E76 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 27. E77 AND E78 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 28. E79 AND E80 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 29. E81 AND E82 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 30. E83 AND E84 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 31. E85 AND E86 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 32. E87 AND E88 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 33. E89 AND E90 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 34. E91 AND E92 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 35. E93 AND E94 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 36. E95 AND E96 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 37. E97 AND E98 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.  
 38. E99 AND E100 ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.

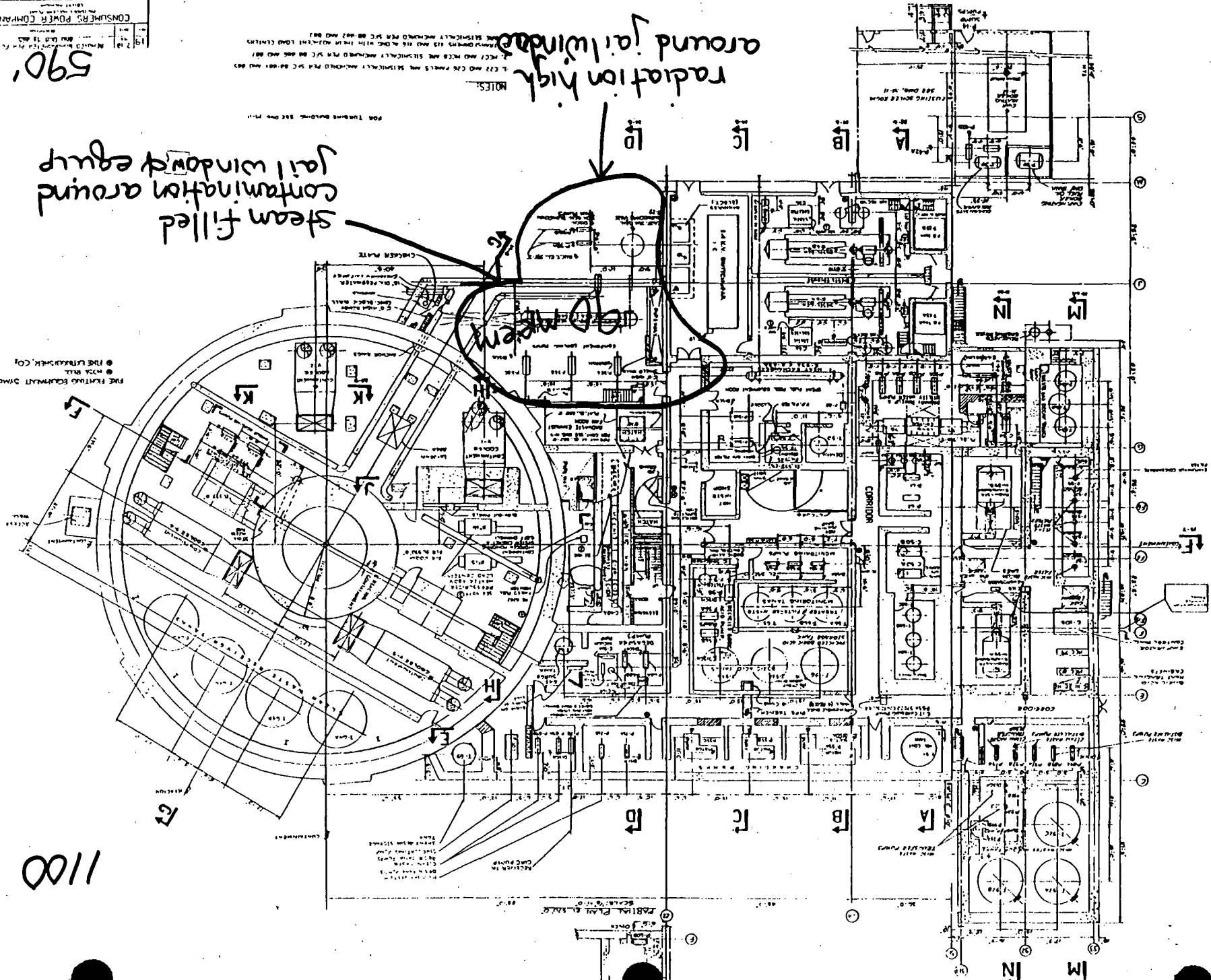
steam filled  
 confinement around  
 jail window equip

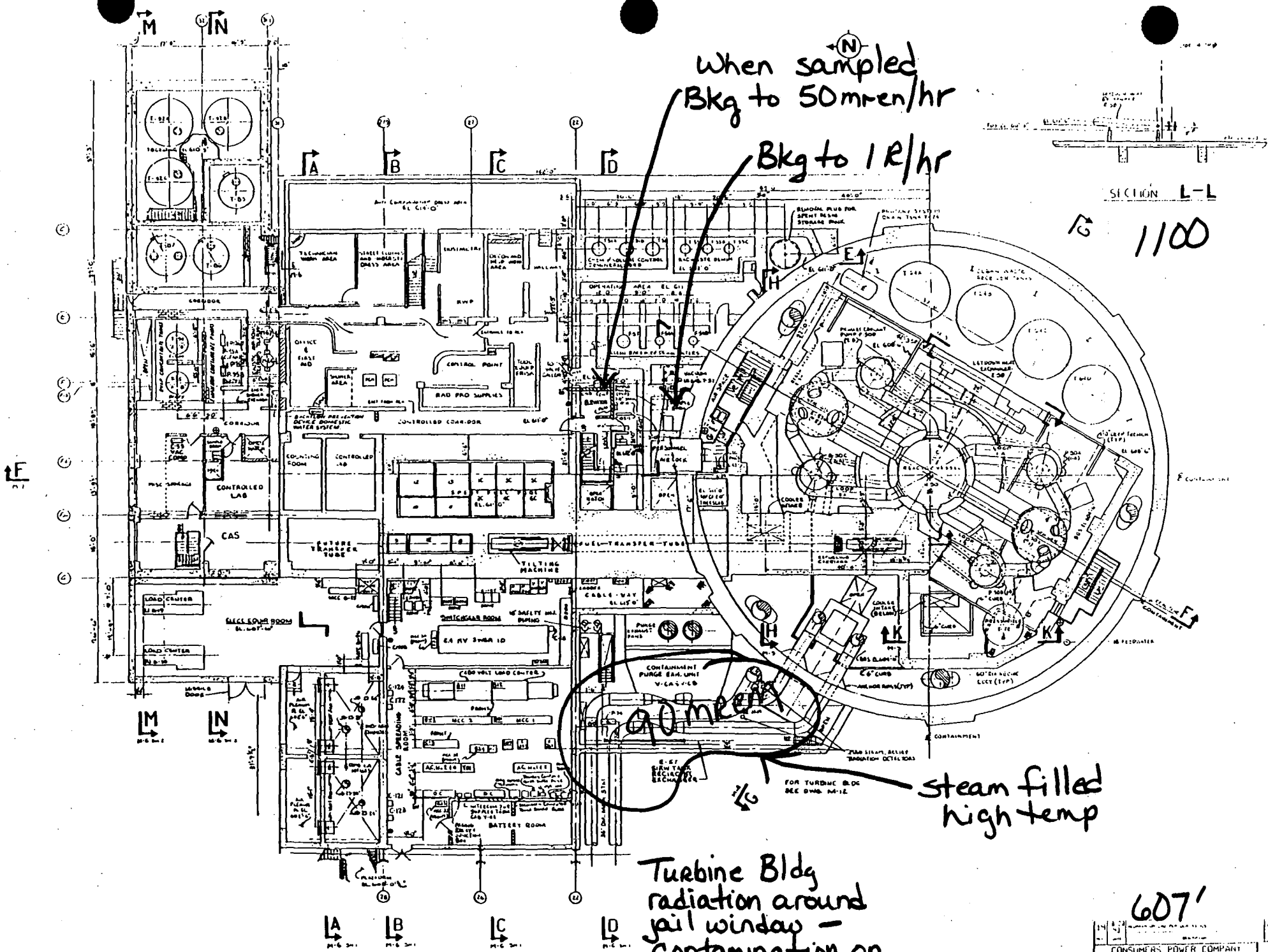
radiation high  
 around jail window

Equipment

PIPE FIXTURES EQUIPMENT SYMBOLS:  
 ● PIPE BALL  
 ● PIPE FITTING/COY

1100





When sampled  
Bkg to 50mrem/hr

Bkg to 1R/hr

SECTION L-L

1100

90mrem

steam filled  
high temp

Turbine Bldg  
radiation around  
jail window -  
contamination on  
east turbine bldg

607'

THIS DRAWING WAS FORMERLY  
M 603 REV. 12

CONSUMERS POWER COMPANY	
EQUIPMENT LOCATION AUXILIARY AND REACTION BLDG. WASTE MODIFICATION	
PLAN NO. 11-607-15	
M.S.	

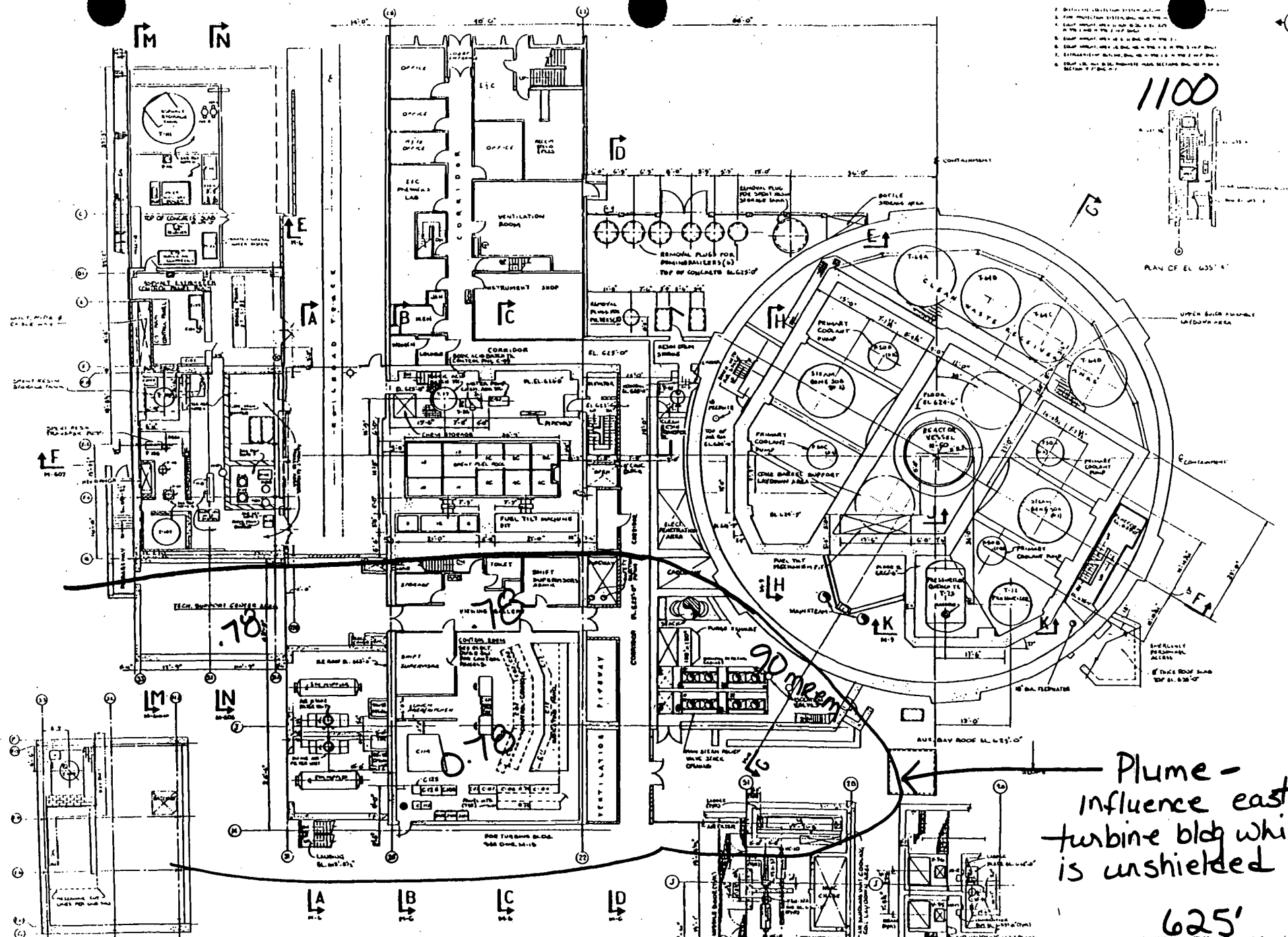
1. DIFFERENTIAL COLLECTION SYSTEM (D.C.S.)
2. FIRE PROTECTION SYSTEM (F.P.S.)
3. EQUIP. ROOMS (E.R.)
4. EQUIP. ROOMS (E.R.)
5. EQUIP. ROOMS (E.R.)
6. EQUIP. ROOMS (E.R.)
7. EQUIP. ROOMS (E.R.)
8. EQUIP. ROOMS (E.R.)
9. EQUIP. ROOMS (E.R.)
10. EQUIP. ROOMS (E.R.)

1100



PLAN OF EL. 635'-0"

UPPER BUILDING LAYOUT AREA

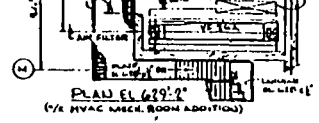


Plume - influence east turbine bldg which is unshielded

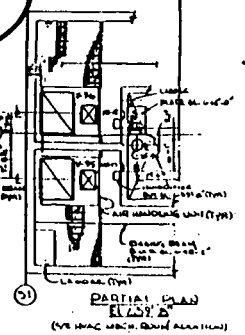
625'

PLAN - EL. 630'-0"

FORMERLY DWG. M-604 REV. 16



PLAN EL. 620'-0" (1/2 HVAC MECH. ROOM ADDITION)



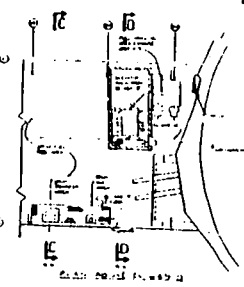
REACTOR VESSEL PLAN (1/2 HVAC MECH. ROOM ADDITION)

18	625'	REACTOR & AUX. BLDG.	12/18/58
CONSUMERS POWER COMPANY			
EQUIP. LOC. - REACTOR & AUX. BLDG.			
RADWASTE MODIFICATIONS			
PLAN OF EL. 625' 0"			
M 4			

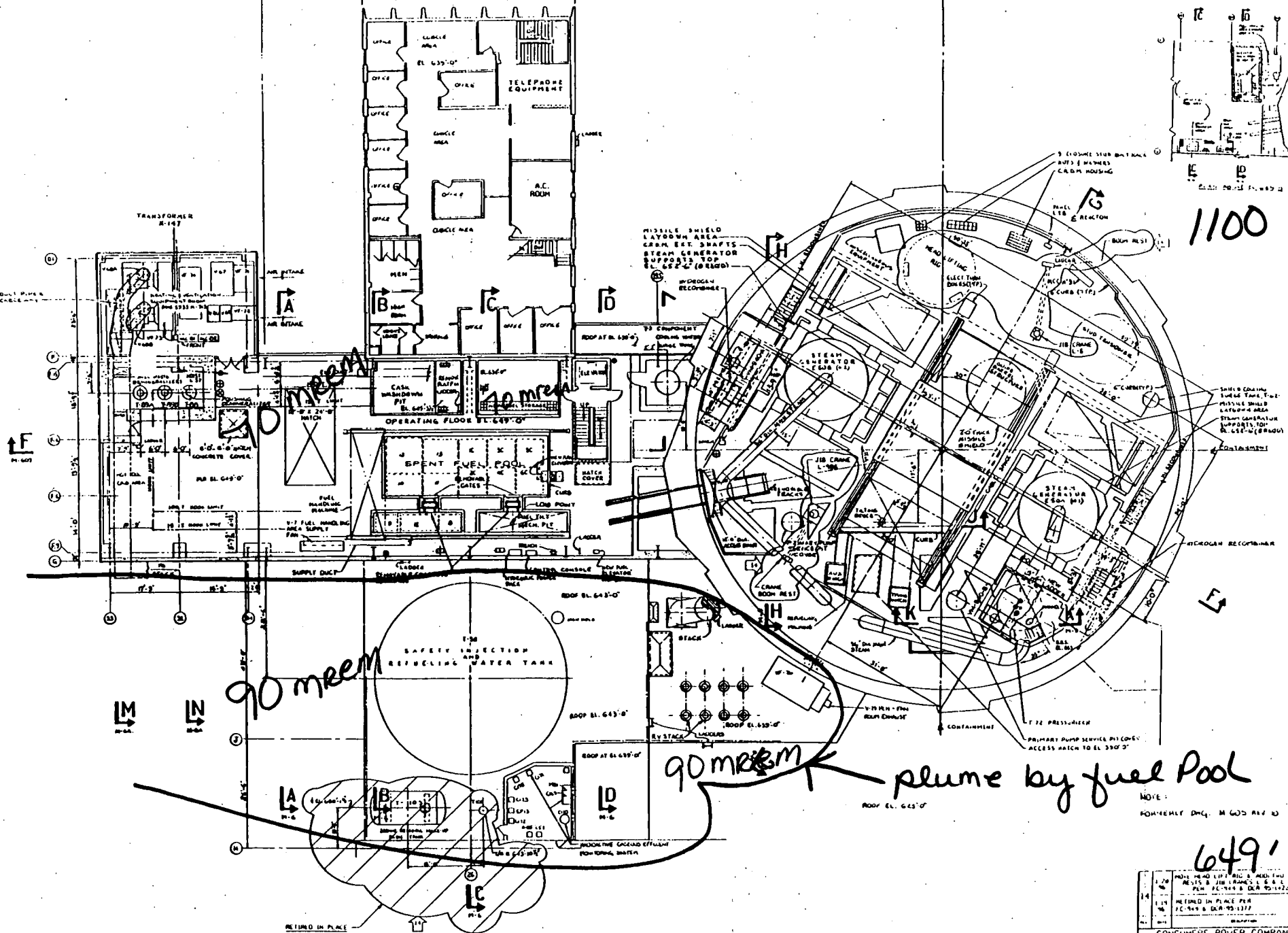


M N

14'-0" 30'-0" 87'-0"



1100



90 mrem

40 mrem

90 mrem

90 mrem

plume by fuel pool

NOTE: FORMERLY Dwg. M 605 REV D

649'

14	1.70	DATE: 10-10-57	BY: J. H. BROWN
15	1.14	REVISION: IN PLACE PER	PC-944 & DCA-75-1377
16	1.14	REVISION: IN PLACE PER	PC-944 & DCA-75-1377
17	1.14	REVISION: IN PLACE PER	PC-944 & DCA-75-1377
CONSUMERS POWER COMPANY			
EQUIP. LOC. - AUX. BLDG. WASTE PURIFICATION			
PLAN OF EL. 649'-0"			

422/84  
115

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

- 1. Blowdown Filter F-14 contact reading at floor grating above Blowdown Filter:

*Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

- 2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G)

*Steam plume*  
Contact mRem/hr \*

b. South Steam Line (from 'A' S/G)

Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating

- 3. Flash Tank T-29A:

*shine from jail house*  
Contact mRem/hr     

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house" doors.

*use room reading direct*

- 4. Off gas line:

Contact mRem/hr 5.5

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

- 5. Indicate the direction of travel and location of any steam plumes from the Turbine Building:

*Steam cloud coming out of jailhouse window.*  
*Vision poor. Steam being drawn out by roof*  
*exhauster up stair well and other penetrations.*

- 6. *#* Use room reading ÷ 10 in plume  
Return survey to Shift Supervisor.

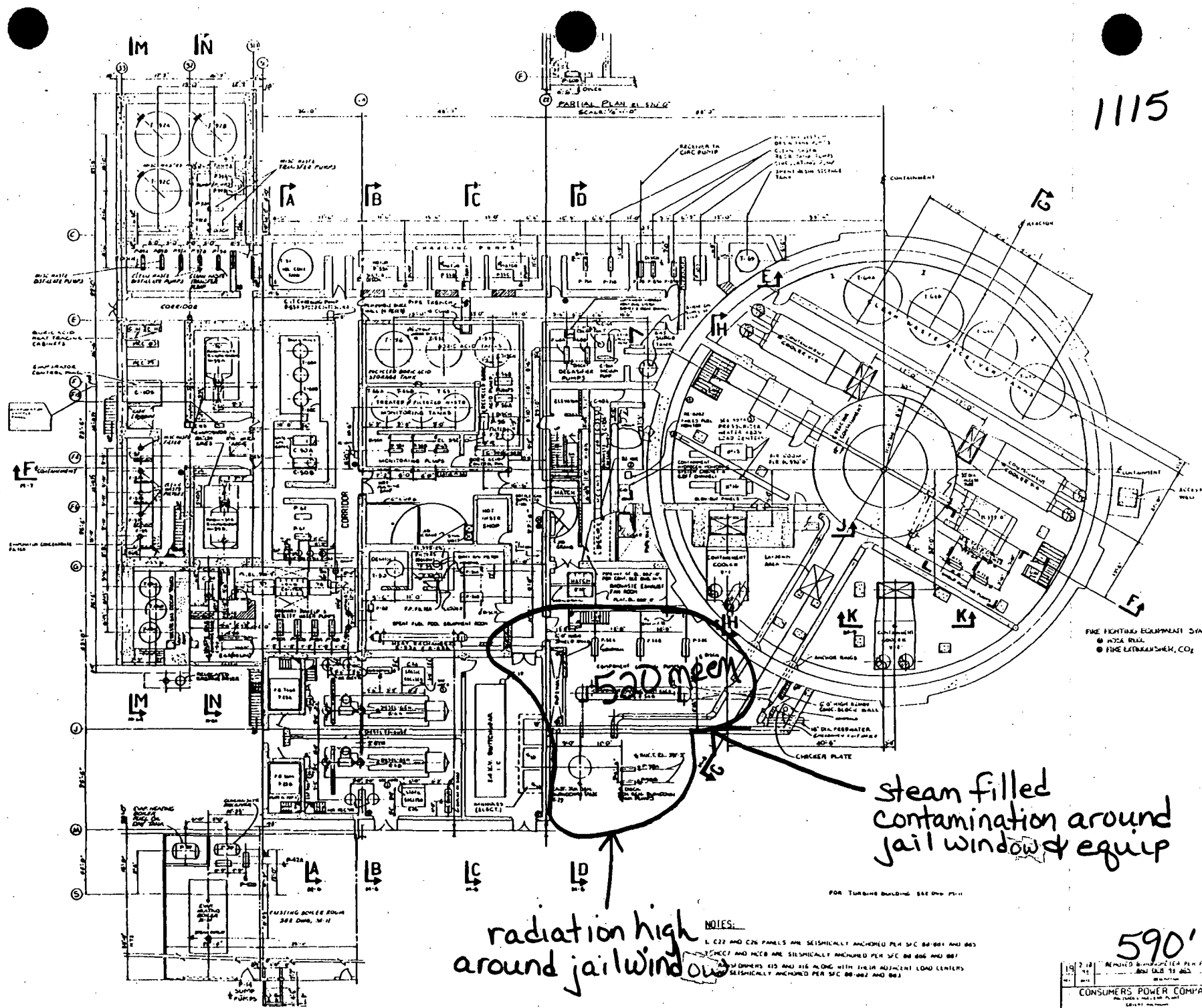
Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)



1115

PARTIAL PLAN EL 590'  
SCALE: 1/8" = 1'-0"



FIRE FIGHTING EQUIPMENT SYMBOLS:  
 ● WATER BELL  
 ○ FIRE EXTINGUISHER, CO<sub>2</sub>

FOR TURBINE BUILDING SEE DWG. P-111

radiation high  
around jail window

steam filled  
contamination around  
jail window & equip

NOTES:  
 1. C22 AND C26 PANELS ARE SEISMICALLY ANCHORED PER SFC 88-001 AND 88-002.  
 2. CHECK AND HCB8 ARE SEISMICALLY ANCHORED PER SFC 88-006 AND 88-007.  
 3. DIMENSIONS R15 AND R16 ALONG WITH THEIR ADJACENT LOAD CENTERS ARE SEISMICALLY ANCHORED PER SFC 88-002 AND 88-003.

590'

15	2	18	REVISIONS
14	1	17	REVISED BY: [unclear]
13	1	16	DATE: 11-23-88
12	1	15	BY: [unclear]
11	1	14	DATE: 11-23-88
10	1	13	BY: [unclear]
9	1	12	DATE: 11-23-88
8	1	11	BY: [unclear]
7	1	10	DATE: 11-23-88
6	1	9	BY: [unclear]
5	1	8	DATE: 11-23-88
4	1	7	BY: [unclear]
3	1	6	DATE: 11-23-88
2	1	5	BY: [unclear]
1	1	4	DATE: 11-23-88
	1	3	BY: [unclear]
	1	2	DATE: 11-23-88
	1	1	BY: [unclear]

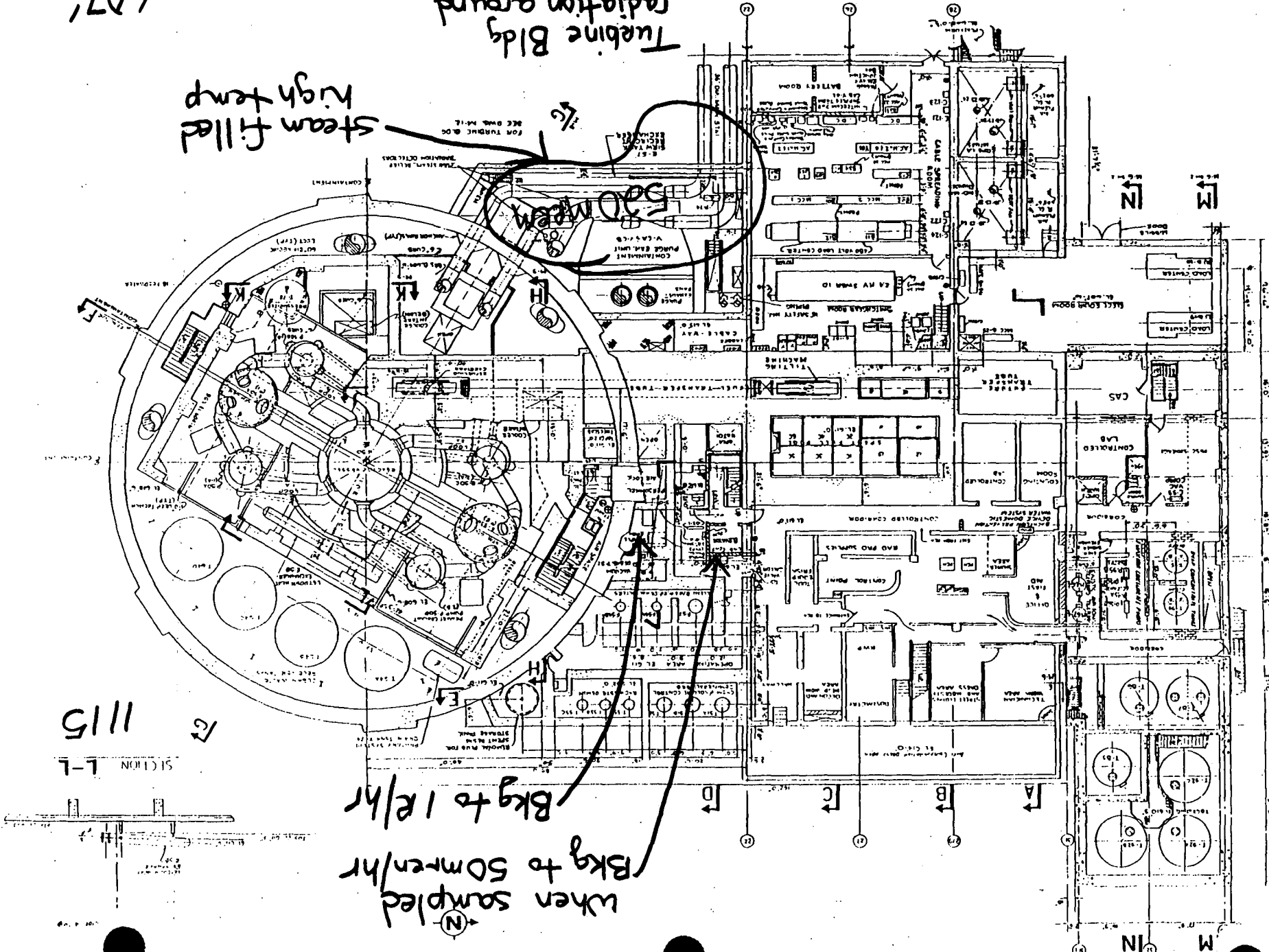
CONSUMERS POWER COMPANY  
 EQUIPMENT LOCATION - AUA BLDG.  
 RADIATION MODIFICATIONS  
 PLAN W. EL. 590' B  
 88-5-500  
 P. 2

EXAMINING ENGINEER'S SEAL

607

Turbine Bldg  
radiation around -  
you would  
contamination on  
east turbine bldg

steam filled  
high temp



1115

SECTION L-1

when sampled  
Bkg to 50mrem/hr  
Bkg to 1e/hr

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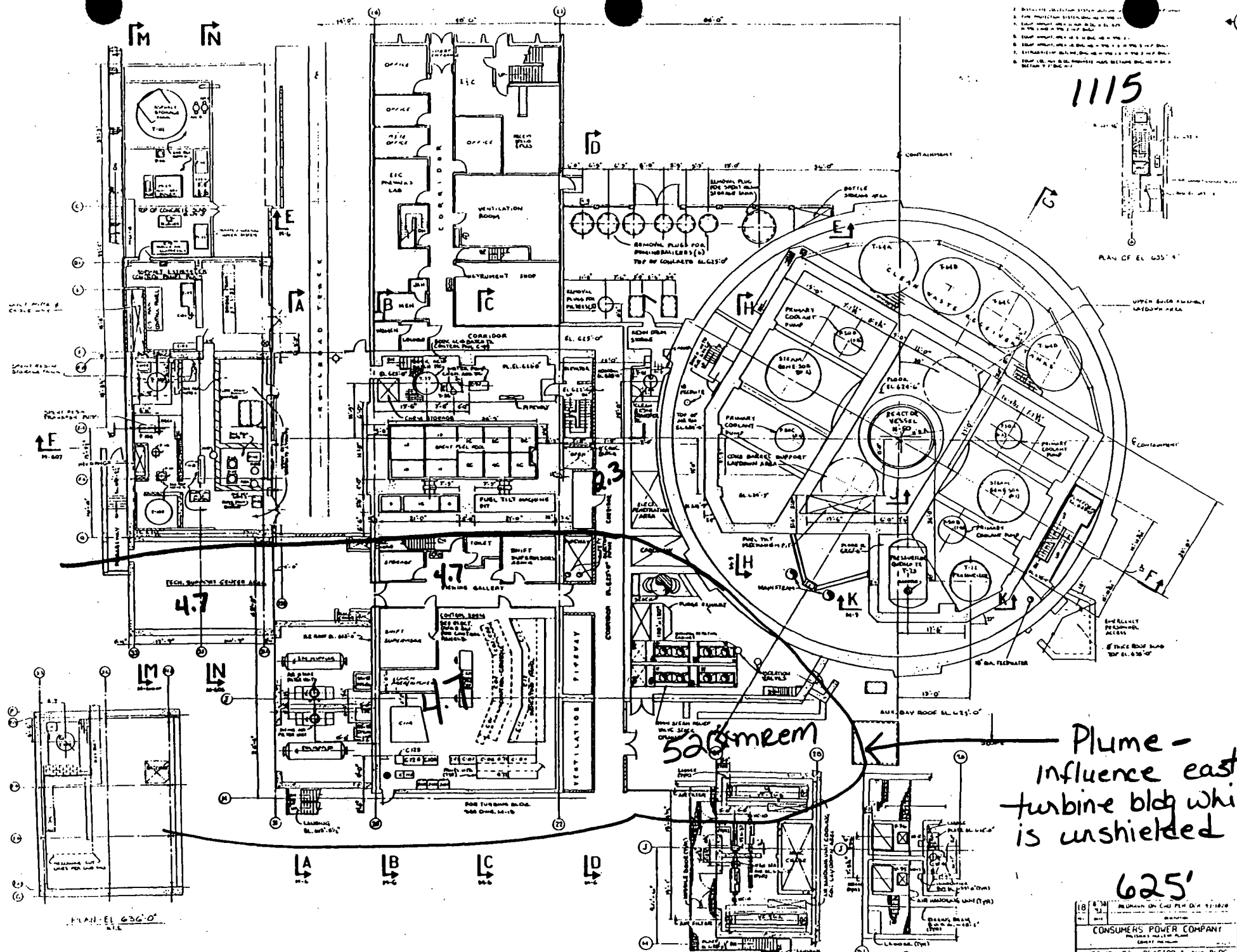
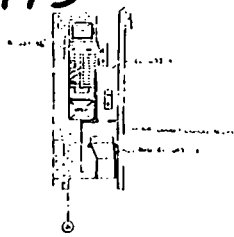
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1. EXISTING STRUCTURE SYSTEM
2. FIRE PROTECTION SYSTEMS
3. EQUIPMENT ROOMS
4. EQUIPMENT ROOMS
5. EQUIPMENT ROOMS
6. EQUIPMENT ROOMS
7. EQUIPMENT ROOMS
8. EQUIPMENT ROOMS

1115



Plume - Influence east turbine bldg which is unshielded

625'

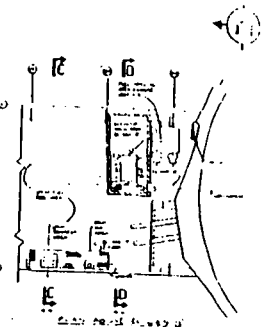
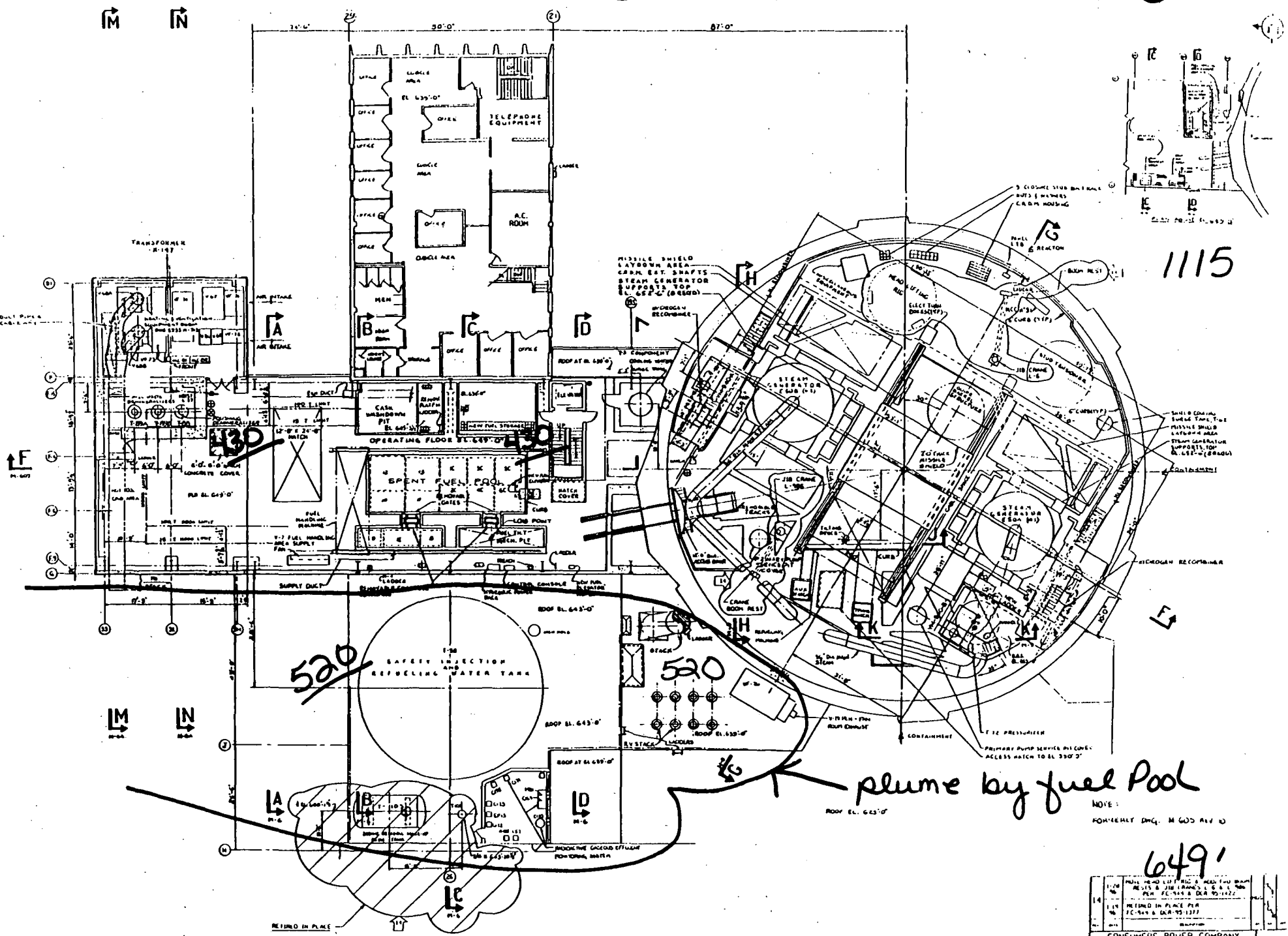
PLAN - EL. 636'-0"

PLAN EL. 679'-0"  
(1/2 HVAC MECH. ROOM ADDITION)

PARTIAL PLAN  
(1/2 HVAC MECH. ROOM ADDITION)

FORMERLY DWG. M-604 REV. 16

18	6/30	REVISIONS	BY	DATE
CONSUMERS POWER COMPANY				
EQUIP. LOC. - REACTOR & AUX. BLDG. RADIATION MODIFICATIONS PLAN OF EL. 625' B'				
M 8				



1115

plume by fuel pool

NOTE:  
FOR REFERENCE DRAWING M-603 REV D

6491

1-24	PLATE HEAD LIFTING & HOIST TOWER BRACKET & JOIST BRACKET S.E.A.S. DRAWING NO. 6491 & DCA 95-1122
1-14	RETAINED IN PLACE PER FC-949 & DCA 95-1377
1-14	RETAINED IN PLACE PER FC-949 & DCA 95-1377

CONSUMERS POWER COMPANY  
 4817Y LOC. AUX. BLDG.  
 RADWASTE PURIFICATION  
 PLAN OF EL. 645'-0"  
 DRAWING NO.

12/2/86  
1130

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

NOTE: Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above Blowdown Filter: *Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:  
a. North Steam Line (from 'B' S/G) Contact mRem/hr *steam plume* \*  
b. South Steam Line (from 'A' S/G) Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A: *shine from jail house*  
Contact mRem/hr     

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house" doors. *use room reading*

4. Off gas line: Contact mRem/hr 50

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes from the Turbine Building:

Steam cloud coming out of jailhouse window.  
Vision poor. Steam being drawn out by roof  
exhauster up stair well and other penetrations.

6. *#* Use room reading ÷ 10 in plume  
Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

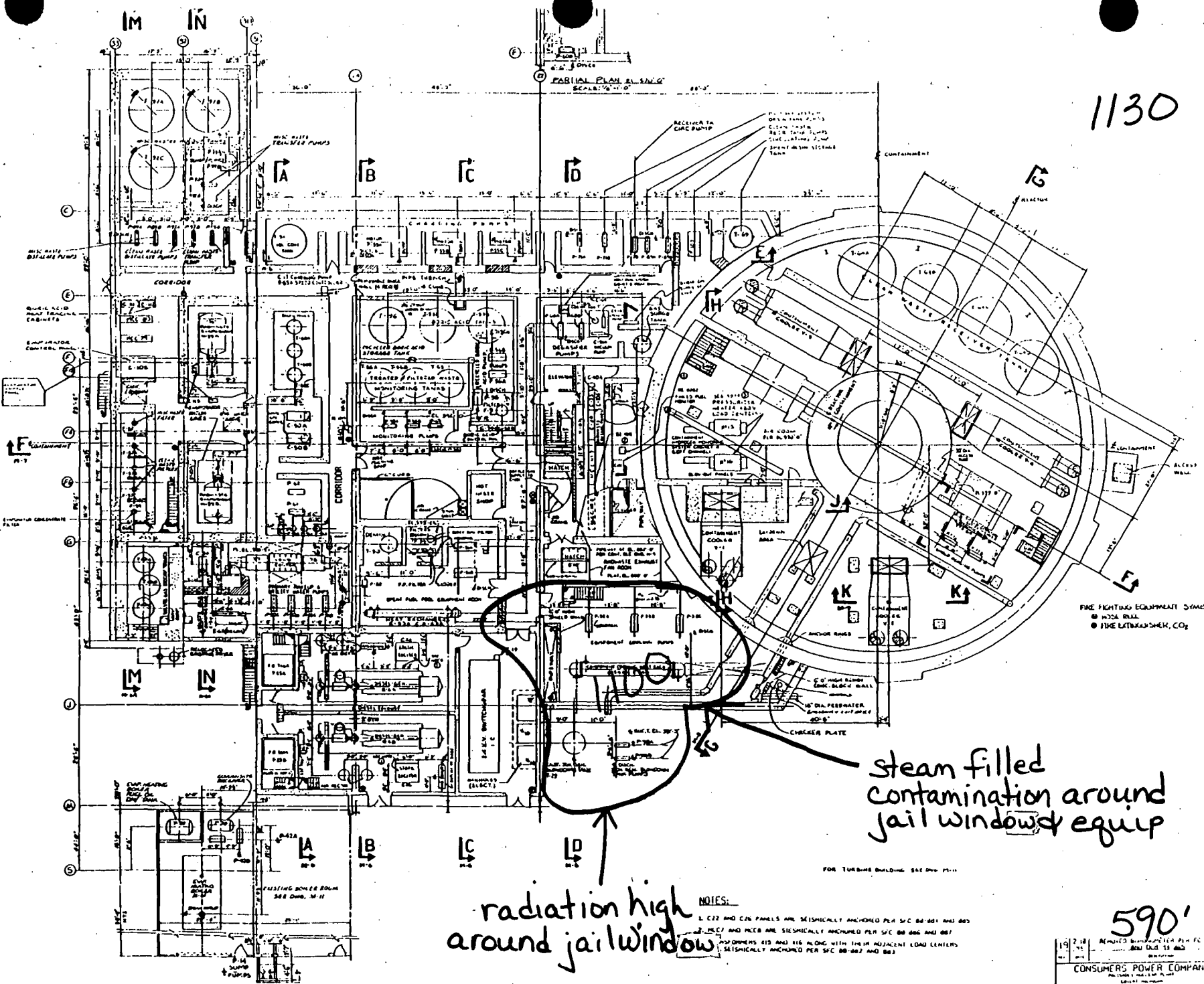
Reviewed By: \_\_\_\_\_ (SS)



1130

PARTIAL PLAN EL. 540'0"

SCALE: 1/8" = 1'-0"



steam filled contamination around jail window & equip

radiation high around jail window

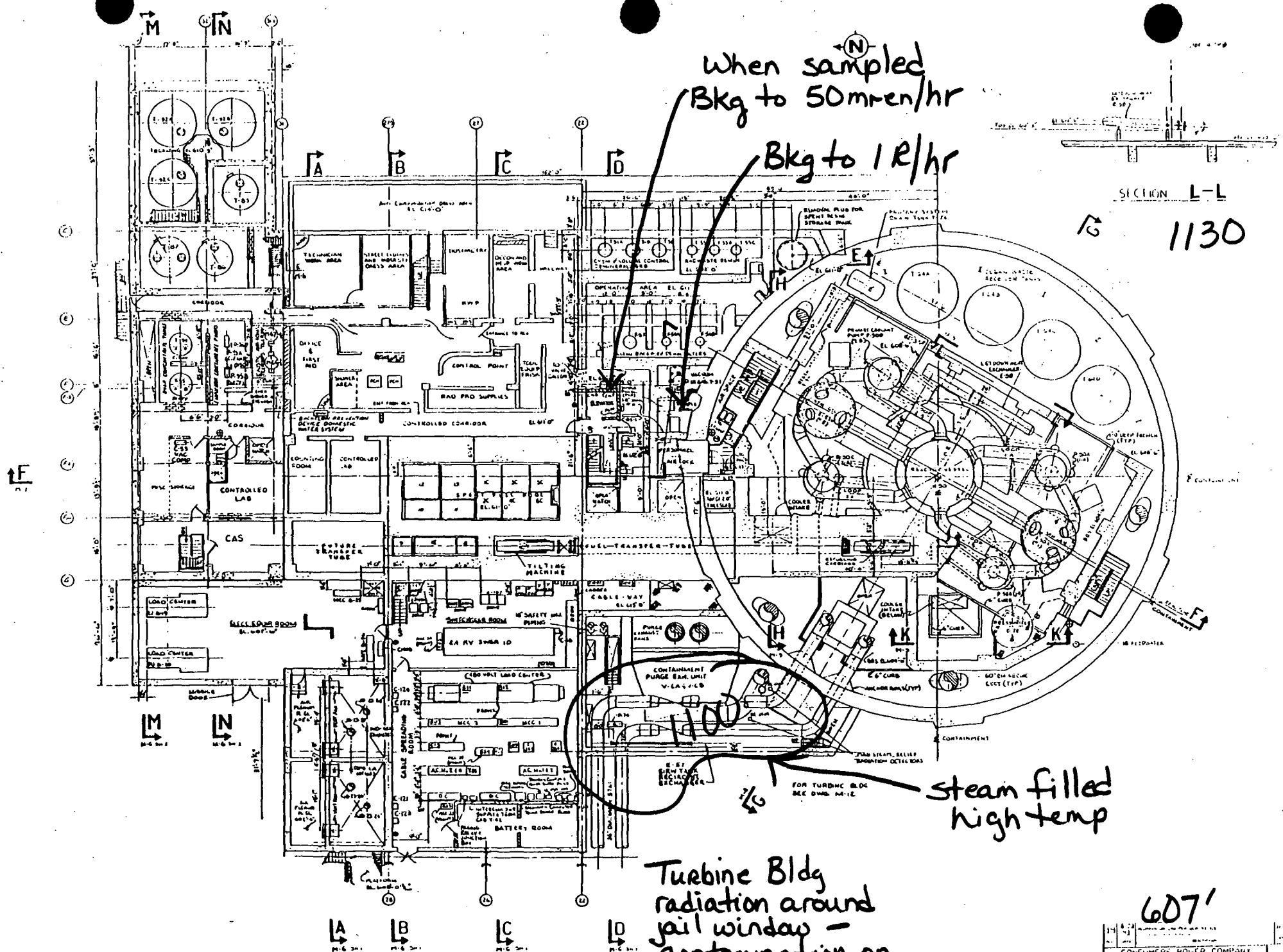
NOTES:  
 L. C22 AND C26 PANELS ARE SEISMICALLY ANCHORED PER SFC BR 861 AND 862  
 L. C27 AND C28 ARE SEISMICALLY ANCHORED PER SFC BR 866 AND 867  
 FOUNDATIONS 415 AND 416 ALONG WITH THEIR ADJACENT LOAD CENTERS  
 ARE SEISMICALLY ANCHORED PER SFC BR 867 AND 868

590'

CONSUMERS POWER COMPANY  
 EQUIPMENT LOCATION - AUX BLDG.  
 RADWASTE PROJECTIONS  
 PLAN OF EL. 540' 0"

DRAWING NUMBER: 1130





When sampled  
Bkg to 50mrem/hr  
Bkg to 1R/hr

SECTION L-L  
1130

1400

steam filled  
high temp

Turbine Bldg  
radiation around  
pail window -  
contamination on  
east turbine bldg

607'

THIS DRAWING WAS FORMERLY  
M 603 REV. 12

CONSUMERS POWER COMPANY	
EQUIPMENT LOCATION, MAINTENANCE AND REACTOR BUILDING WASTE HANDLING PLANT, UNIT 1, 607' E M 3	

1. REACTOR VENTILATION SYSTEM (RVS) PLAN
2. FIRE PROTECTION SYSTEM (FIS) PLAN
3. EQUIPMENT ROOMS (ER) PLAN
4. EQUIPMENT ROOMS (ER) PLAN
5. EQUIPMENT ROOMS (ER) PLAN
6. EQUIPMENT ROOMS (ER) PLAN
7. EQUIPMENT ROOMS (ER) PLAN
8. EQUIPMENT ROOMS (ER) PLAN

1130

PLAN OF EL. 635'-0"

UPPER BUILDING LAYDOWN AREA

CONTAINMENT

EL. 635'-0"

EL. 635'-0"

EL. 635'-0"

EL. 635'-0"

EL. 635'-0"

EL. 635'-0"

EL. 635'-0"

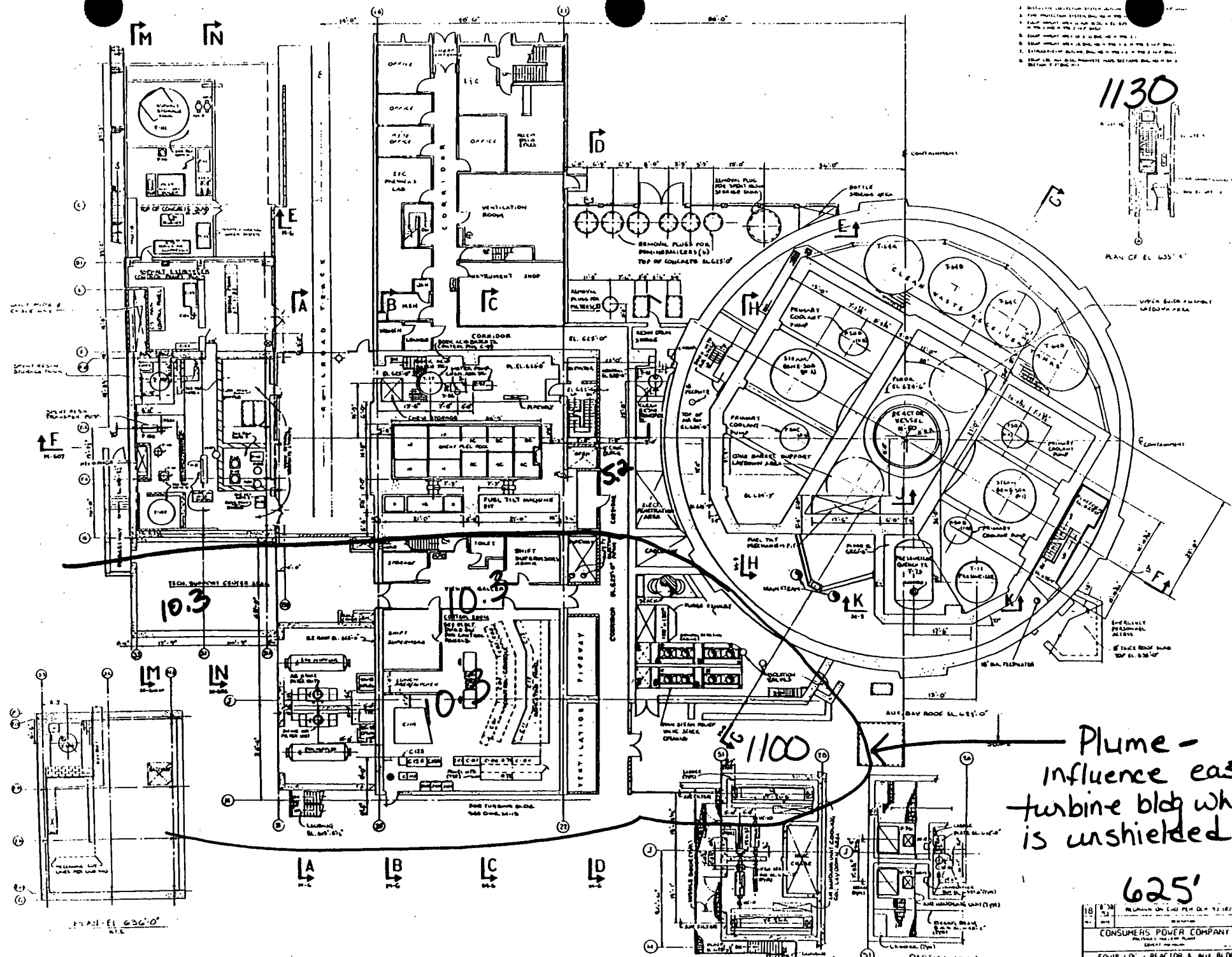
EL. 635'-0"

EL. 635'-0"

EL. 635'-0"

Plume - influence east turbine bldg which is unshielded

625'



PLAN EL. 630'-0"

FORMERLY DWG. M-604 REV. 16

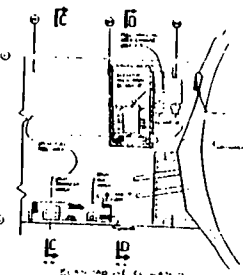
PLAN EL. 625'-0"

PLAN EL. 625'-0"

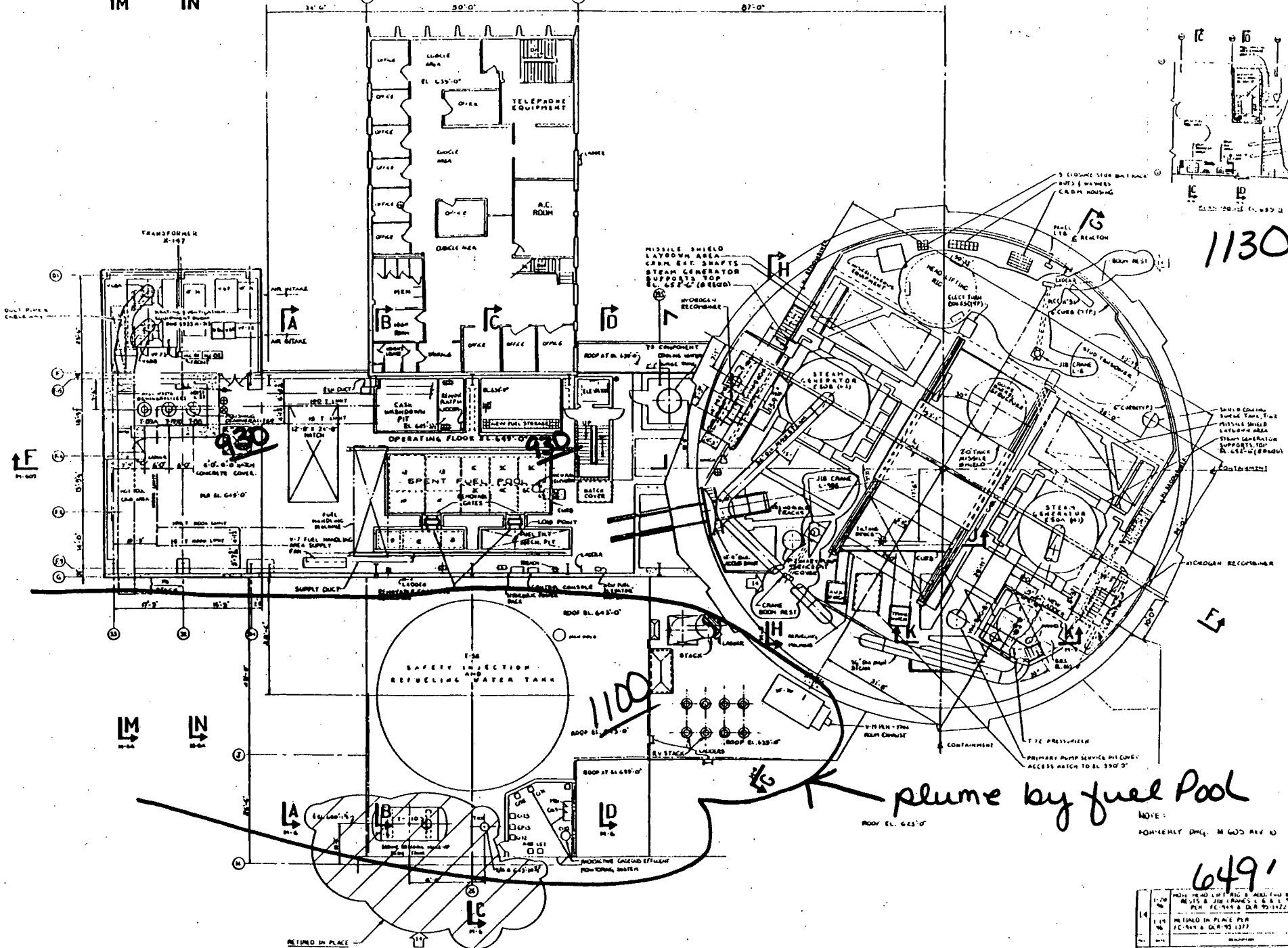
CONSUMERS POWER COMPANY	
EQUIP. LOC. - REACTOR & AUX. BLDG.	
RADIATION MODIFICATIONS	
PLAN OF EL. 625'-0"	
M 4	

M N

24'-0" 30'-0" 87'-0"



1130



plume by fuel pool

NOTE: FORMERLY DWG. M 603 REV D

6491

1-70	PLATE HEAD LIFTING & HOLDING BRACKET
1-71	REACTOR & JIB CRANES, S.G. & S.L. NO. 1
1-72	PER. FC-949 & D.R. 90-1422
1-73	REPLACED IN PLACE PER
1-74	FC-949 & D.R. 90-1377
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1-100	

CONSUMERS POWER COMPANY  
 FEDERAL POWER PROJECT  
 CONN. REGION  
 EQUIP. I. DC. AUX. BLDG.  
 RADWASTE MODIFICATIONS  
 PLAN OF EL. 645'-0"

10/22/96  
1145

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

NOTE: Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above Blowdown Filter:

*Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G)

*Steam plume*  
Contact mRem/hr \*

b. South Steam Line (from 'A' S/G)

Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A:

*shine from jail house*  
Contact mRem/hr     

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house" doors.

*use room reading*

4. Off gas line:

Contact mRem/hr 45

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes from the Turbine Building:

*Steam cloud coming out of jailhouse window.*  
*Vision poor. Steam being drawn out by roof*  
*exhauster up stair well and other penetrations.*

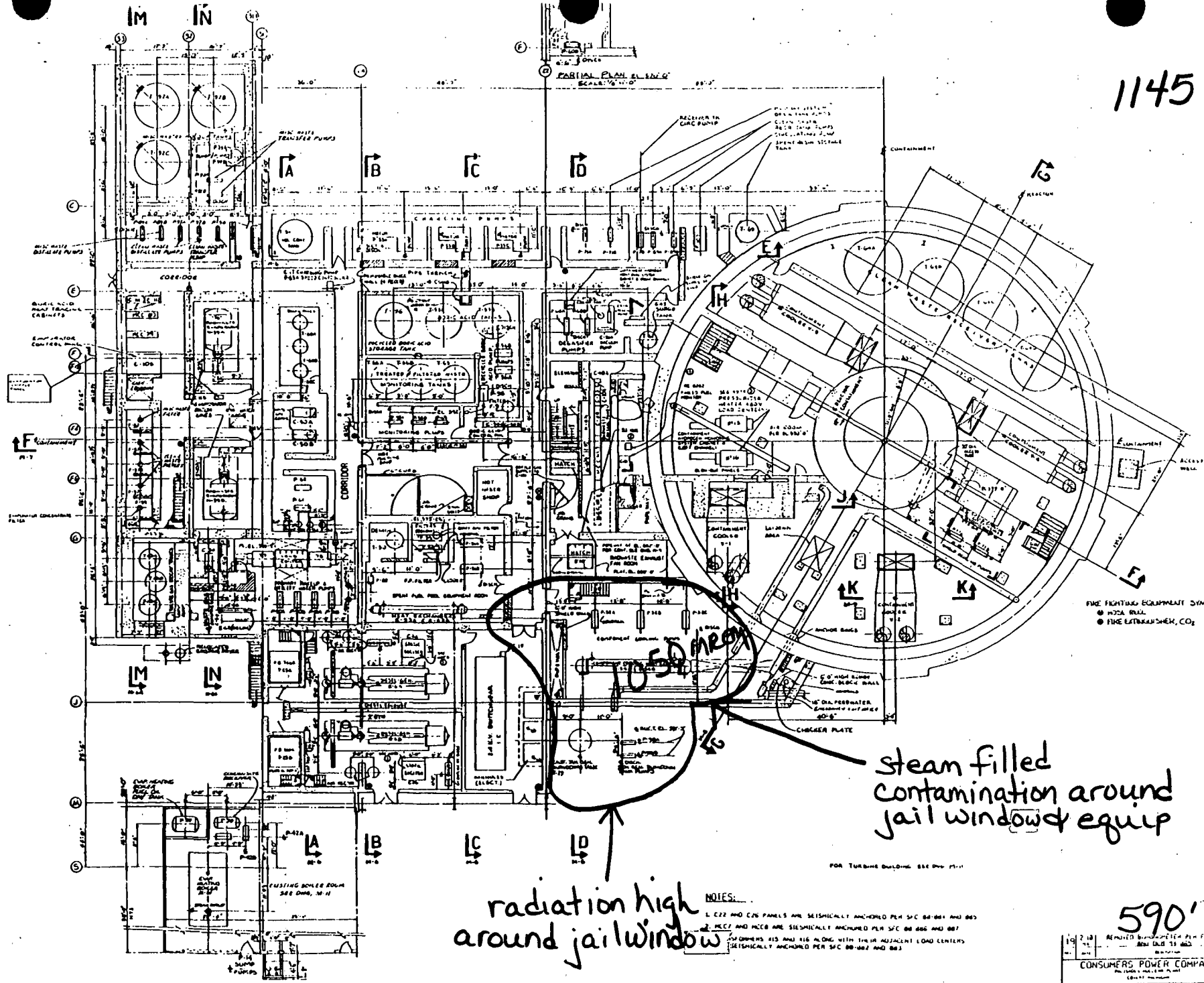
6. *\** Use room reading ÷ 10 in plume  
Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)



1145



radiation high  
around jail window

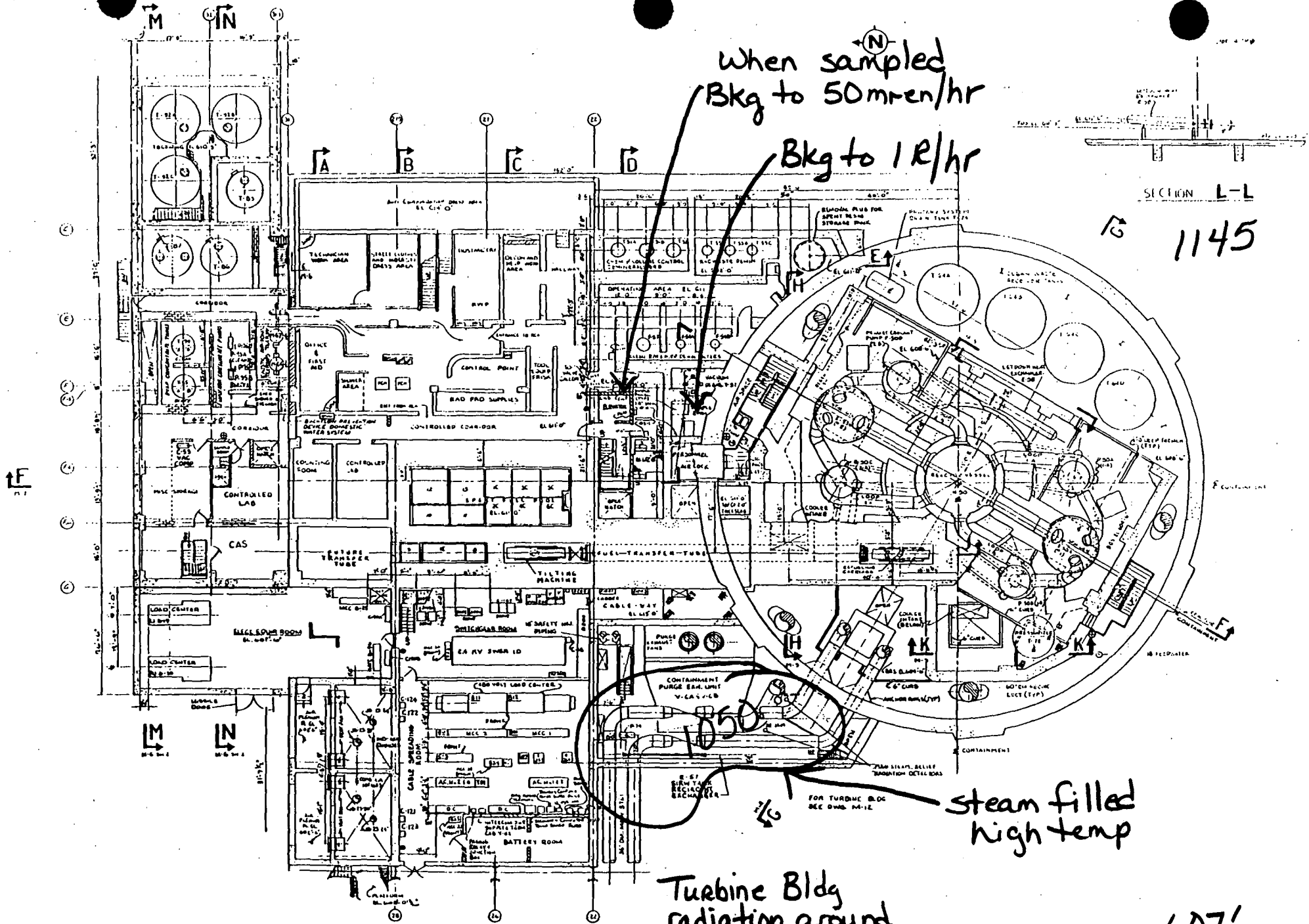
steam filled  
contamination around  
jail window & equip

NOTES:  
1. C22 AND C26 PANELS ARE SEISMICALLY ANCHORED PER SFC 84-064 AND 865  
2. MCF AND MCB ARE SEISMICALLY ANCHORED PER SFC 86-066 AND 867  
3. DIMENSIONS R15 AND R16 ALONG WITH THEIR ADJACENT LOAD CENTERS  
SEISMICALLY ANCHORED PER SFC 86-062 AND 863

590'

109	210	REVISED BY	DATE
110	111	112	113

CONSUMERS POWER COMPANY  
EQUIPMENT LOCATION - AUX. BLDG.  
RADIATION MONITORING  
PLAN OF EL. 510' 0"  
M 2



When sampled  
Bkg to 50 mrem/hr

Bkg to 1 R/hr

SECTION L-L  
1145

1050

steam filled  
high temp

Turbine Bldg  
radiation around  
jail window -  
contamination on  
east turbine bldg

607'

CONSUMERS POWER COMPANY  
EQUIPMENT LOCATION, QUALITY AND  
REACTOR BLDG. WASTE PRODUCTION  
PLAN OF 11. 607' 15"

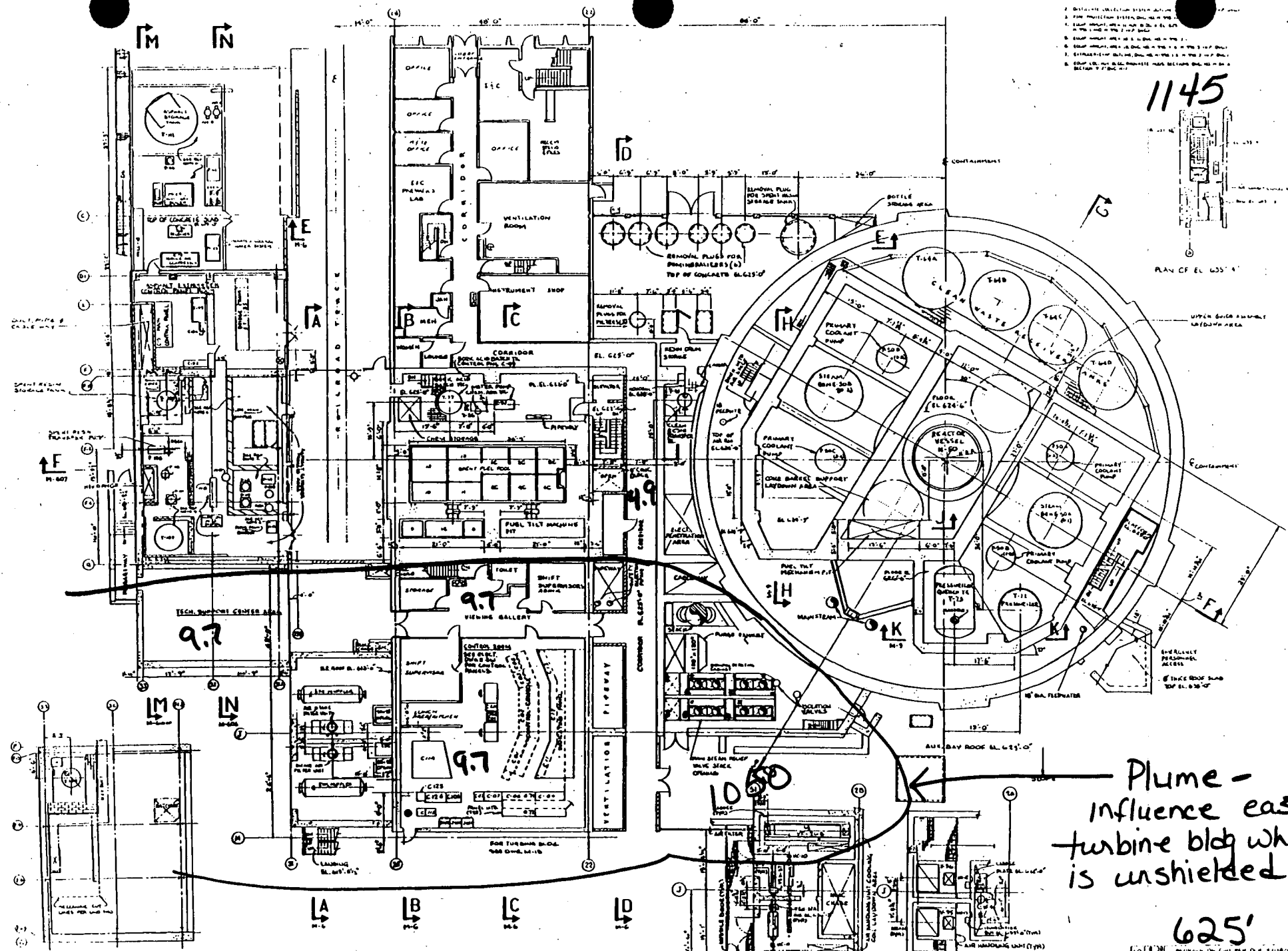
THIS DRAWING WAS FORMERLY  
H 603 REV. 12

1. DETAIL THE VENTILATION SYSTEM...
2. FINE PARTICULATE SYSTEM...
3. SCALP HEIGHT, AND IN ONE... EL. 625' AT THE END OF THE 1' RISE...
4. SCALP HEIGHT, AND IN ONE... EL. 625' AT THE END OF THE 1' RISE...
5. SCALP HEIGHT, AND IN ONE... EL. 625' AT THE END OF THE 1' RISE...
6. SCALP HEIGHT, AND IN ONE... EL. 625' AT THE END OF THE 1' RISE...
7. SCALP HEIGHT, AND IN ONE... EL. 625' AT THE END OF THE 1' RISE...
8. SCALP HEIGHT, AND IN ONE... EL. 625' AT THE END OF THE 1' RISE...

1145

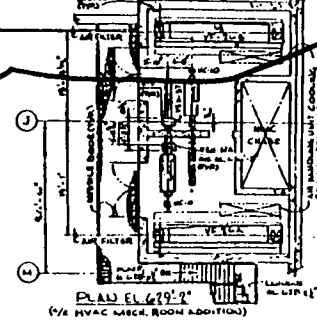


PLAN OF EL. 635'-0"

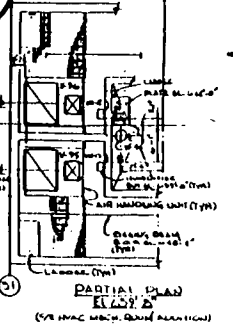


Plume - influence east turbine bldg which is unshielded

625'

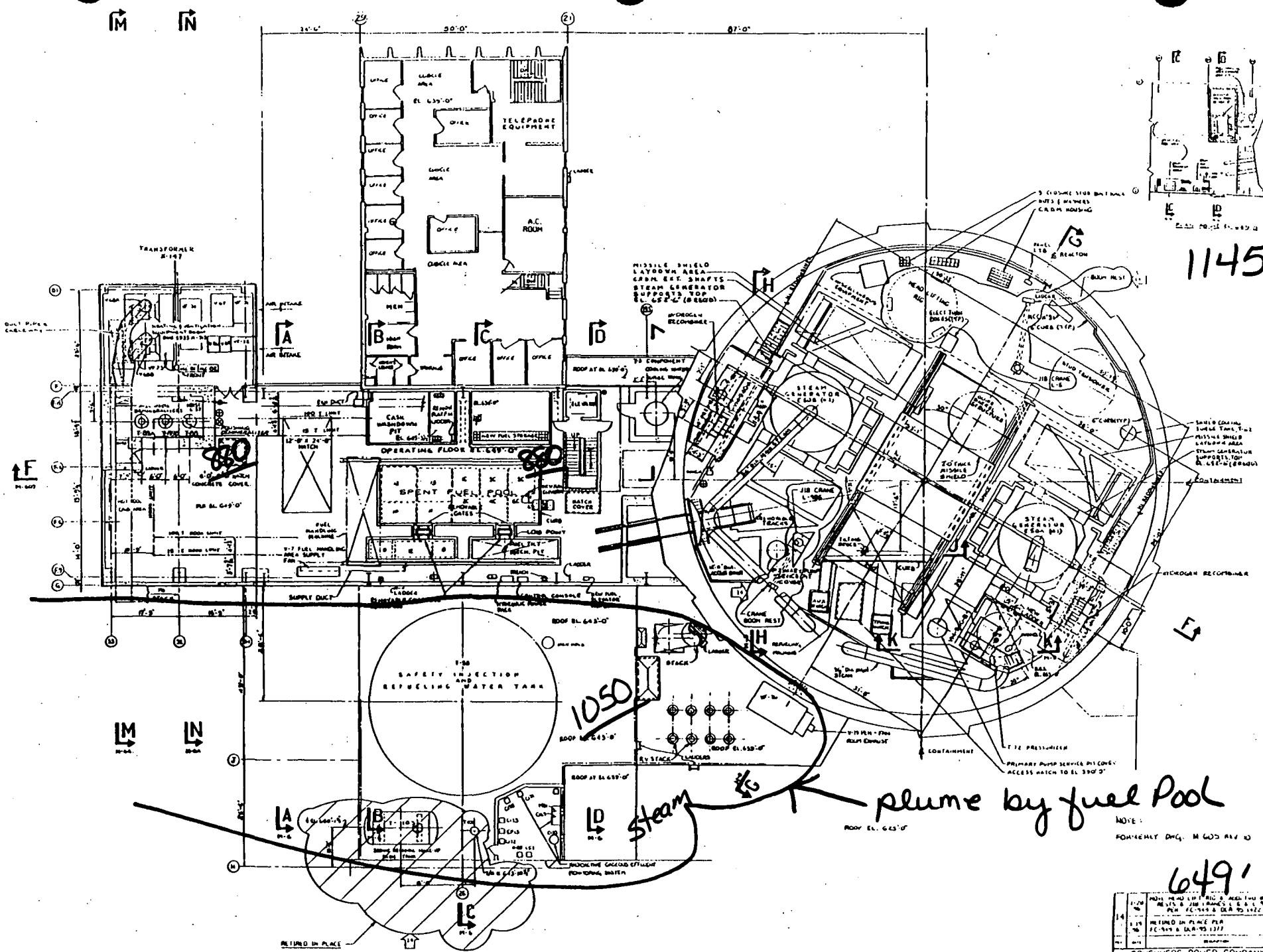


PLAN EL. 629'-0" (1/2 HVAC MACH. ROOM ADDITION)



PARTIAL PLAN EL. 625'-0" (5/8 HVAC MACH. ROOM ADDITION)

18	625'	REACTOR & AUX. BLDG.
CONSUMERS POWER COMPANY		
EQUIP. LOC. - REACTOR & AUX. BLDG.		
RADIOACTIVE MODIFICATIONS		
PLAN OF EL. 625'-0"		
M.S. 118		



6491

1172	NO.	1172	REV.	1	DATE	11-15-54
1173	NO.	1173	REV.	1	DATE	11-15-54
1174	NO.	1174	REV.	1	DATE	11-15-54
1175	NO.	1175	REV.	1	DATE	11-15-54
1176	NO.	1176	REV.	1	DATE	11-15-54
1177	NO.	1177	REV.	1	DATE	11-15-54
1178	NO.	1178	REV.	1	DATE	11-15-54
1179	NO.	1179	REV.	1	DATE	11-15-54
1180	NO.	1180	REV.	1	DATE	11-15-54

CONSUMERS POWER COMPANY  
 EQUIP. LOC. - A11, B1, D1  
 RADIOACTIVE PURIFICATION  
 PLAN OF EL. 644'-0"



STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

NOTE: Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above  
Blowdown Filter:

*Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G)

*steam plume*  
Contact mRem/hr \*

b. South Steam Line (from 'A' S/G)

Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating,

3. Flash Tank T-29A:

*shine from jail house*  
Contact mRem/hr     

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house"  
doors.

*use room reading*

4. Off gas line:

Contact mRem/hr 4.0

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes  
from the Turbine Building:

*Steam cloud coming out of jailhouse window.*  
*Vision poor. Steam being drawn out by roof*  
*exhauster up stair well and other penetrations.*

- \*  
6. Use room reading ÷ 10 in plume  
Return survey to Shift Supervisor.

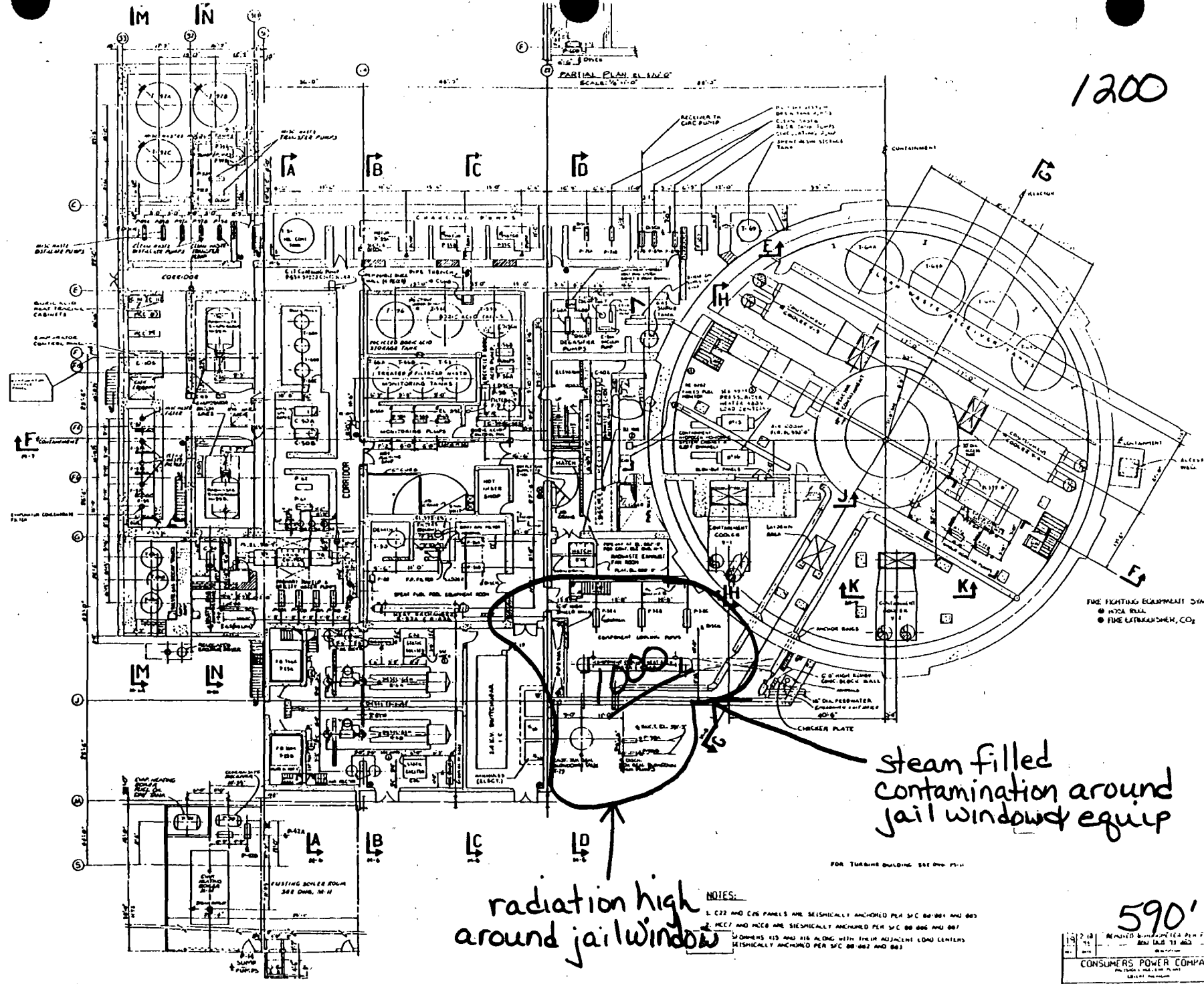
Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)



1200

PARTIAL PLAN EL. 510' 0"  
SCALE: 1/4" = 1'-0"



FIRE FIGHTING EQUIPMENT SYMBOLS:  
 ● HYDR. BALL  
 ● FIRE EXTINGUISHER, CO<sub>2</sub>

steam filled  
 contamination around  
 jail window & equip

radiation high  
 around jail window

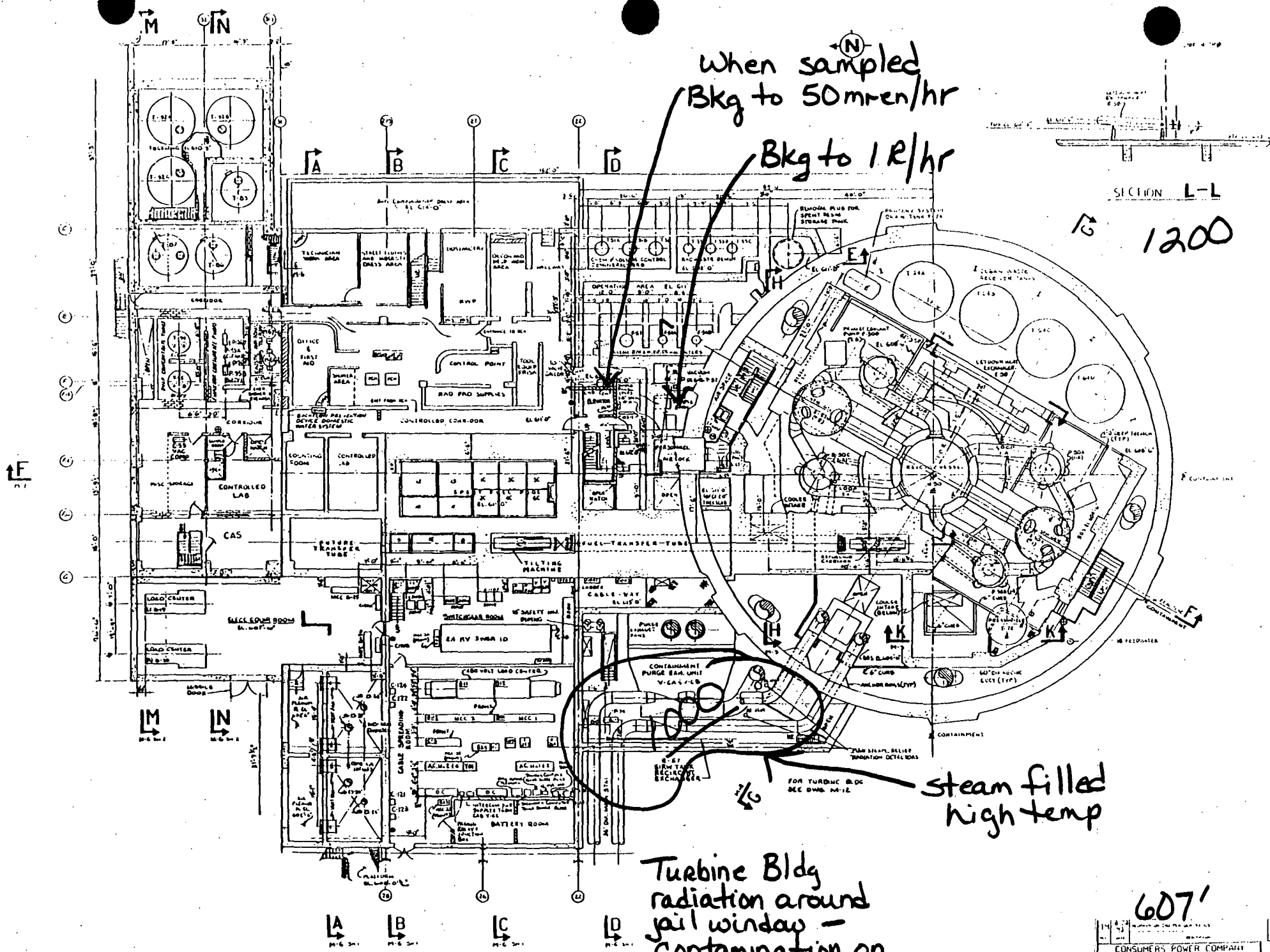
NOTES:  
 1. C22 AND C26 PANELS ARE SEISMICALLY ANCHORED PER SFC 89-184 AND 89-185  
 2. MCT1 AND MCT2 ARE SEISMICALLY ANCHORED PER SFC 89-184 AND 89-185  
 3. MOWERS 113 AND 116 ARE ALIGNED WITH THEIR ADJACENT LOAD CENTERS SEISMICALLY ANCHORED PER SFC 89-184 AND 89-185

FOR TURBINE BUILDING SEE DWG. PL-11

590'

19	2	18	REVISED EQUIPMENT PER EC 940
15	11	11	REVISED PER EC 940
CONSUMERS POWER COMPANY <small>PLANT NO. 1001</small>			
EQUIPMENT LOCATION - AUX. BLDG. RADIATION MONITORATIONS PLAN OF EL. 510' 0" <small>DATE: 5/8/81</small>			
P. 2			





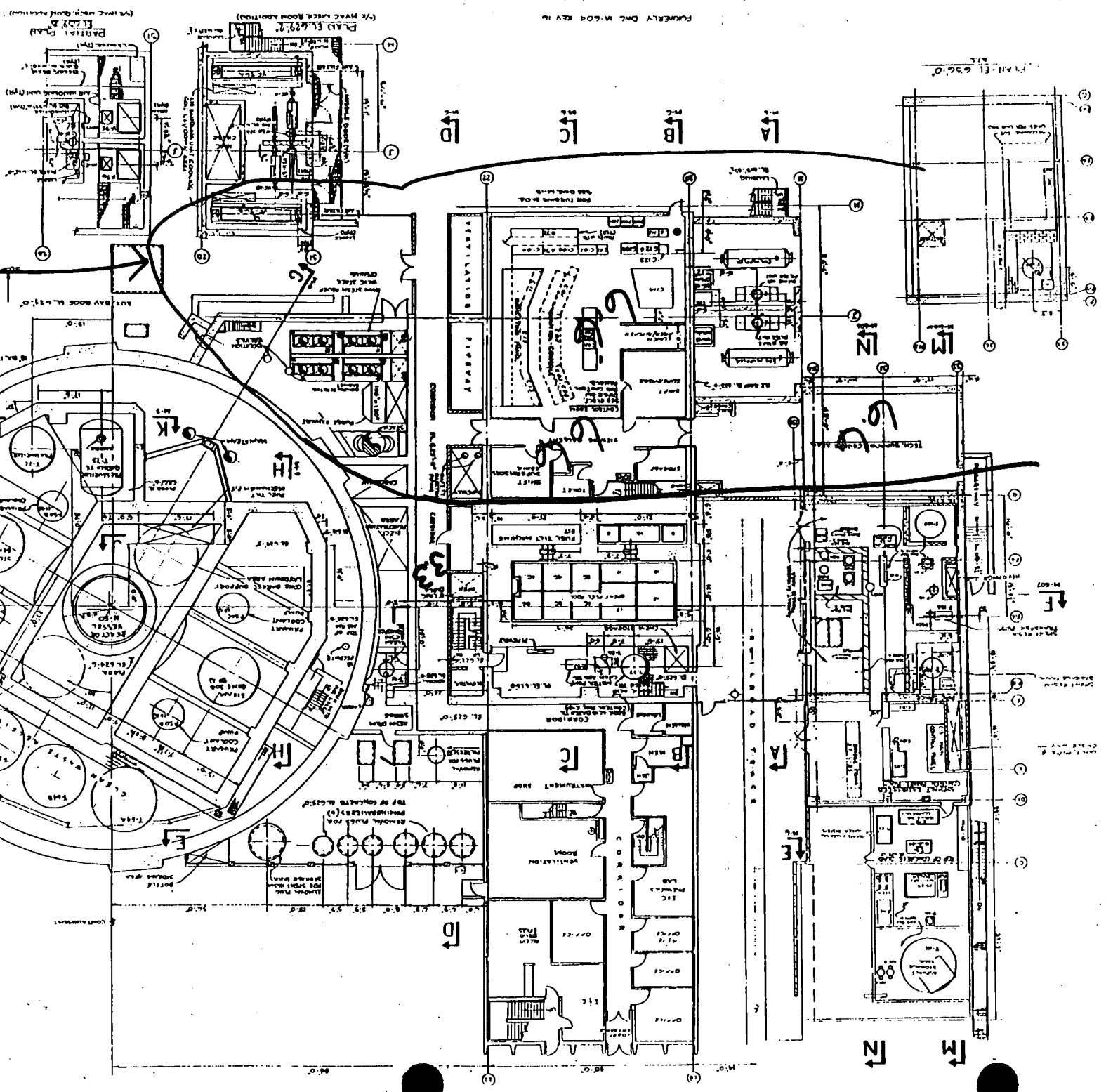
THIS DRAWING WAS FORMERLY  
M 603 REV. 12

607'	
CONSUMERS POWER COMPANY	
EQUIPMENT LOCATION, MAINTENANCE AND REACTOR BLDG. WASTE PRODUCTION PLAN OF 11. 607' 5' P. 1 X 1/2"	
M. J.	

CONSUMERS POWER COMPANY  
 EQUIPMENT ROOMS - REACTOR & AUX. BLDG.  
 REACTOR & AUX. BLDG.  
 REACTOR & AUX. BLDG.  
 REACTOR & AUX. BLDG.  
 REACTOR & AUX. BLDG.

Plume -  
 Influence east  
 turbine bldg which  
 is unshielded

1200  
 PLAN OF EL. 655'-0"  
 1. REACTOR & AUX. BLDG. IS A 10' X 10' X 10' BLDG.  
 2. REACTOR & AUX. BLDG. IS A 10' X 10' X 10' BLDG.  
 3. REACTOR & AUX. BLDG. IS A 10' X 10' X 10' BLDG.  
 4. REACTOR & AUX. BLDG. IS A 10' X 10' X 10' BLDG.  
 5. REACTOR & AUX. BLDG. IS A 10' X 10' X 10' BLDG.



PLUMBERY DWG. M-204 REV. 11

PLAN - EL. 655'-0"

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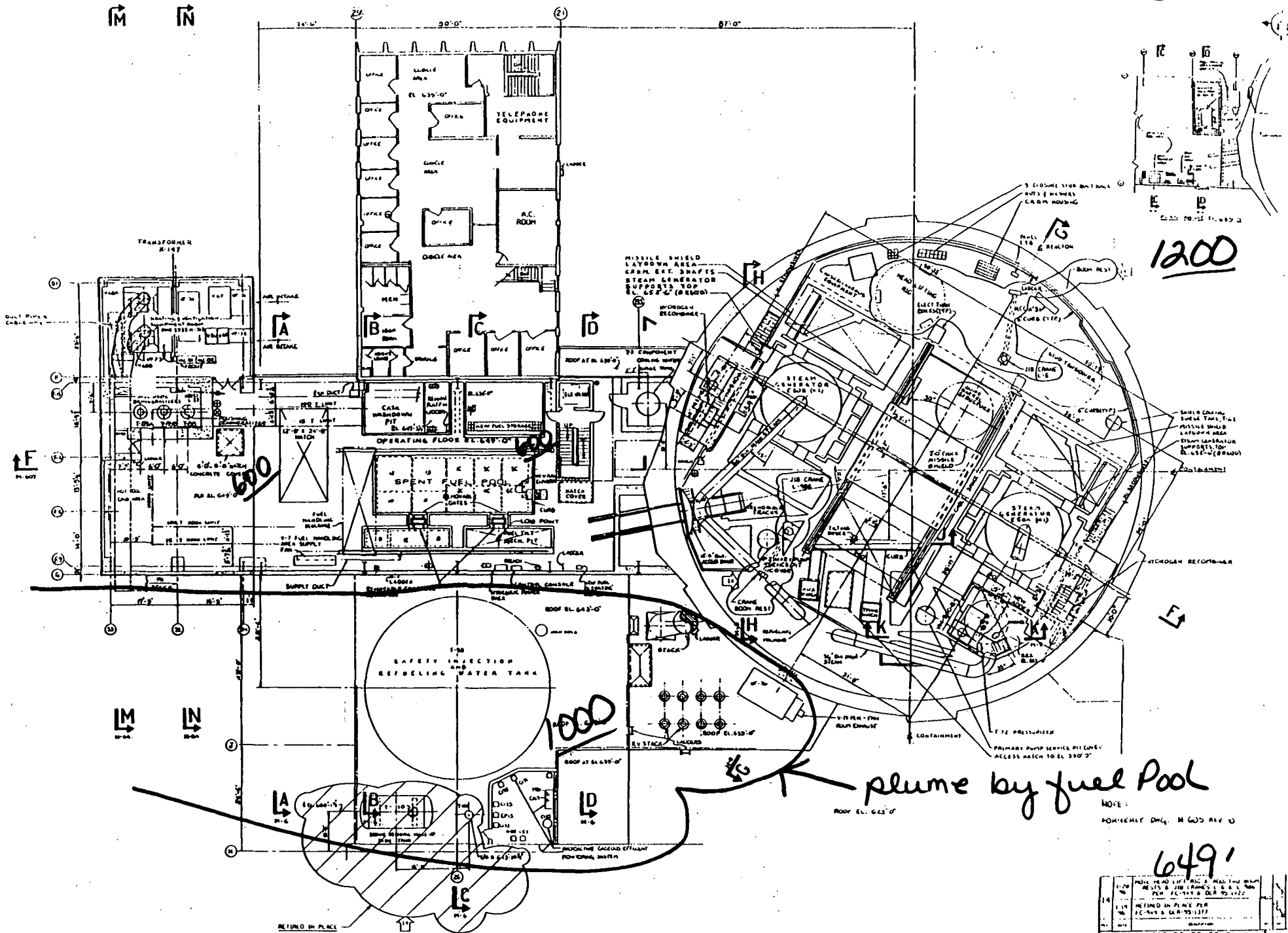
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51



1200

plume by fuel pool

NOTE: FORMERLY DNG. M 605 REV D

649'

1-76	REVISED	BY JIM FRANKS & S. L. NICHOLS
1-78	REVISED	BY JIM FRANKS & S. L. NICHOLS
1-79	REVISED	BY JIM FRANKS & S. L. NICHOLS
1-80	REVISED	BY JIM FRANKS & S. L. NICHOLS

CONSUMERS POWER COMPANY  
 ENGINEERING DEPARTMENT  
 EAST PITTSBURGH, PA.  
 PROJECT NO. 649-B  
 DRAWING NO. 649-B-1

12/22/96  
1215

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above Blowdown Filter: *Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:  
a. North Steam Line (from 'B' S/G) *Steam plume* Contact mRem/hr \*  
b. South Steam Line (from 'A' S/G) Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A: *shine from jail house*  
Contact mRem/hr     

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house" doors. *use room reading*

4. Off gas line: Contact mRem/hr 3.8

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes from the Turbine Building:

Steam cloud coming out of jailhouse window.  
Vision poor. Steam being drawn out by roof  
exhauster up stair well and other penetrations.

\*  
6. Return survey to Shift Supervisor. *Use room reading ÷ 10 in plume*

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)

CONSUMERS POWER COMPANY  
 EQUIPMENT LOCATION - AUX. BLDG.  
 ROADSIDE BUILDING - AUX. BLDG.  
 PLAN OF ET. 510 B.  
 M 2

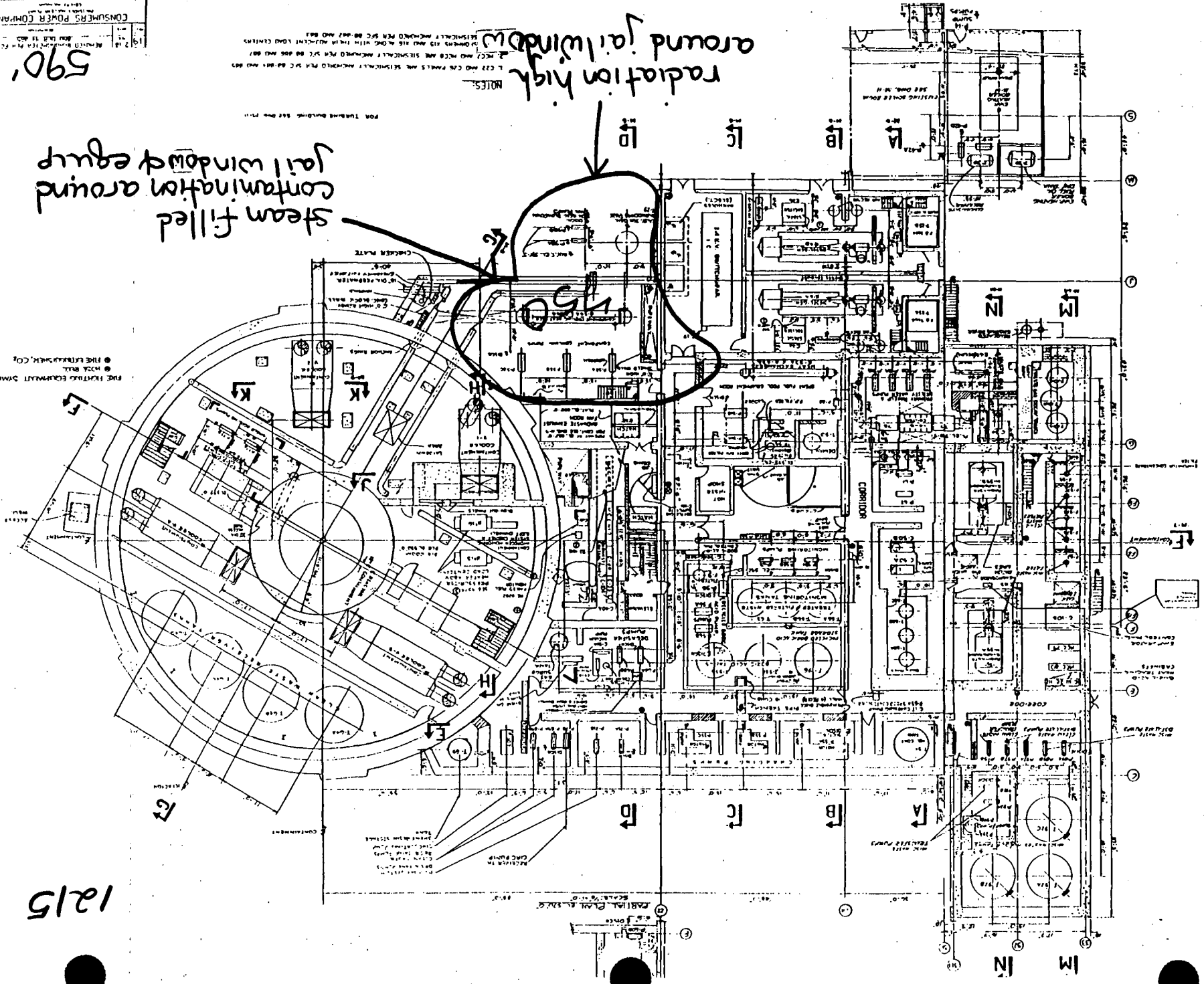
590'

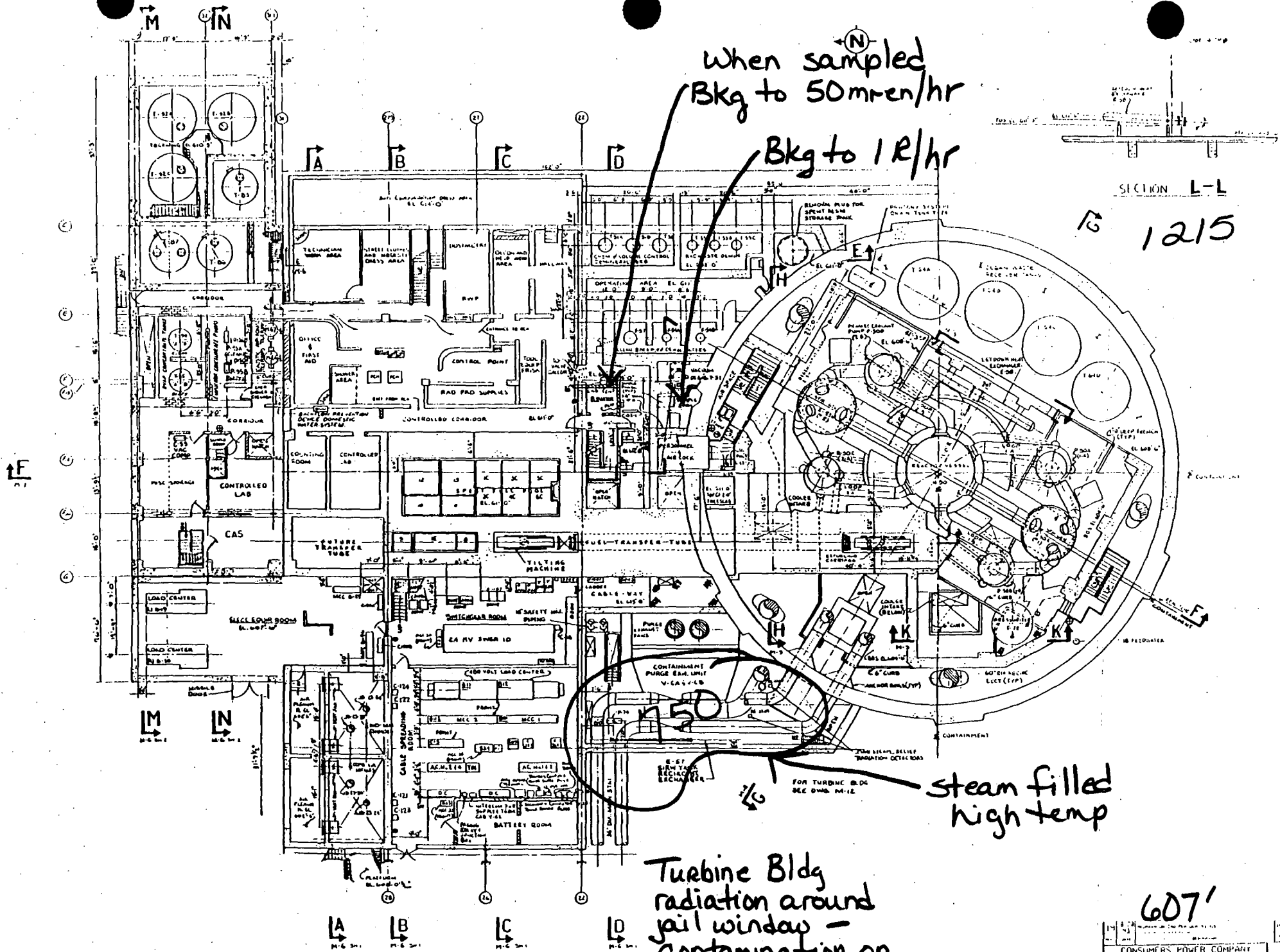
radiation high  
 around jail window

steam filled  
 containment around  
 jail window equip

1215

1215





SECTION L-L

1215

Turbine Bldg  
radiation around  
jail window -  
contamination on  
east turbine bldg

steam filled  
high temp

THIS DRAWING WAS FORMERLY  
M 603 REV. 12

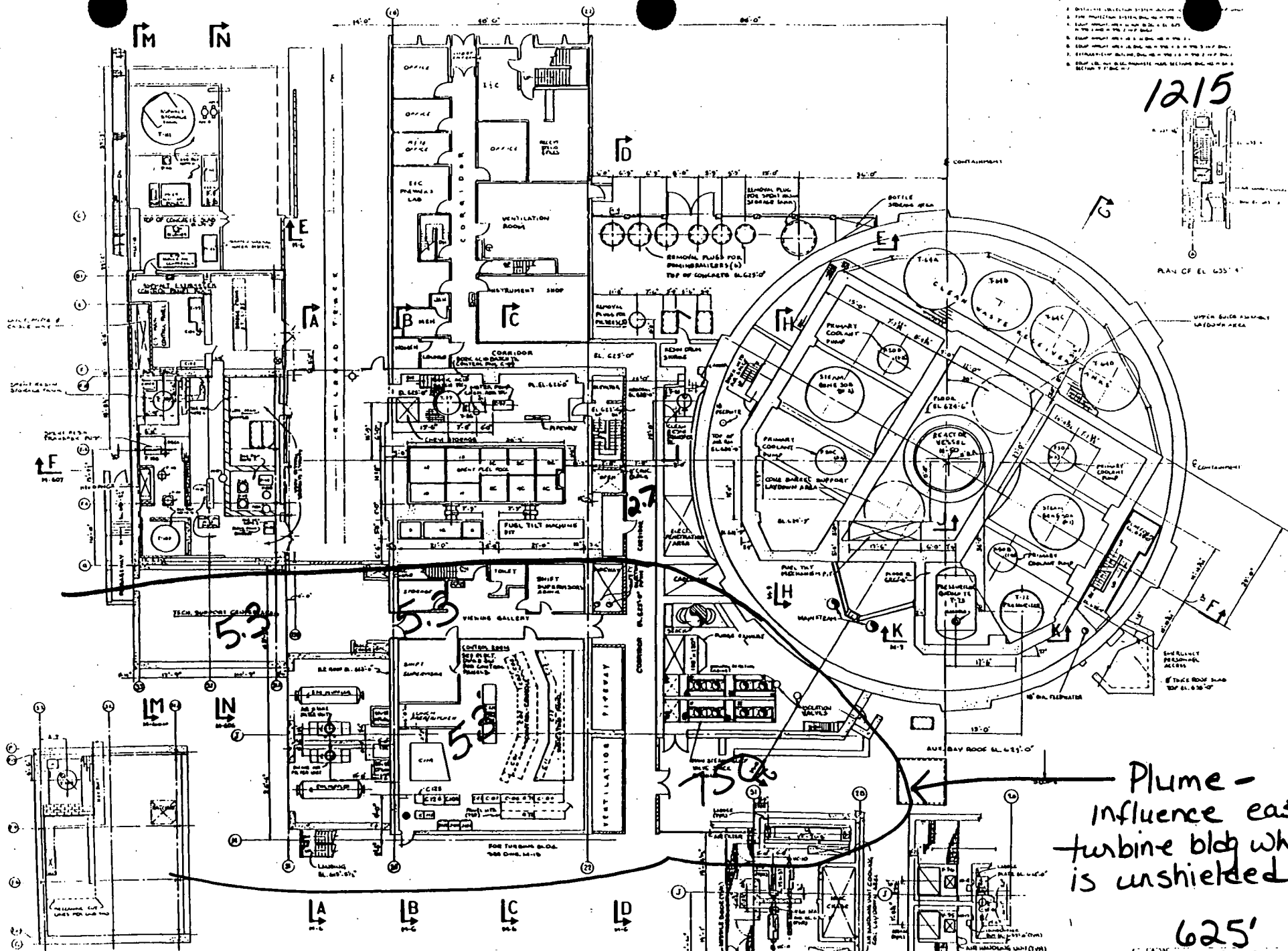
607'

CONSUMERS POWER COMPANY	
EQUIPMENT LOCATION, MAINTENANCE AND REACTOR BLDG. WASTE MODIFICATION PLAN OF 11.607.15	



1. DUCTILE IRON COLLECTION SYSTEM
2. FIRE PROTECTION SYSTEM
3. EQUIPMENT ROOMS
4. EQUIPMENT ROOMS
5. EQUIPMENT ROOMS
6. EQUIPMENT ROOMS
7. EQUIPMENT ROOMS
8. EQUIPMENT ROOMS
9. EQUIPMENT ROOMS
10. EQUIPMENT ROOMS

1215



Plume - influence east turbine bldg which is unshielded

625'

PLAN: EL. 636'-0

FORMERLY DWG. M-604 REV. 16

PLAN: EL. 629'-0  
(1/2 HVAC MECH. ROOM ADDITION)

PARTIAL PLAN  
EL. 625'-0  
(1/2 HVAC MECH. ROOM ADDITION)

18	19	20	21
CONSUMERS POWER COMPANY			
EQUIP. BLDG. - REACTOR & AUX. BLDG.			
RADIATION MODIFICATIONS			
PLAN OF EL. 625'-0			
MAY 1961			
P			



10/22/96  
1230

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

NOTE: Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above  
Blowdown Filter: *Steaming* mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G) *Steam plume* Contact mRem/hr \*

b. South Steam Line (from 'A' S/G) Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A: *shine from jail house* Contact mRem/hr     

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house" doors. *use room reading*

4. Off gas line: Contact mRem/hr 3.6

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

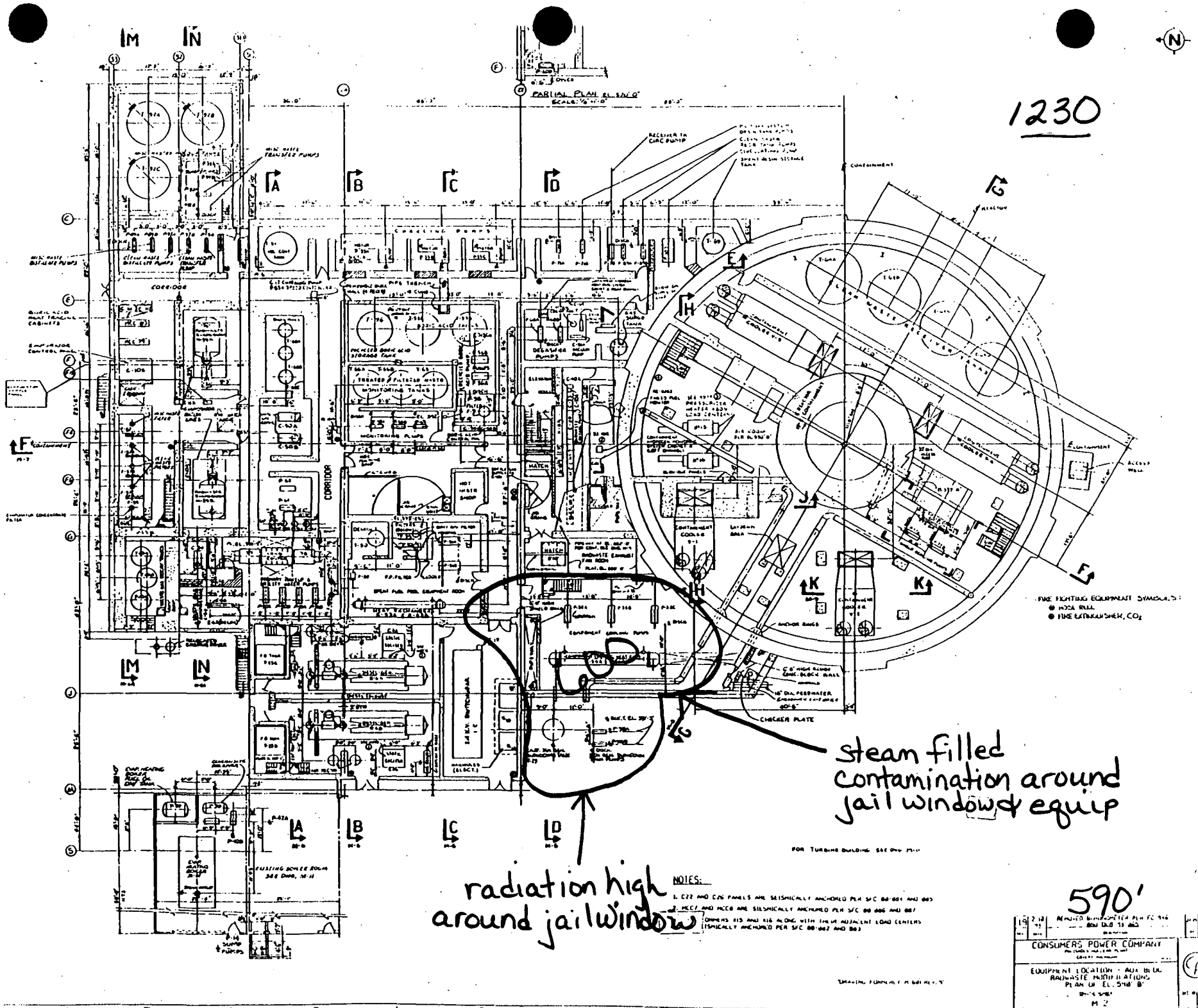
5. Indicate the direction of travel and location of any steam plumes from the Turbine Building:

Steam cloud coming out of jailhouse window.  
Vision poor. Steam being drawn out by roof  
exhauster up stair well and other penetrations.

\*  
6. Use room reading ÷ 10 in plume  
Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)



PARTIAL PLAN EL. 540'  
SCALE: 1/8" = 1'-0"

1230

radiation high  
around jail window

steam filled  
contamination around  
jail window & equip

FIRE FIGHTING EQUIPMENT SYMBOLS:  
● HOSE ROLL  
● FIRE EXTINGUISHER, CO<sub>2</sub>

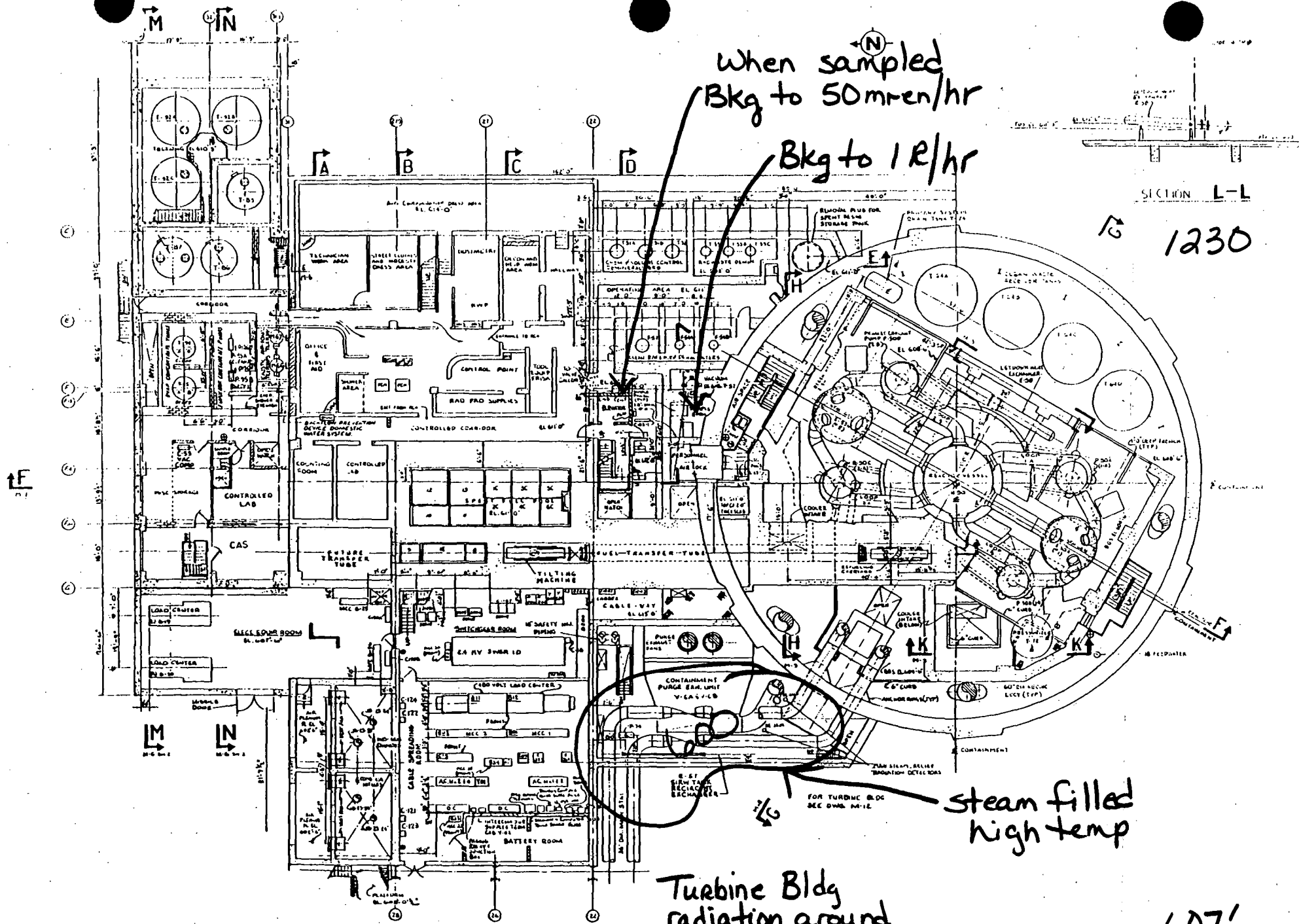
FOR TURBINE BUILDING SEE DWG. 11-11

NOTES:  
1. C22 AND C23 PANELS ARE SEISMICALLY ANCHORED PER SFC 80-004 AND 80-005  
2. C24 AND C25 ARE SEISMICALLY ANCHORED PER SFC 80-006 AND 80-007  
3. C26 AND C27 ARE SEISMICALLY ANCHORED PER SFC 80-008 AND 80-009

590'

CONSUMERS POWER COMPANY	
EQUIPMENT LOCATION - AUX. BLDG. RADIATION MODIFICATIONS	
PLAN OF EL. 540'	
M-2	

DRAWING NUMBER: 11-11-11-11



When sampled  
Bkg to 50mrem/hr

Bkg to 1 R/hr

steam filled  
high temp

Turbine Bldg  
radiation around  
jail window -  
contamination on  
east turbine bldg

SECTION L-L  
1230

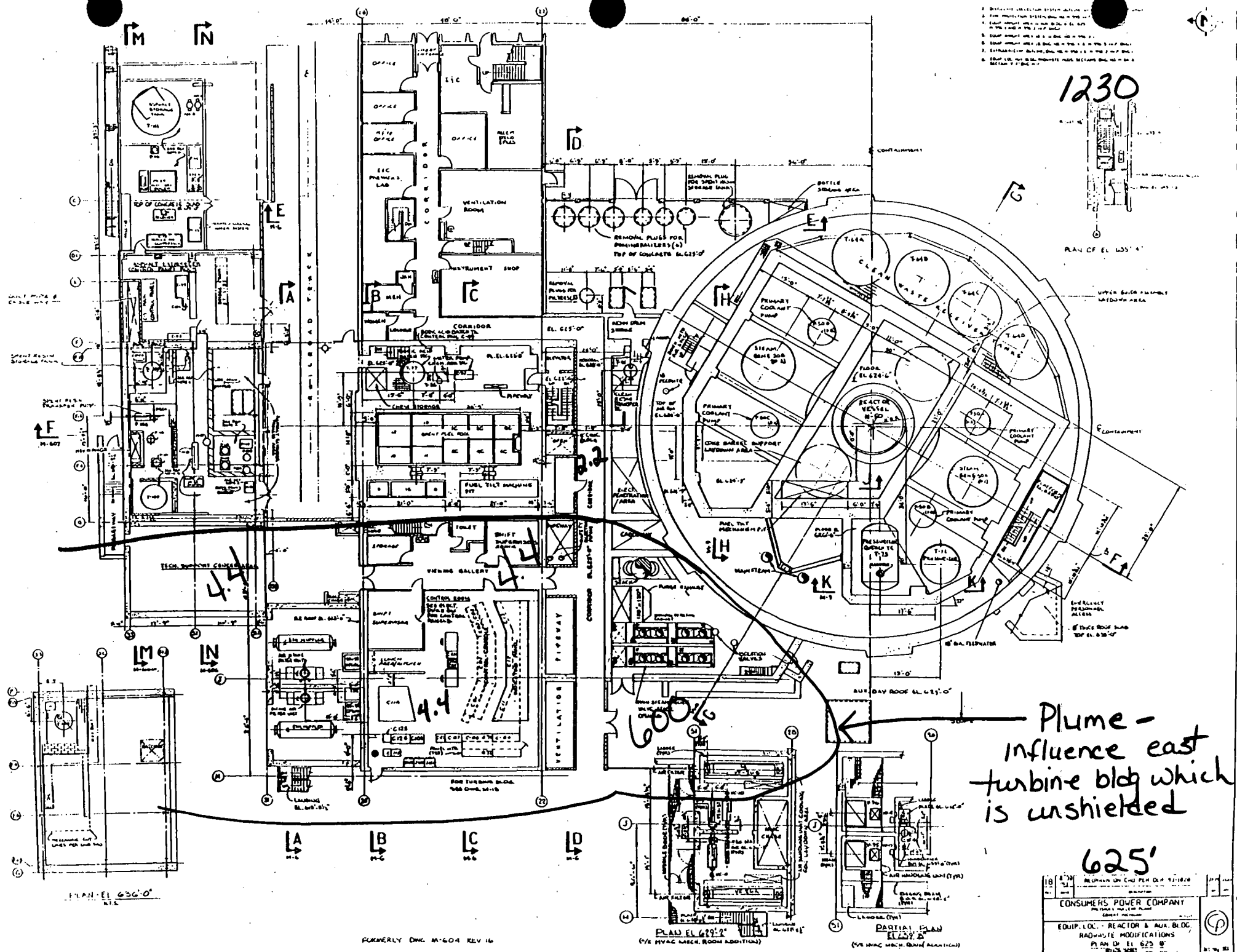
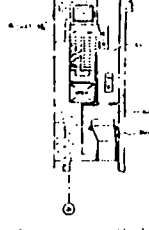
607'

THIS DRAWING WAS FORMERLY  
H 603 REV. 12

CONSUMERS POWER COMPANY	
EQUIPMENT LOCATION, MAINTENANCE AND REACTOR BLDG. WASTE PRODUCTION PLAN OF EL 607-5	
M. J.	

1. THIS PLAN SHOWS THE REACTOR AND AUXILIARY BUILDING.
2. THE REACTOR AND AUXILIARY BUILDING IS SHOWN IN THE PLAN.
3. THE REACTOR AND AUXILIARY BUILDING IS SHOWN IN THE PLAN.
4. THE REACTOR AND AUXILIARY BUILDING IS SHOWN IN THE PLAN.
5. THE REACTOR AND AUXILIARY BUILDING IS SHOWN IN THE PLAN.
6. THE REACTOR AND AUXILIARY BUILDING IS SHOWN IN THE PLAN.
7. THE REACTOR AND AUXILIARY BUILDING IS SHOWN IN THE PLAN.
8. THE REACTOR AND AUXILIARY BUILDING IS SHOWN IN THE PLAN.

1230



Plume - influence east turbine bldg which is unshielded

625'

PLAN - EL. 630' 0"

FORMERLY DWG. M-604 REV. 16

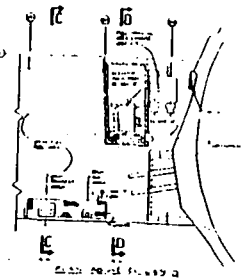
PLAN EL. 620' 0" (1/2 HYAC MACH. ROOM ADDITION)

PARTIAL PLAN EL. 625' 0" (1/2 HYAC MACH. ROOM ADDITION)

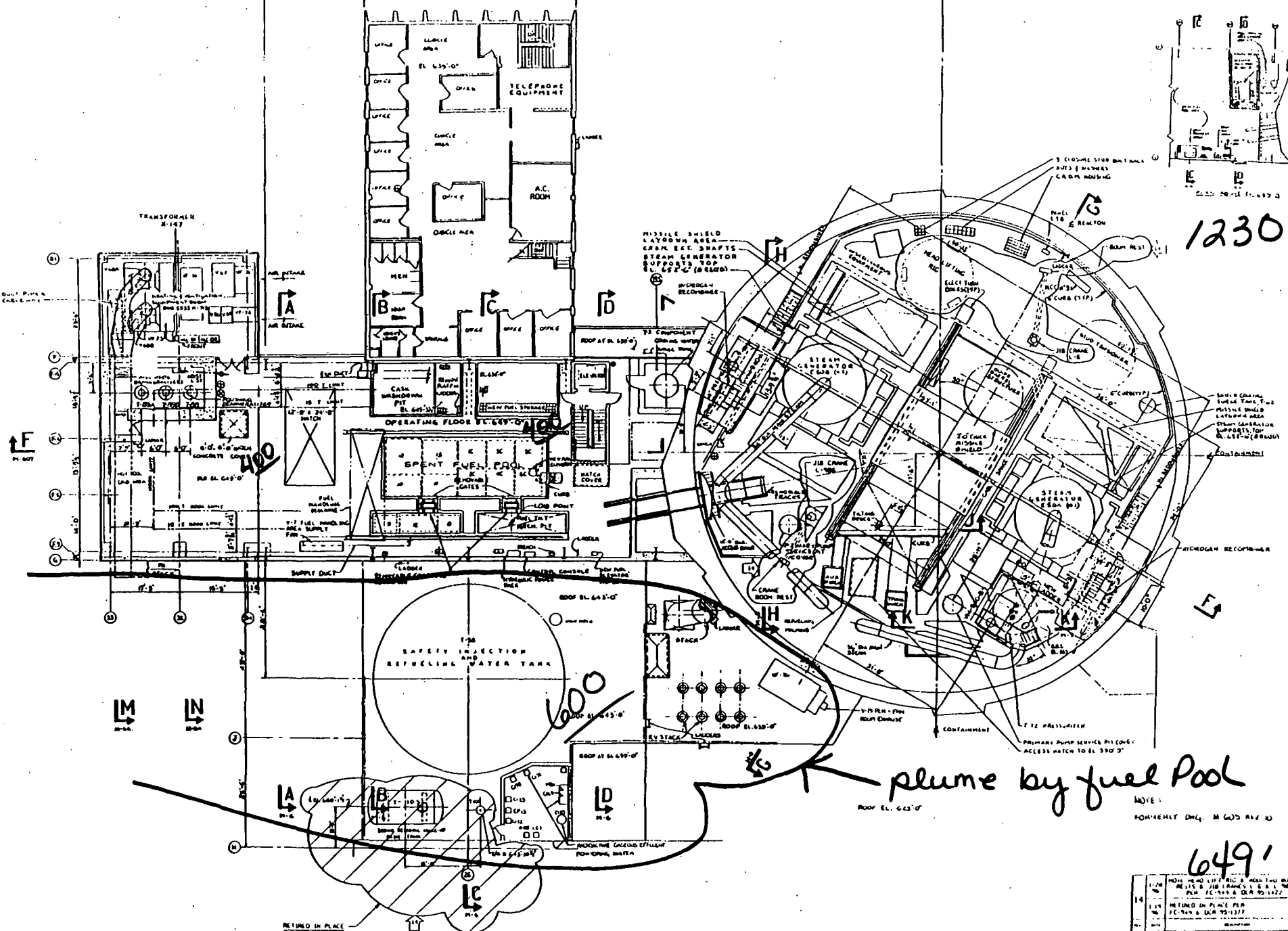
CONSUMERS POWER COMPANY	
EQUIP. LOC. - REACTOR & AUX. BLDG.	
RADIOWASTE MODIFICATIONS	
PLAN OF EL. 625' 0"	
MAY 1968	
PH 4	

M N

24'-0" 30'-0" 87'-0"



1230



plume by fuel pool

NOTE: MOMENT DNG. M 603 REV 10

6491

14	1-20	DATE: 11-1-64	BY: J. S. L. W.
	1-18	DATE: 10-1-64	BY: J. S. L. W.
	1-17	DATE: 9-1-64	BY: J. S. L. W.
	1-16	DATE: 8-1-64	BY: J. S. L. W.
	1-15	DATE: 7-1-64	BY: J. S. L. W.
	1-14	DATE: 6-1-64	BY: J. S. L. W.
	1-13	DATE: 5-1-64	BY: J. S. L. W.
	1-12	DATE: 4-1-64	BY: J. S. L. W.
	1-11	DATE: 3-1-64	BY: J. S. L. W.
	1-10	DATE: 2-1-64	BY: J. S. L. W.
	1-9	DATE: 1-1-64	BY: J. S. L. W.
	1-8	DATE: 12-1-63	BY: J. S. L. W.
	1-7	DATE: 11-1-63	BY: J. S. L. W.
	1-6	DATE: 10-1-63	BY: J. S. L. W.
	1-5	DATE: 9-1-63	BY: J. S. L. W.
	1-4	DATE: 8-1-63	BY: J. S. L. W.
	1-3	DATE: 7-1-63	BY: J. S. L. W.
	1-2	DATE: 6-1-63	BY: J. S. L. W.
	1-1	DATE: 5-1-63	BY: J. S. L. W.

CONSUMERS POWER COMPANY

ENGR. LDC. - ALX. BLCH. RADIATION MODIFICATIONS PLAN UP EL. 644'-0"

10/22/96  
1245

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

NOTE: Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above Blowdown Filter:

*Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G)

*Steam plume*  
Contact mRem/hr \*

b. South Steam Line (from 'A' S/G)

Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating,

3. Flash Tank T-29A:

*shine from jail house*  
Contact mRem/hr     

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house" doors.

*use room reading*

4. Off gas line:

Contact mRem/hr 3.4

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes from the Turbine Building:

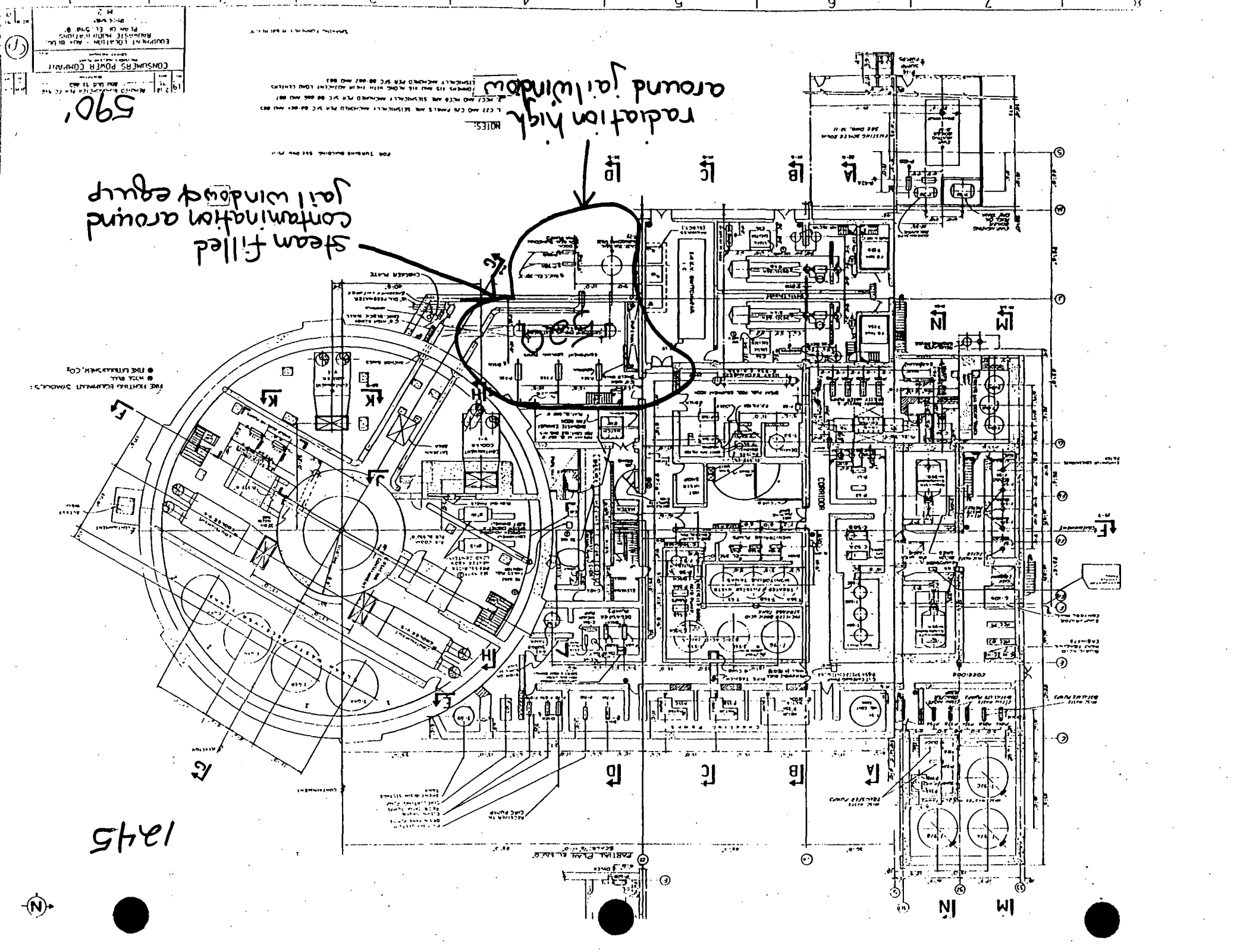
*Steam cloud coming out of jailhouse window.*  
*Vision poor. Steam being drawn out by roof*  
*exhauster up stair well and other penetrations.*

6. *\** Use room reading ÷ 10 in plume  
Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)





radiation high  
around jail window

steam filled  
confinement around  
jail window & equip

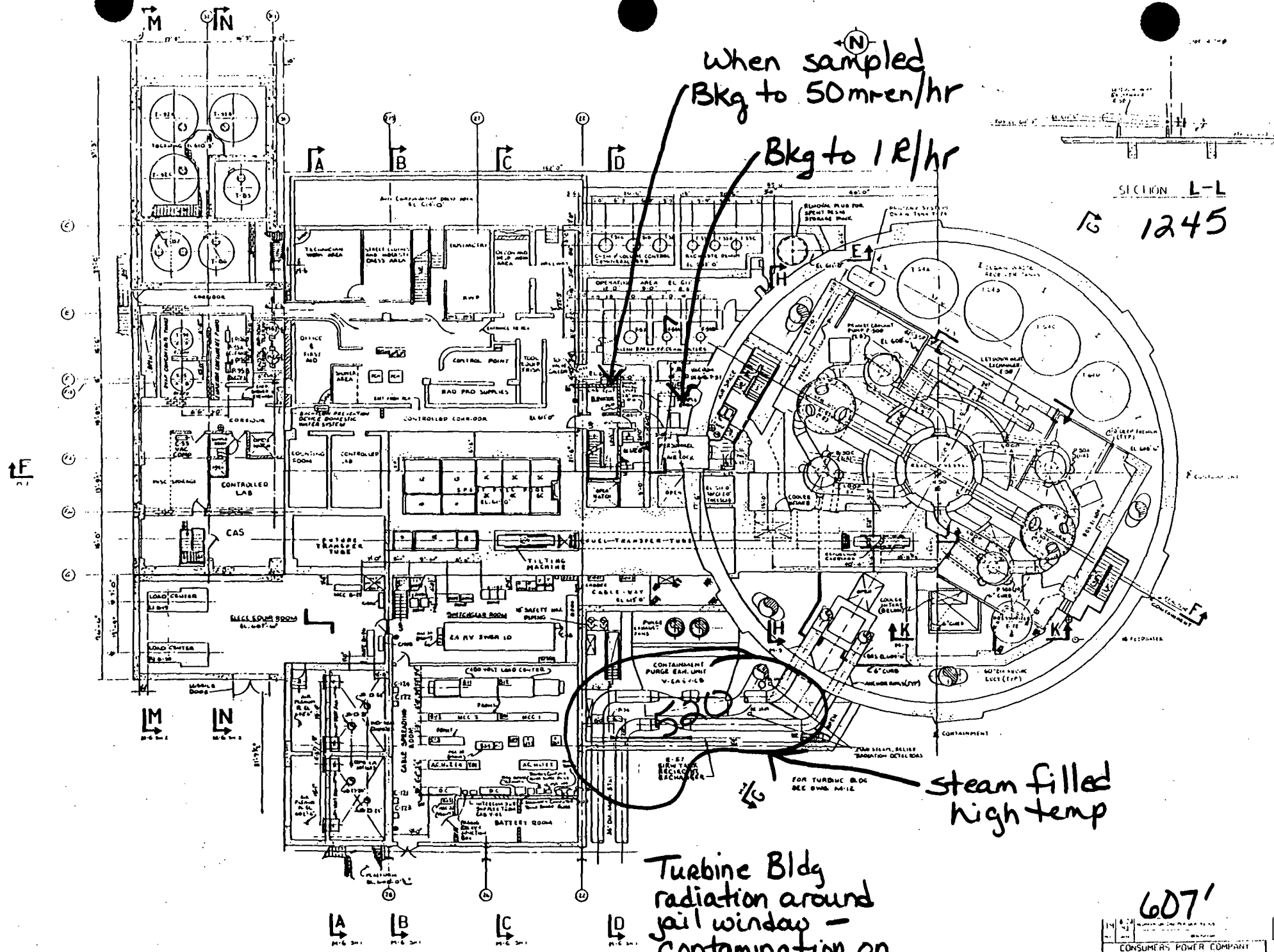
590'

1245

NOTES:  
1. C27 AND C28 PANELS ARE SEISMICALLY ANCHORED PER SFC 04-041 AND 041  
2. C27 AND C28 ARE SEISMICALLY ANCHORED PER SFC 04-041 AND 041  
3. SHEETS 413 AND 416 ALONG WITH THE ADJACENT LOAD LAYOUTS  
SPECIFICALLY ANCHORED PER SFC 04-042 AND 042

EQUIPMENT LOCATION - AREA BR 12  
RAUMASTE MODIFICATIONS  
CONSUMERS POWER COMPANY  
MAY 2004





SECTION L-L  
1245

When sampled  
Bkg to 50mrem/hr

Bkg to 1 R/hr

steam filled  
high temp

Turbine Bldg  
radiation around  
jail window -  
contamination on  
east turbine bldg

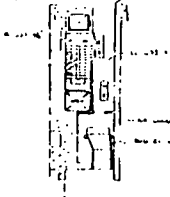
607'

CONSUMERS POWER COMPANY	
EQUIPMENT LOCATION: REACTOR BUILDING AND REACTOR BUILDING WASTE MANAGEMENT PLANT, EL. 607' 15"	
DATE: 11/15/78	
BY: M. J.	

THIS DRAWING WAS FORMERLY  
M 603 REV. 12

1. DISTRICT VENTILATION SYSTEM (SEE PLAN)
2. FINE PARTICULATE SYSTEM (SEE PLAN)
3. EQUIP. ROOM (SEE PLAN) (SEE PLAN)
4. EQUIP. ROOM (SEE PLAN) (SEE PLAN)
5. EQUIP. ROOM (SEE PLAN) (SEE PLAN)
6. EQUIP. ROOM (SEE PLAN) (SEE PLAN)
7. EQUIP. ROOM (SEE PLAN) (SEE PLAN)
8. EQUIP. ROOM (SEE PLAN) (SEE PLAN)

1245



PLAN OF EL. 635'-0"

UPPER BENCH PLUMBING LAYOUT AREA

CONTAINMENT

REACTOR VESSEL

TRIAL ROOF SLAB

TOP OF EL. 635'-0"

Plume - influence east turbine bldg which is unshielded

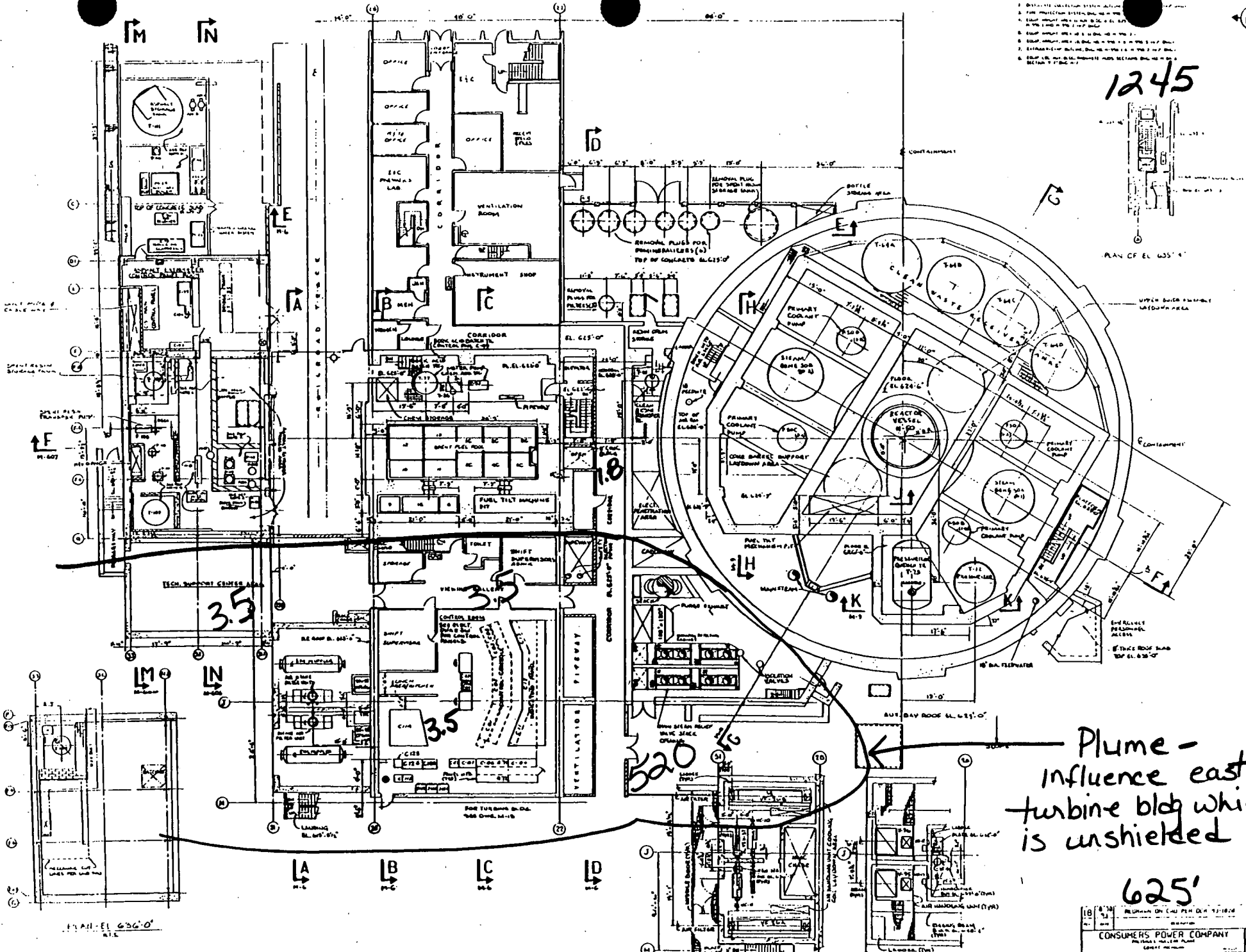
625'

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CONSUMERS POWER COMPANY										EQUIP. LOC. - REACTOR & AUX. BLDG.										RADWASTE MODIFICATIONS										PLAN OF EL. 625'-0"																																																				
M. A.										M. A.										M. A.										M. A.																																																				

FORMERLY DWG. N-604 REV. 16

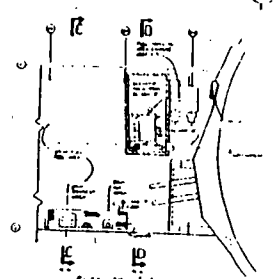
PLAN OF EL. 625'-0" (1/2 HVAC REAR, ROOM ADDITIONS)

PLAN OF EL. 625'-0" (1/2 HVAC REAR, ROOM ADDITIONS)

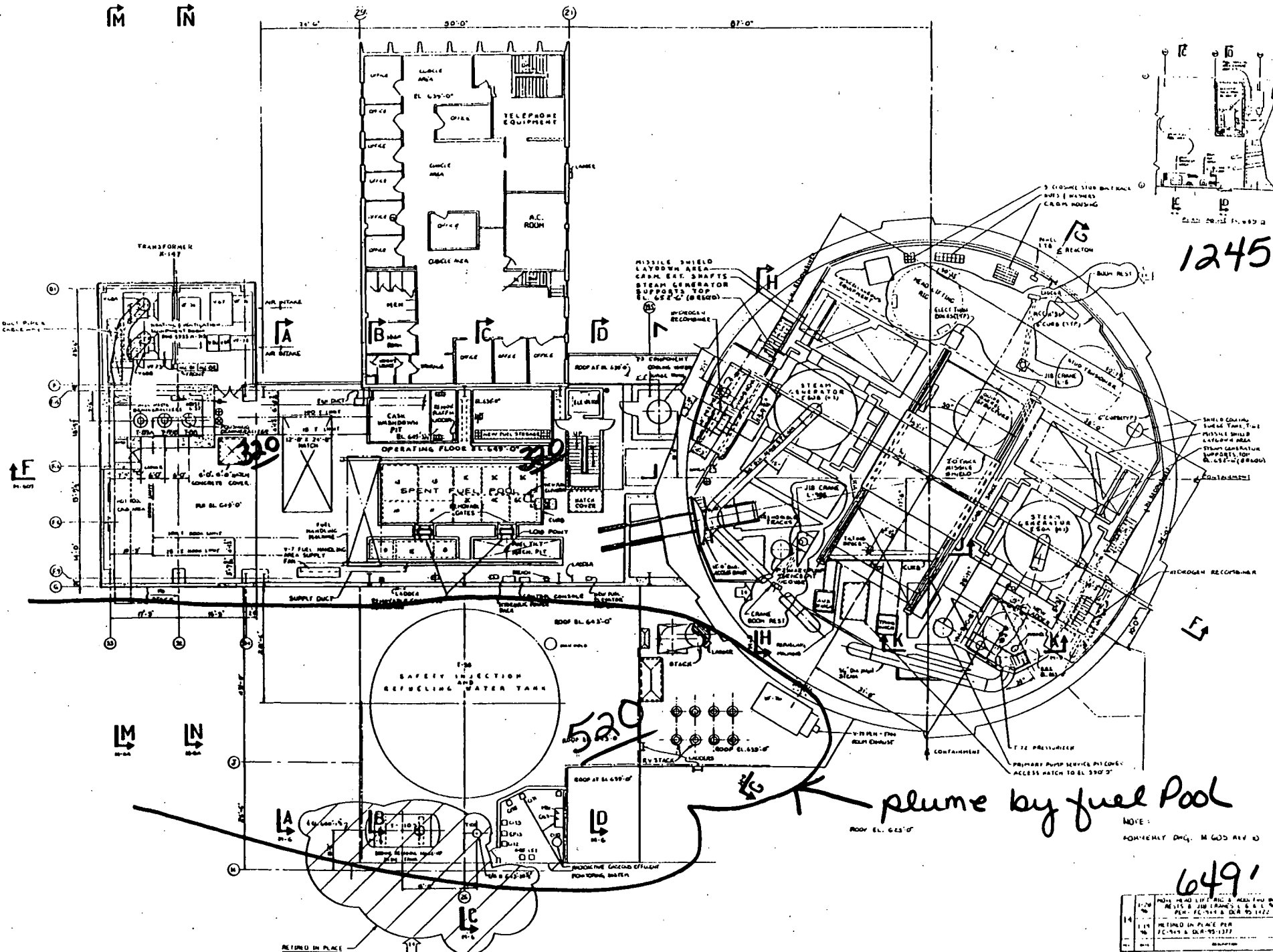


M N

14'-0" 30'-0" 87'-0"



1245



plume by fuel pool

NOTE:  
FORMERLY DWG. M 603 REV D

6491

12/28/54	REVISED IN PLACE PER FC-1000 & DCR 95-1333
1/14/55	REVISED IN PLACE PER FC-1000 & DCR 95-1333
1/14/55	REVISED IN PLACE PER FC-1000 & DCR 95-1333

CONSUMERS POWER COMPANY  
EQUIP. LOC. AUX. BLDG.  
RAHWASTE MODIFICATIONS  
PLAN OF EL. 645'-0"

1300  
/22/96

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

NOTE: Extendable probe type instrument should be used for surveys.

- 1. Blowdown Filter F-14 contact reading at floor grating above Blowdown Filter:

*Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

- 2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G)

*Steam plume*  
Contact mRem/hr \*

b. South Steam Line (from 'A' S/G)

Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating

- 3. Flash Tank T-29A:

*shine from jail house*  
Contact mRem/hr     

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house" doors.

*use room reading*

- 4. Off gas line:

Contact mRem/hr 3.2

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

- 5. Indicate the direction of travel and location of any steam plumes from the Turbine Building:

*Steam cloud coming out of jailhouse window.*  
*Vision poor. Steam being drawn out by roof*  
*exhauster up stair well and other penetrations.*

*#*

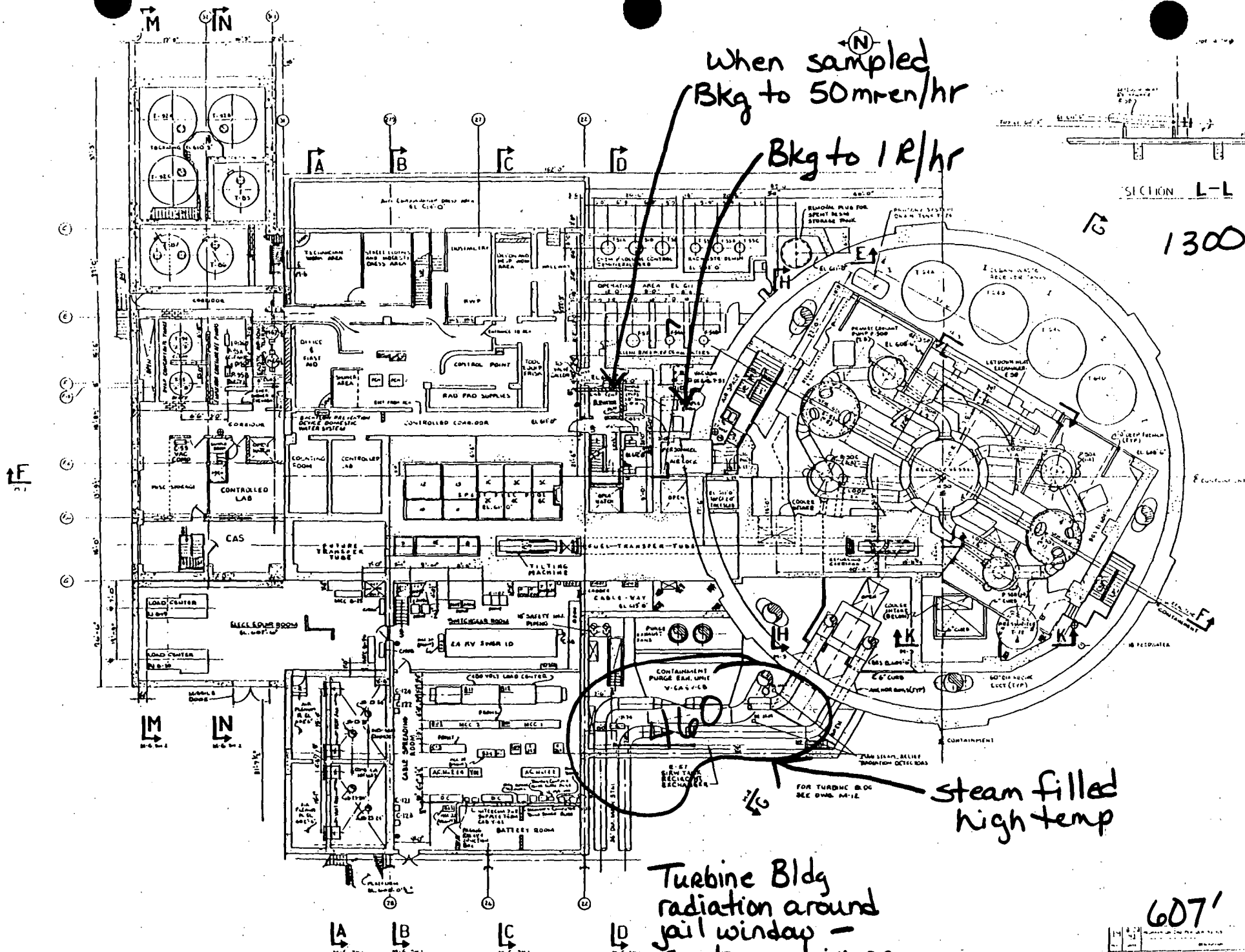
*Use room reading ÷ 10 in plume*  
Return survey to Shift Supervisor.

- 6.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)





When sampled  
Bkg to 50 mrem/hr  
Bkg to 1 R/hr

SECTION L-L  
1300

460  
FOR TURBINE BLDG SEC DWS 44-12

steam filled  
high temp

Turbine Bldg  
radiation around  
jail window -  
Contamination on  
east turbine bldg

607'

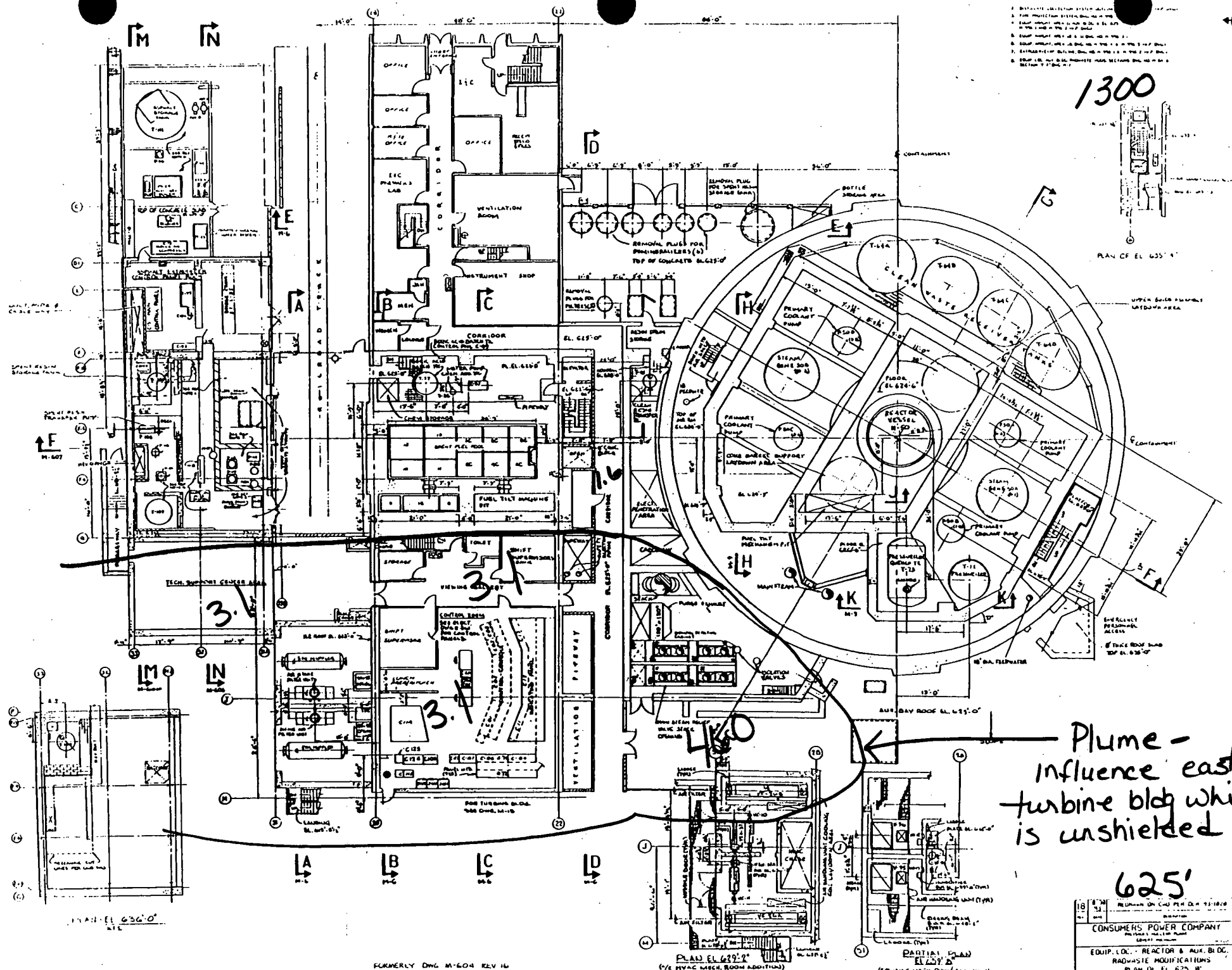
THIS DRAWING WAS FORMERLY  
M 603 REV. 12

CONSUMERS' POWER COMPANY	
EQUIPMENT LOCATION, MAINTENANCE AND REACTOR BLDG. WASTE MANAGEMENT PLAN 10-11-60 607-6	

- 1. DISTRICT COOLING SYSTEM
- 2. FIRE PROTECTION SYSTEM
- 3. EQUIPMENT ROOMS
- 4. EQUIPMENT ROOMS
- 5. EQUIPMENT ROOMS
- 6. EQUIPMENT ROOMS
- 7. EQUIPMENT ROOMS
- 8. EQUIPMENT ROOMS

1300

PLAN OF EL. 635'-0"



PLAN EL. 636'-0"

PLAN EL. 639'-0"

PARTIAL PLAN EL. 637'-0"

FORMERLY DWG. M-604 REV. 16

Plume - Influence east turbine bldg which is unshielded

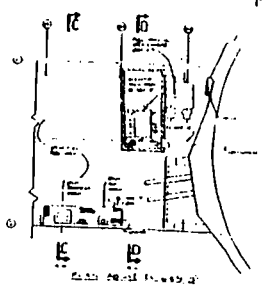
625'

18'	12"	REVISION ON CWP PER DCR 93-1020	12"	18'
CONSUMERS POWER COMPANY				
EQUIP. LOC. - REACTOR & AUX. BLDG.				
RADIATION MODIFICATIONS				
PLAN OF EL. 625' 0"				
P.A.				

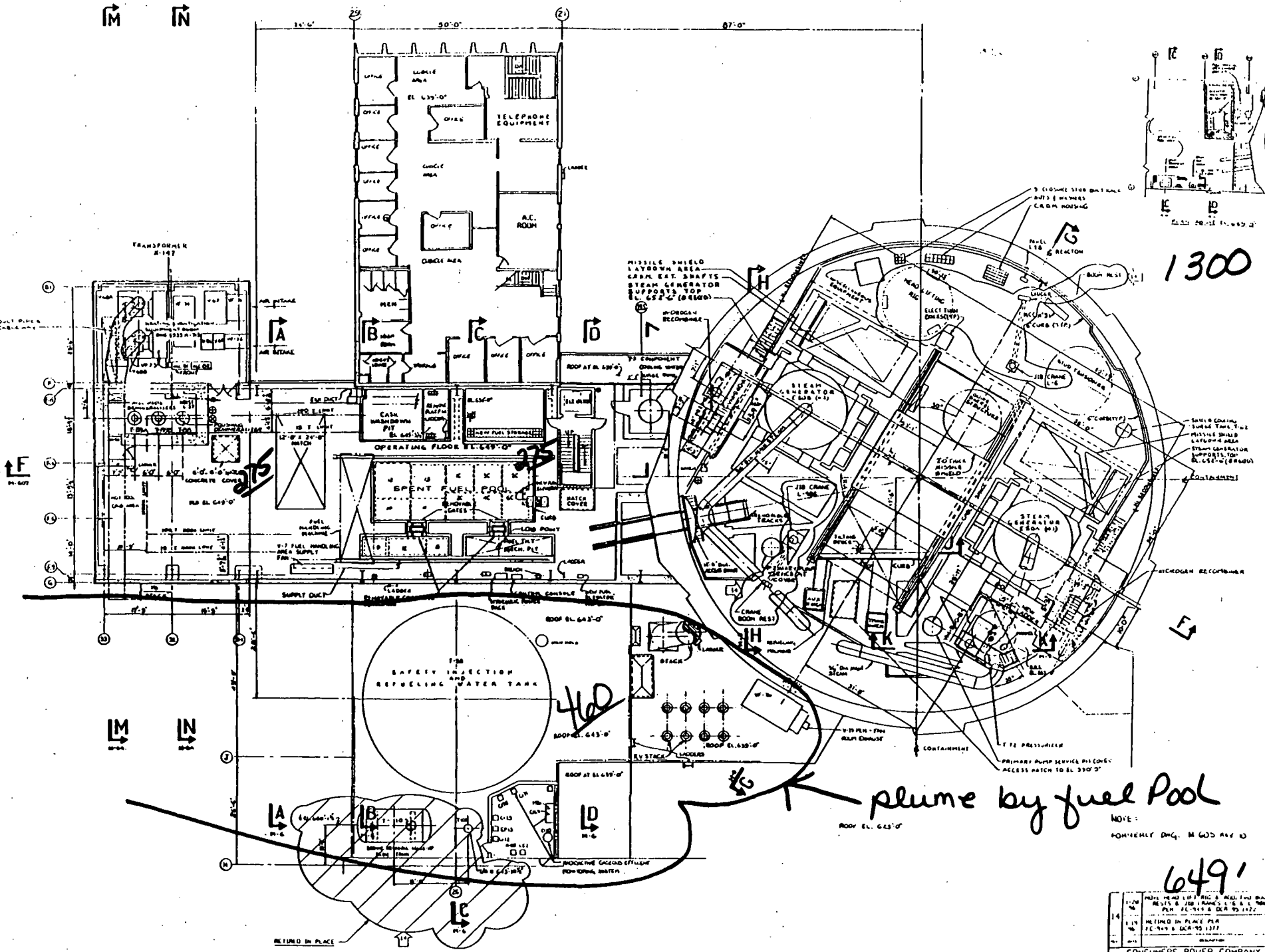


M N

24'-0" 30'-0" 87'-0"



1300



plume by fuel pool  
ROOF EL. 643'-0"

NOTE:  
NONHEAT DNG. M 605 REV D

649'

14	1-78	PLUM. REPAIR TO PLUM. & REPAIR TO DRAIN
	1-78	PLUM. & JIB RENEWAL S.E. & E. Side
	1-78	PLM. EL. 714 & DCR 70 1272
	1-78	INSTALL IN PLUM. PER
	1-78	PL. 705 & DCR 70 1277
CONSUMERS POWER COMPANY		
EQUIP. LOC. - AUC. BLDG.		
RAHWASTE PURIFICATION		
PLAN OF EL. 643'-0"		
DWG. NO. 14		

1315  
12/22/96

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

- 1. Blowdown Filter F-14 contact reading at floor grating above Blowdown Filter:

*Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

- 2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G)

*Steam plume*  
Contact mRem/hr \*

b. South Steam Line (from 'A' S/G)

Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating

- 3. Flash Tank T-29A:

*shine from jail house*  
Contact mRem/hr     

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house" doors.

*use room reading*

- 4. Off gas line:

Contact mRem/hr 3.0

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

- 5. Indicate the direction of travel and location of any steam plumes from the Turbine Building:

*Steam cloud coming out of jailhouse window.*  
*Vision poor. Steam being drawn out by roof*  
*exhauster up stair well and other penetrations.*

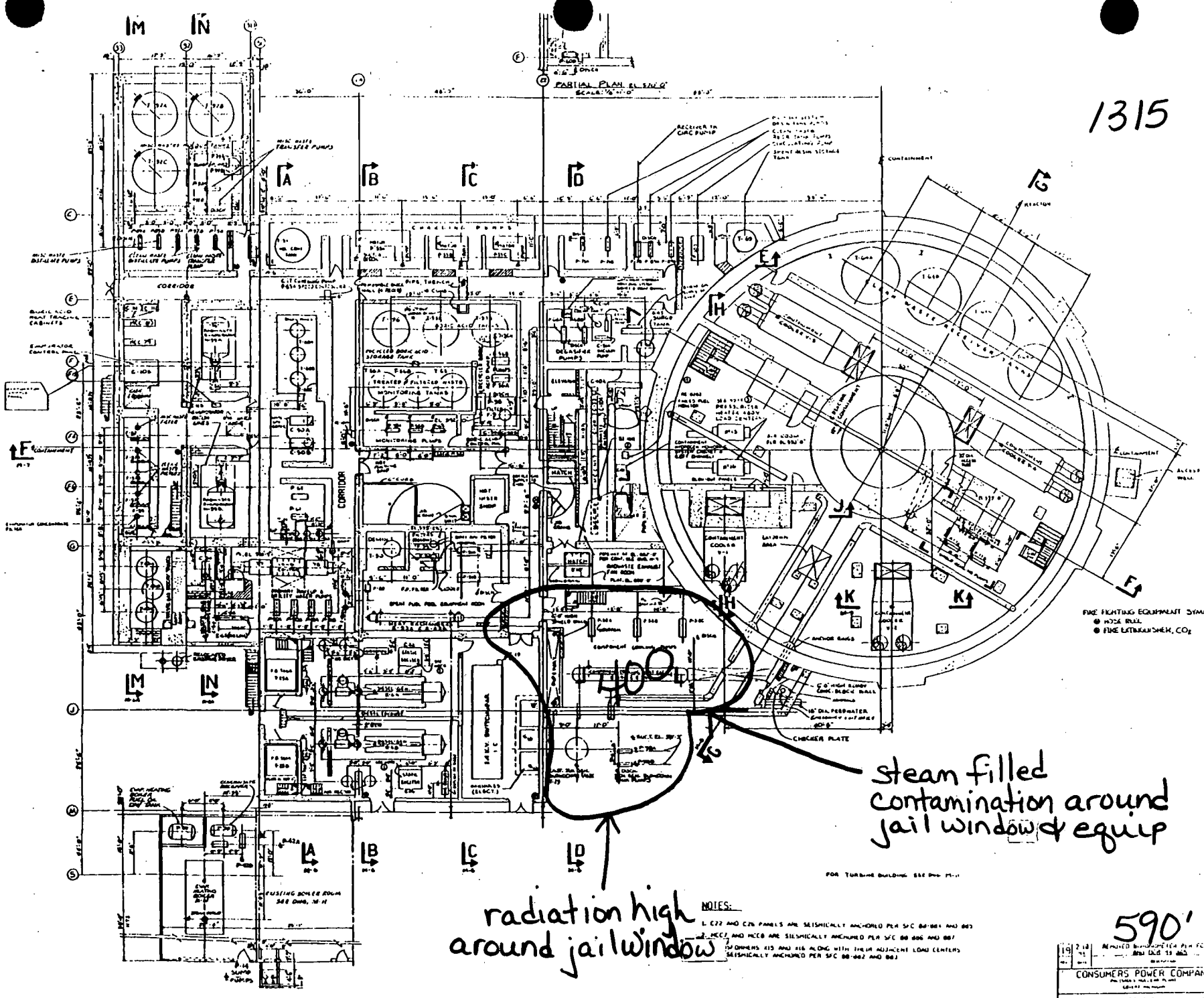
- 6. *\** Use room reading ÷ 10 in plume  
Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)



1315



FIRE HEATING EQUIPMENT SYMBOLS:  
 ● HOTK BULL  
 ● FIRE EXTINGUISHER, CO<sub>2</sub>

steam filled  
 contamination around  
 jail window & equip

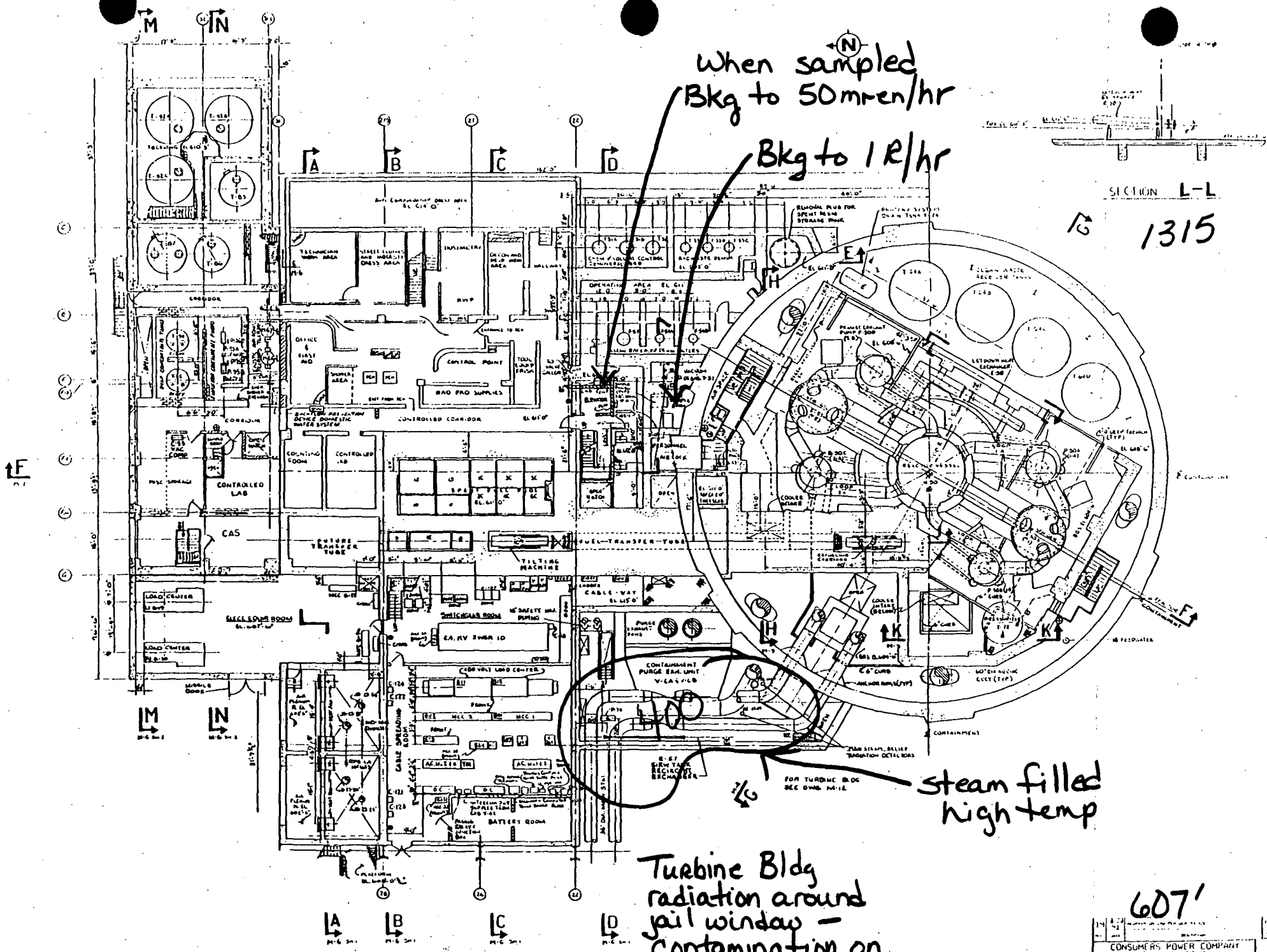
radiation high  
 around jail window

NOTES:  
 1. C22 AND C26 PANELS ARE SEISMICALLY ANCHORED PER SFC 88-001 AND 883  
 2. PEE2 AND PEE3 ARE SEISMICALLY ANCHORED PER SFC 88-006 AND 887  
 3. DIMMERS R15 AND R16 ALONG WITH THEIR ADJACENT LOAD CENTERS  
 SEISMICALLY ANCHORED PER SFC 88-002 AND 883

590'

19	218	REVISED MECHANICAL PLAN FC 100	REVISED 08/13/88
CONSUMERS POWER COMPANY			
EQUIPMENT LOCATION - AREA B-10A RADIATION MEASUREMENTS PLAN UP EL. 5'10" B'			
M 2			

DRAWING SUPPLEMENT NUMBER 117



When sampled  
Bkg to 50mrem/hr  
Bkg to 1R/hr

SECTION L-L  
1315

steam filled  
high temp

Turbine Bldg  
radiation around  
jail window -  
contamination on  
east turbine bldg

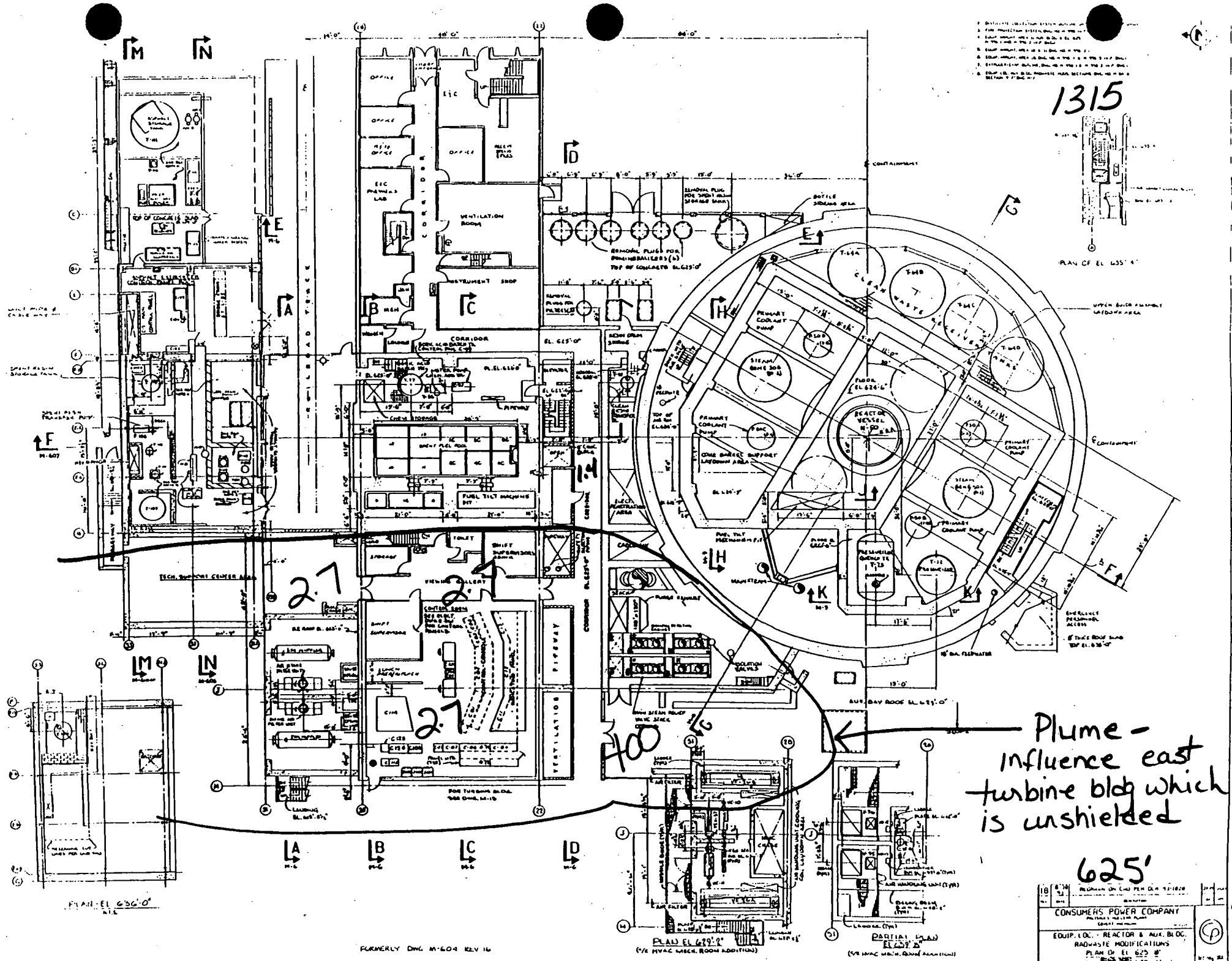
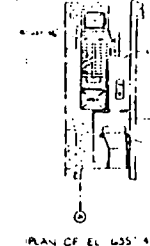
607'

CONSUMERS POWER COMPANY	
EQUIPMENT LOCATION, MAINTENANCE AND REACTION BLDG. WASTE PRODUCTION PLAN OF 11, 607'6"	
M 3	

THIS DRAWING WAS FORMERLY M 603 REV. 12

- 1. DETAILED SECTION SYSTEM DRAWING OF
- 2. FAN PROTECTION SYSTEM DRAWING OF
- 3. EQUIPMENT ROOMS DRAWING OF
- 4. EQUIPMENT ROOMS DRAWING OF
- 5. EQUIPMENT ROOMS DRAWING OF
- 6. EQUIPMENT ROOMS DRAWING OF
- 7. EQUIPMENT ROOMS DRAWING OF
- 8. EQUIPMENT ROOMS DRAWING OF

1315



Plume - influence east turbine bldg which is unshielded

625'

18	8' 1/4"	REVISION ON CHG PER DA 9/18/80
17	1/2"	REVISION ON CHG PER DA 9/18/80
CONSUMERS POWER COMPANY		
EQUIP. LOC. - REACTOR & AUX. BLDG.		
RADIOWASTE MODIFICATIONS		
PLAN OF EL. 625'		
REVISED 10/18/80		
M 1		

FORMERLY DWG. M-604 REV. 16



1330  
10/22/96

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

NOTE: Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above Blowdown Filter:

*Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G)

*Steam plume*  
Contact mRem/hr \*

b. South Steam Line (from 'A' S/G)

Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating

3. Flash Tank T-29A:

*shine from jail house*  
Contact mRem/hr     

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house" doors.

*use room reading*

4. Off gas line:

Contact mRem/hr 2.8

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes from the Turbine Building:

*Steam cloud coming out of jailhouse window.*  
*Vision poor. Steam being drawn out by roof*  
*exhauster up stair well and other penetrations.*

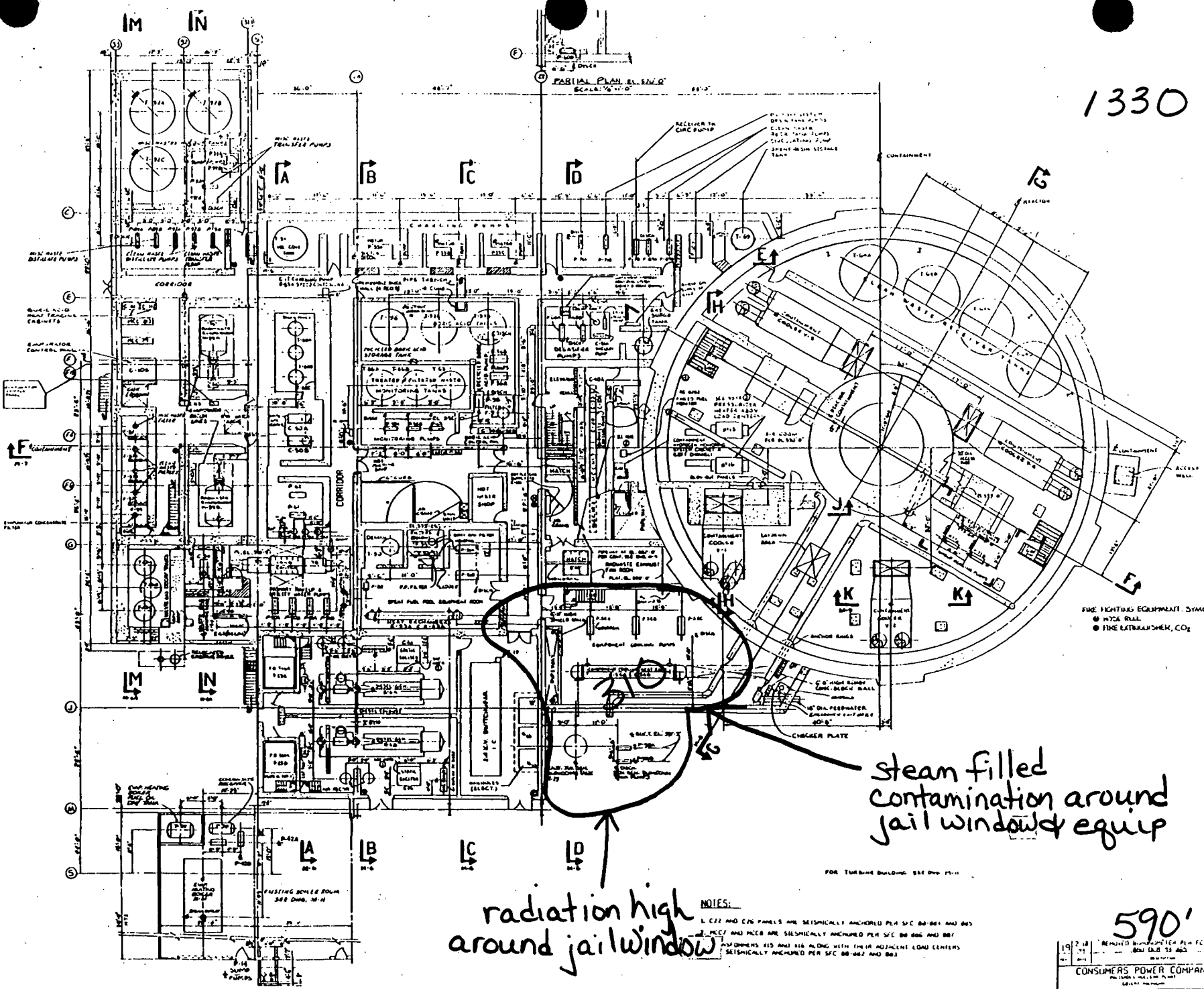
6. *\** Use room reading ÷ 10 in plume  
Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)



1330



FIRE FIGHTING EQUIPMENT SYMBOLS:  
 ● HYDR. ROLL  
 ● FIRE EXTINGUISHER, CO<sub>2</sub>

radiation high  
 around jail window

steam filled  
 contamination around  
 jail window & equip

NOTES:

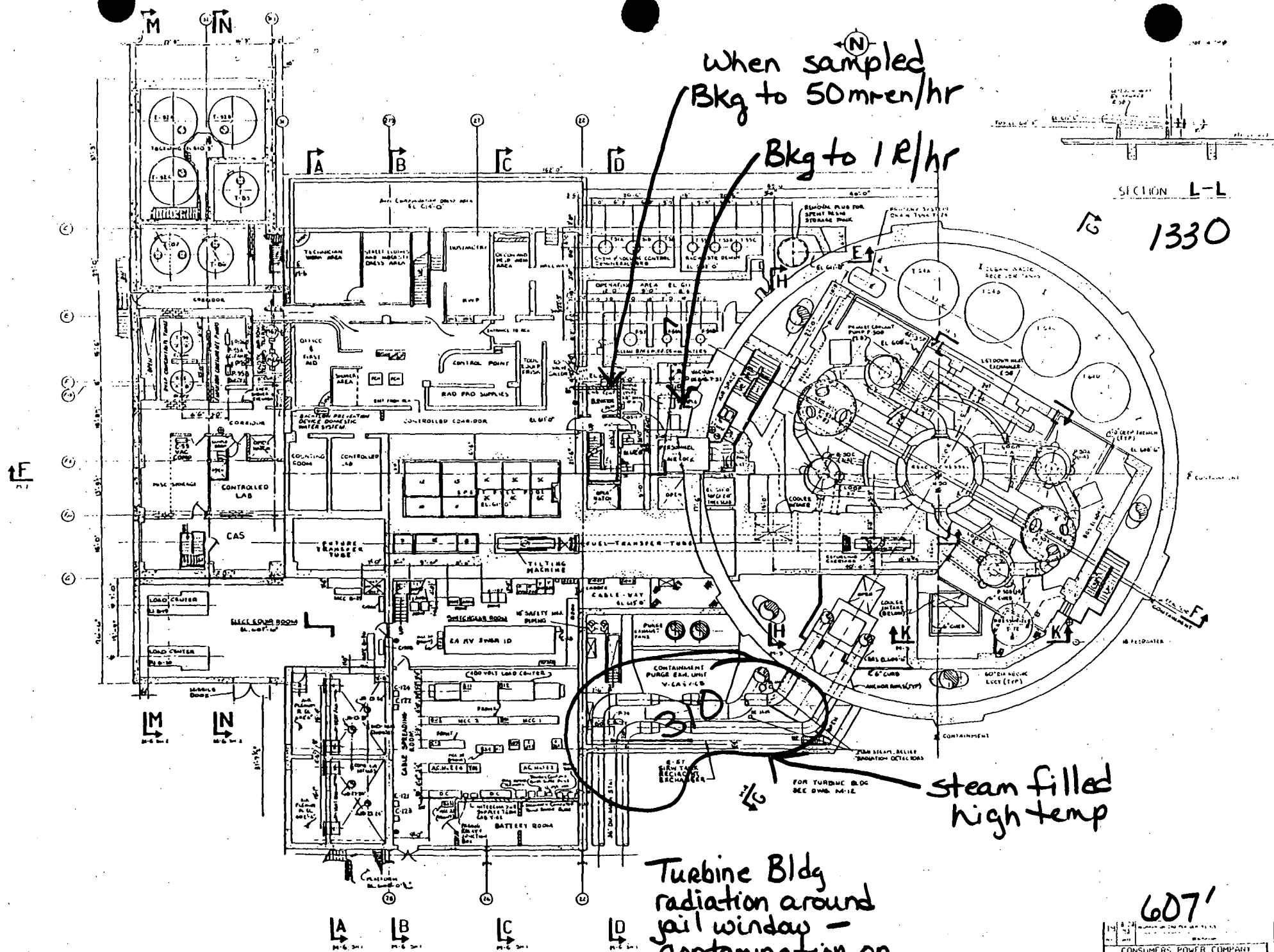
- 1. C22 AND C26 PANELS ARE SEISMICALLY ANCHORED PER SFC 00-1061 AND 002
- 2. P1C7 AND P1C8 ARE SEISMICALLY ANCHORED PER SFC 00-006 AND 007
- 3. FOUNDATIONS R15 AND R16 ARE ALONG WITH OTHER ADJACENT LOAD CENTERS SEISMICALLY ANCHORED PER SFC 00-062 AND 003

FOR TURBINE BUILDING, SEE DWG. P-111

590'

CONSUMERS POWER COMPANY  
 EQUIPMENT LOCATION - AUX. BLDG.  
 RADIATION MODIFICATION  
 PLAN OF E.L. 5148 'B'  
 M-2





When sampled  
Bkg to 50mrem/hr  
Bkg to 1R/hr

steam filled  
high temp

Turbine Bldg  
radiation around  
jail window -  
contamination on  
east turbine bldg

SECTION L-L  
1330

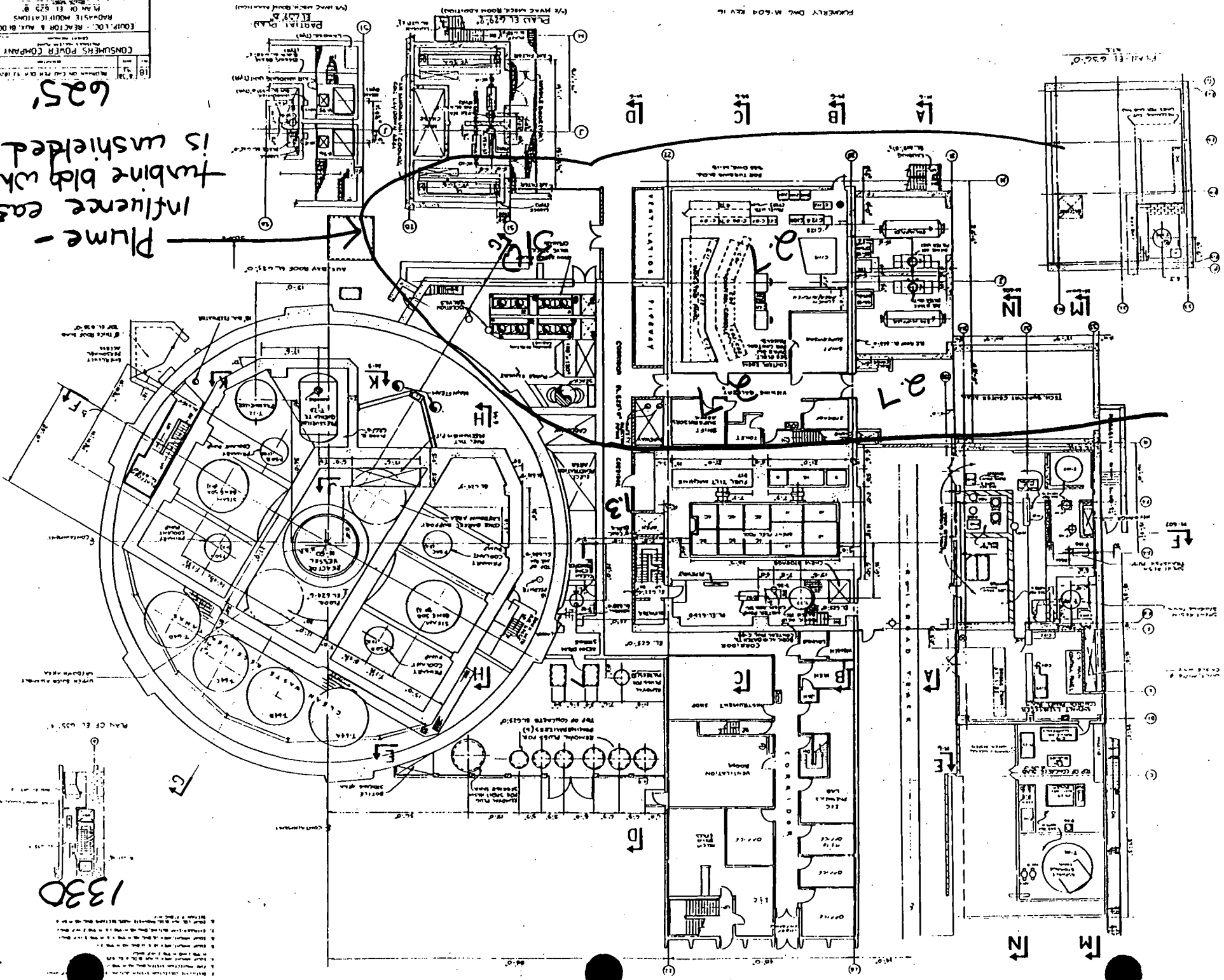
607'

THIS DRAWING WAS FORMERLY  
M 603 REV. 12

CONSUMERS POWER COMPANY	
EQUIPMENT LOCATION-AUXILIARY AND REACTOR BLDG. WASTE MODIFICATION PLAN NO. 607-15	
M 3	

CONSUMERS POWER COMPANY  
 COURT LOC. REACTOR & AUX. BLD.  
 RADIASIE MODIFICATIONS  
 PLAN OF EL. 625.0'  
 18 7.38

Plume -  
 Influence east  
 turbine bldg which  
 is unshielded



1330

PLAN OF EL. 625.0'

PROPERTY DWG. M-504 REV. 11

PLAN OF EL. 625.0'

PLAN OF EL. 625.0' (1/2 SCALE WORK ROOM ADDITIONS)

PLAN OF EL. 625.0' (1/2 SCALE WORK ROOM ADDITIONS)

PLAN OF EL. 625.0' (1/2 SCALE WORK ROOM ADDITIONS)

PLAN OF EL. 625.0' (1/2 SCALE WORK ROOM ADDITIONS)

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PLAN OF EL. 625.0' (1/2 SCALE WORK ROOM ADDITIONS)

PLAN OF EL. 625.0' (1/2 SCALE WORK ROOM ADDITIONS)

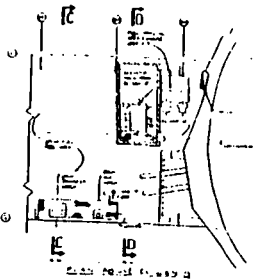
PLAN OF EL. 625.0' (1/2 SCALE WORK ROOM ADDITIONS)

PLAN OF EL. 625.0' (1/2 SCALE WORK ROOM ADDITIONS)

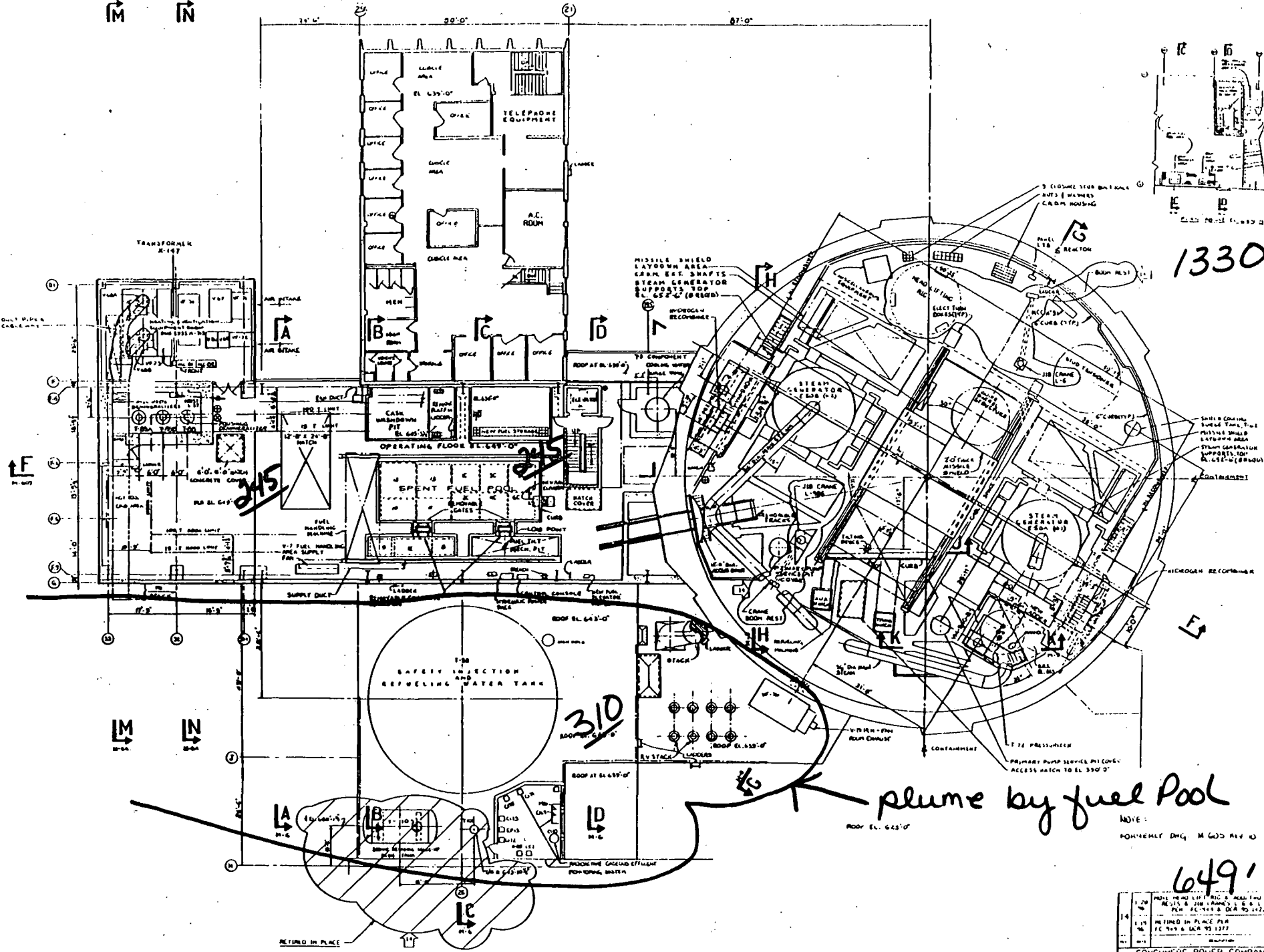
PLAN OF EL. 625.0' (1/2 SCALE WORK ROOM ADDITIONS)

M N

34'-0" 30'-0" 07'-0"



1330



345

345

310

plume by fuel pool

NOTE: PORTABLE DRY M GDS ARE 10

649'

1-20	PLUM HEAD 1 1/2" P.C. & ACCESS TO PLUM HEAD, 2 1/2" P.C. & 2 1/2" P.C. P.C. EL. 649' & CL. TO 647'
1-15	NOTED IN PLACE PER FC 924 & ICA 93 1272
1-10	
1-5	

CONSUMERS POWER COMPANY  
 649' PLUM HEAD 1 1/2" P.C. & ACCESS TO PLUM HEAD, 2 1/2" P.C. & 2 1/2" P.C. P.C. EL. 649' & CL. TO 647'

GROUP: 100 - AUX. BLDG. WASTE PURIFICATION  
 PLAN OF EL. 649'-0"

1345  
12/96

STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

NOTE: Extendable probe type instrument should be used for surveys.

- 1. Blowdown Filter F-14 contact reading at floor grating above Blowdown Filter:

*Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

- 2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G)

*Steam plume*  
Contact mRem/hr \*

b. South Steam Line (from 'A' S/G)

Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating

- 3. Flash Tank T-29A:

*shine from jail house*  
Contact mRem/hr \_\_\_\_\_  
*use room reading*

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house" doors.

- 4. Off gas line:

Contact mRem/hr 2.6

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

- 5. Indicate the direction of travel and location of any steam plumes from the Turbine Building:

*Steam cloud coming out of jailhouse window.*  
*Vision poor. Steam being drawn out by roof*  
*exhauster up stair well and other penetrations.*

- 6. \* Use room reading ÷ 10 in plume  
Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)

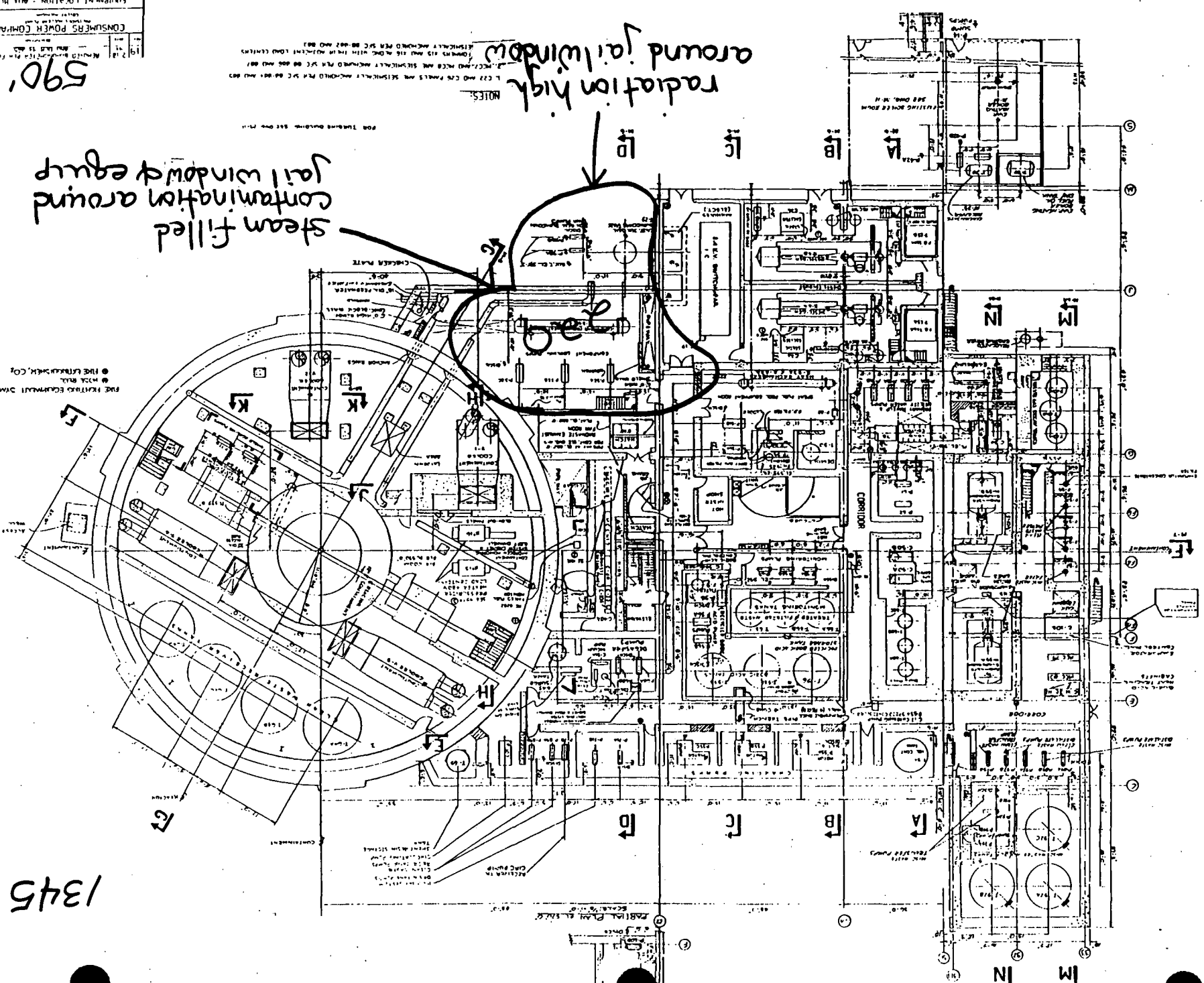
590'

CONSUMERS POWER COMPANY  
EQUIPMENT LOCATION - MAIN BUILDING  
ANALYSIS - NORTH ELEVATION  
PLAN ON EL. 510.0

NOTES:  
1. C22 AND C26 PANELS ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
2. C27 AND C28 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
3. C29 AND C30 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
4. C31 AND C32 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
5. C33 AND C34 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
6. C35 AND C36 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
7. C37 AND C38 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
8. C39 AND C40 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
9. C41 AND C42 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
10. C43 AND C44 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
11. C45 AND C46 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
12. C47 AND C48 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
13. C49 AND C50 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
14. C51 AND C52 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
15. C53 AND C54 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
16. C55 AND C56 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
17. C57 AND C58 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
18. C59 AND C60 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
19. C61 AND C62 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
20. C63 AND C64 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
21. C65 AND C66 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
22. C67 AND C68 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
23. C69 AND C70 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
24. C71 AND C72 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
25. C73 AND C74 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
26. C75 AND C76 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
27. C77 AND C78 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
28. C79 AND C80 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
29. C81 AND C82 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
30. C83 AND C84 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
31. C85 AND C86 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
32. C87 AND C88 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
33. C89 AND C90 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
34. C91 AND C92 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
35. C93 AND C94 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
36. C95 AND C96 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
37. C97 AND C98 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.  
38. C99 AND C100 ARE SEISMICALLY ANCHORED PER SFC 64.001 AND 64.002.

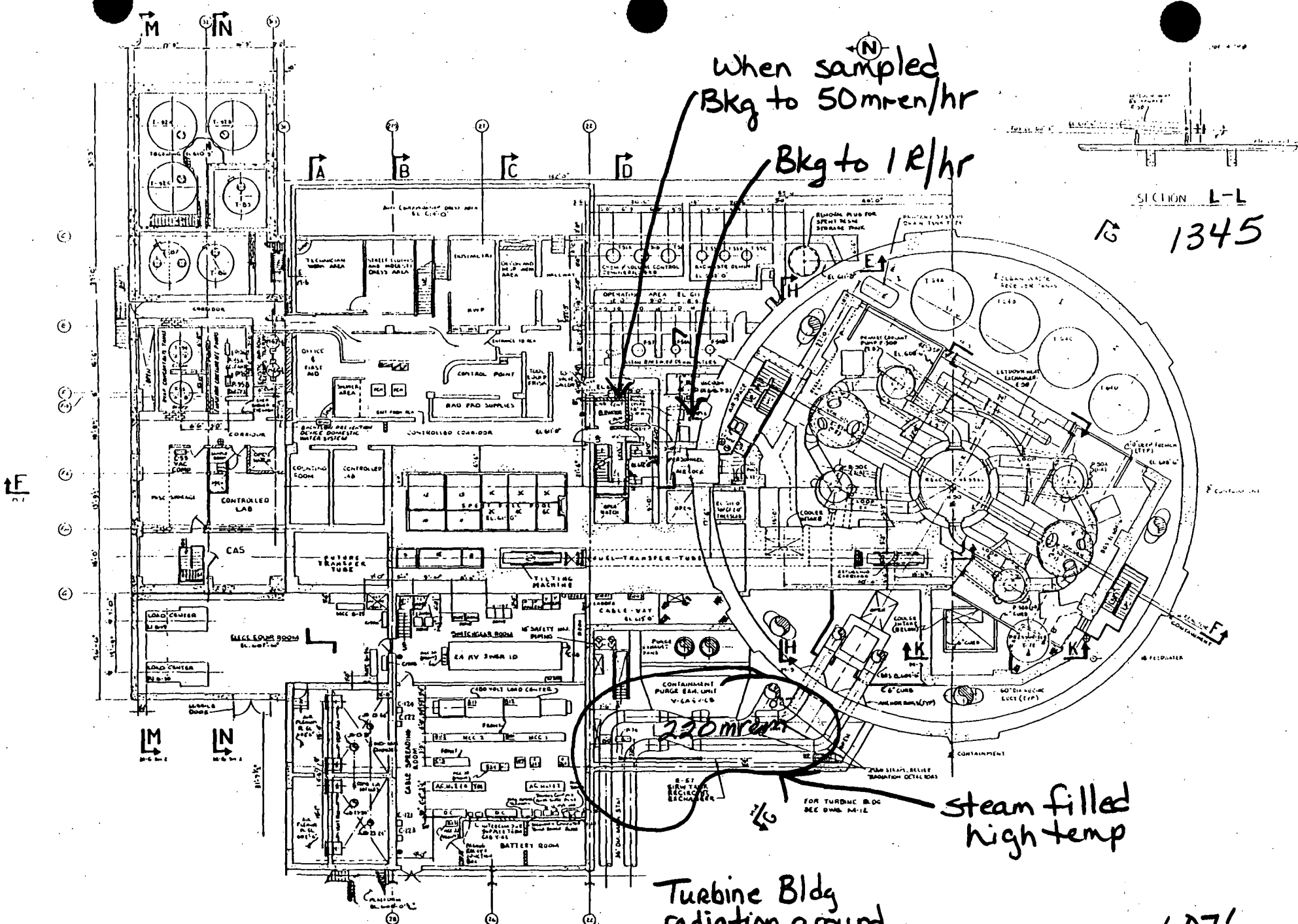
radiation high  
around jail window

steam filled  
containment around  
jail window equip



1345





SECTION L-L  
1345

Turbine Bldg  
radiation around  
jail window -  
contamination on  
east turbine bldg

steam filled  
high temp

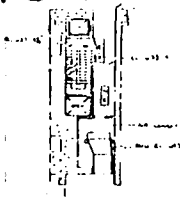
607'

THIS DRAWING WAS FORMERLY  
M 603 REV. 12

CONSUMERS POWER COMPANY	
EQUIPMENT LOCATION AUXILIARY AND REACTOR BLDG. WASTE MANUFACTURING PLAN OF EL. 607'-6"	

1. DIFFERENTIAL COLLECTION SYSTEM...
2. FINE PARTICULATE SYSTEM...
3. SCRAP REMOVAL AREA...
4. SCRAP REMOVAL AREA...
5. SCRAP REMOVAL AREA...
6. SCRAP REMOVAL AREA...
7. SCRAP REMOVAL AREA...
8. SCRAP REMOVAL AREA...

1345



PLAN OF EL. 635'-0"

UPPER BUILDING W/OUT LAYDOWN AREA

CONTAINMENT

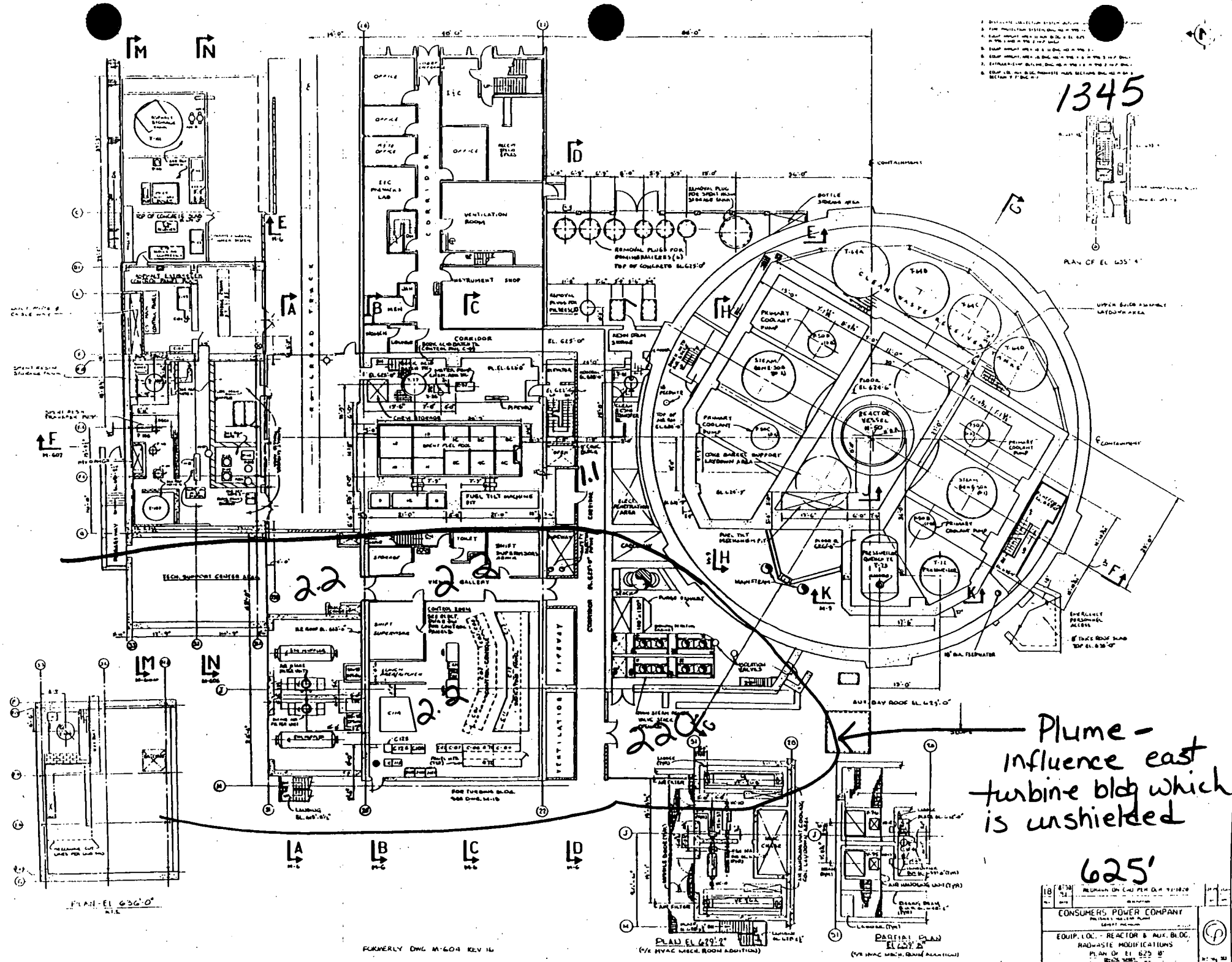
EMERGENCY PERSONNEL ACCESS

IF TRUCK ROOF SLAB TOP EL. 636'-0"

Plume - influence east turbine bldg which is unshielded

625'

18	625'	REVISIONS TO LAD PER D.W. 9/18/80
CONSUMERS POWER COMPANY		
EQUIP. LOC. - REACTOR & AUX. BLDG.		
RAIOWASTE MODIFICATIONS		
PLAN OF EL. 625'-0"		
BLOCK NO. 11		



PLAN-EL. 636'-0"

FORMERLY DWG. M-604 REV. 16

PLAN EL. 629'-2" (1/2 HVAC MECH. ROOM ADDITION)

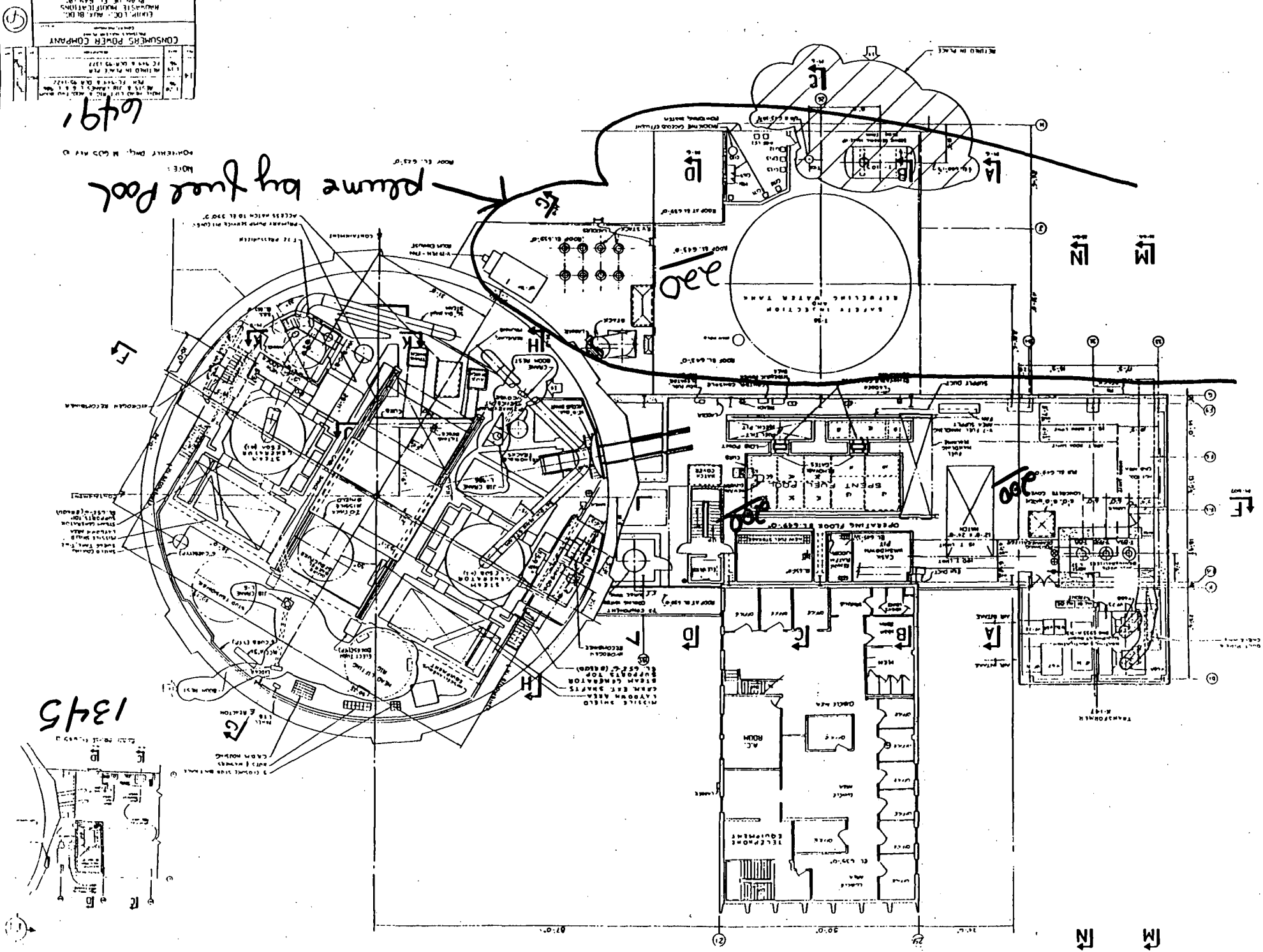
PARTIAL PLAN EL. 625'-0" (1/2 HVAC MECH. ROOM ADDITION)

CONSUMERS POWER COMPANY	DATE: 11/15/55
PROJECT: 100-100-100-100	SCALE: 1/4" = 1'-0"
DESIGNED BY: [Name]	CHECKED BY: [Name]
DATE: 11/15/55	PROJECT NO: 100-100-100-100
BY: [Name]	FOR: [Name]

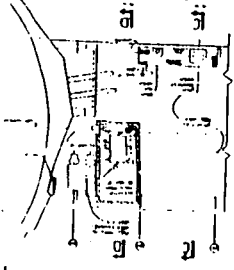
6491

NOTE: POWERED BY: M 605 RAY D.

Passage by fuel pool



1345





STEAM GENERATOR TUBE RUPTURE  
PRELIMINARY AREA SURVEY

**NOTE:** Extendable probe type instrument should be used for surveys.

1. Blowdown Filter F-14 contact reading at floor grating above  
Blowdown Filter:

*Steaming*  
mRem/hr \*

LOCATION: 625' Turbine Building about 25' NE Of Main Turbine Pedestal

2. Main Steam Lines above Turbine Building East Mezzanine:

a. North Steam Line (from 'B' S/G)

*Steam plume*  
Contact mRem/hr \*

b. South Steam Line (from 'A' S/G)

Contact mRem/hr \*

LOCATION: By Instrument Air Dryer about 9' above floor grating,

3. Flash Tank T-29A:

*shine from jail house*  
Contact mRem/hr     

LOCATION: 590' Turbine Building, Northeast next to stairs by "jail house"  
doors.

*use room reading*

4. Off gas line:

Contact mRem/hr 2.4

LOCATION: Above Condensate Pump Pit,  
590' Turbine Building

5. Indicate the direction of travel and location of any steam plumes  
from the Turbine Building:

*Steam cloud coming out of jailhouse window.*  
*Vision poor. Steam being drawn out by roof*  
*exhauster up stair well and other penetrations.*

6. *#* Use room reading ÷ 10 in plume  
Return survey to Shift Supervisor.

Completed By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_ (SS)



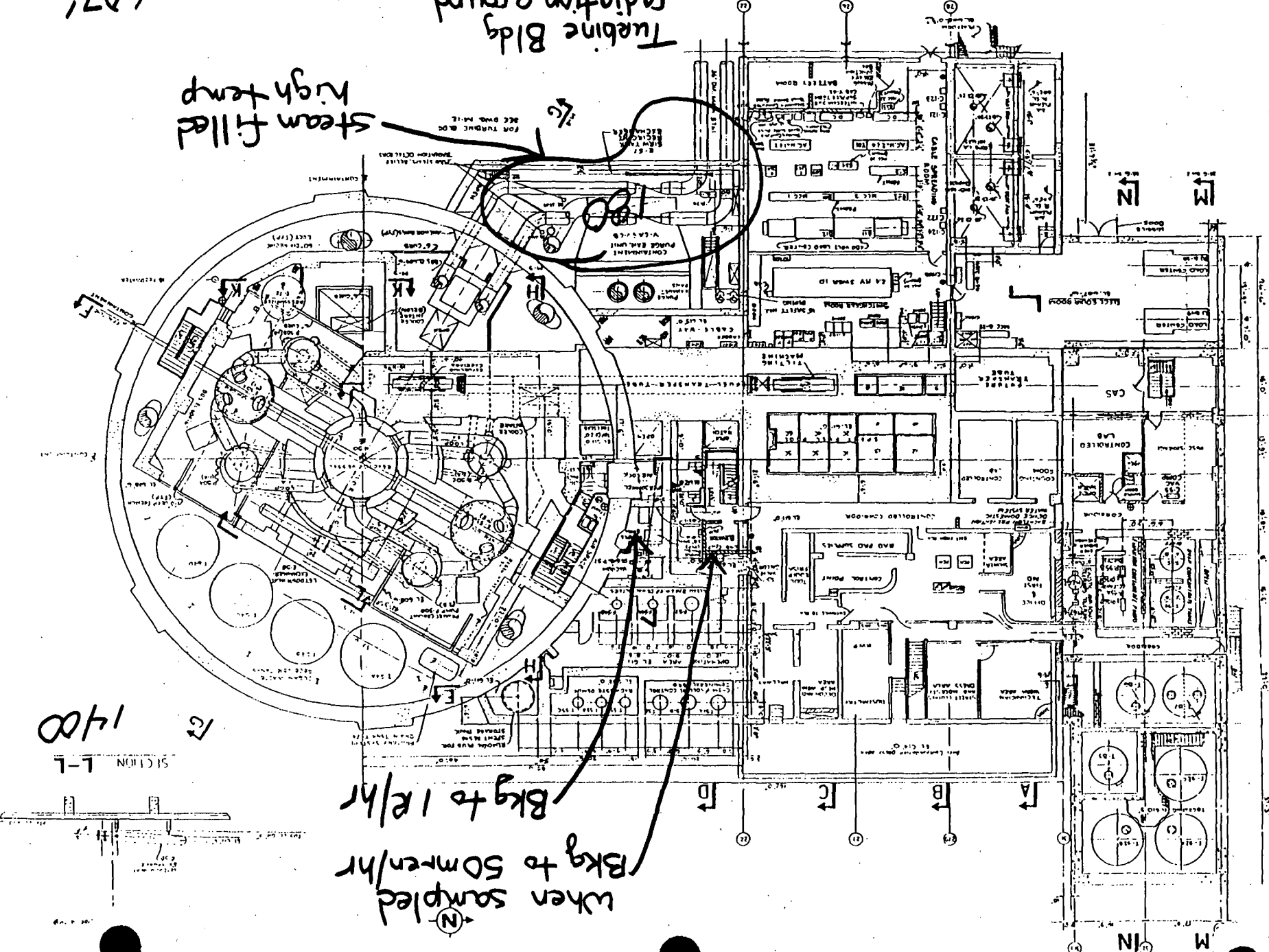
CONSUMERS POWER COMPANY  
PLANT OR INDUSTRIAL FACILITY  
EARTHQUAKE LOCATION DATA SHEET AND  
REACTOR OR INDUSTRIAL FACILITY

THIS DRAWING WAS FORMERLY  
M 603 REV. 12

6071

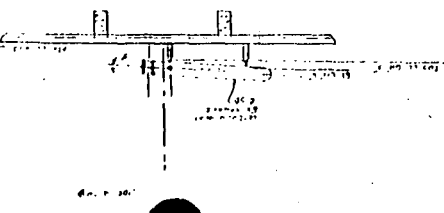
Turbine Bldg  
radiation around  
you! window -  
contamination on  
east turbine bldg

Steam filled  
high temp



1400

SECTION T-1



↑ N

↑ N

↑ N

1. DETAIL OF COLLECTION SYSTEM...
2. FINE PARTICULATE SYSTEM...
3. EQUIPMENT ROOM...
4. EQUIPMENT ROOM...
5. EQUIPMENT ROOM...
6. EQUIPMENT ROOM...
7. EQUIPMENT ROOM...
8. EQUIPMENT ROOM...

1400

PLAN OF EL. 635'-0"

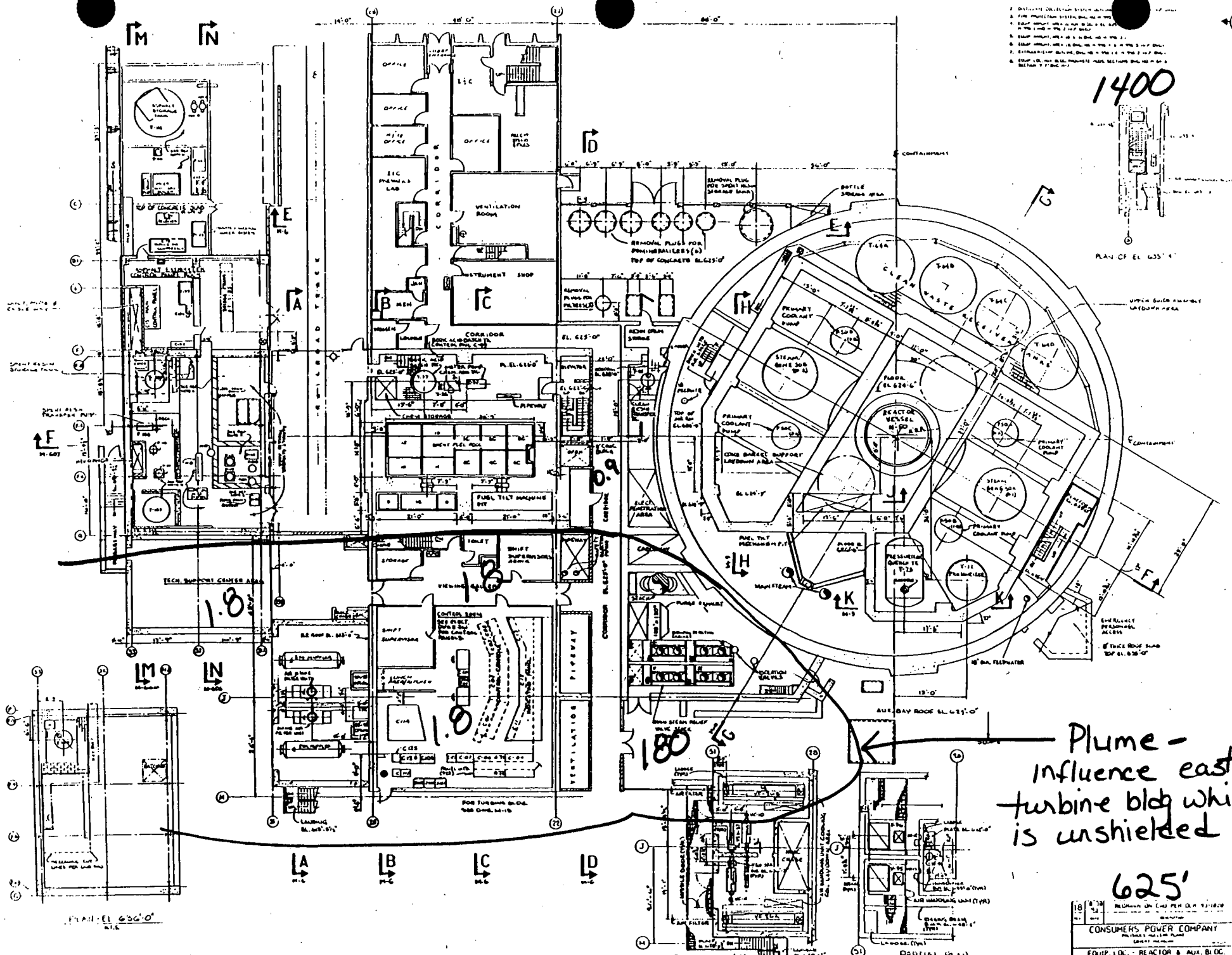
UPPER BUILT-UP AREA  
LAYOUT AREA

CONTAINMENT

180

Plume - influence east turbine bldg which is unshielded

625'



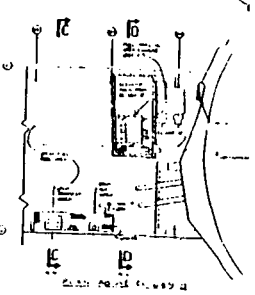
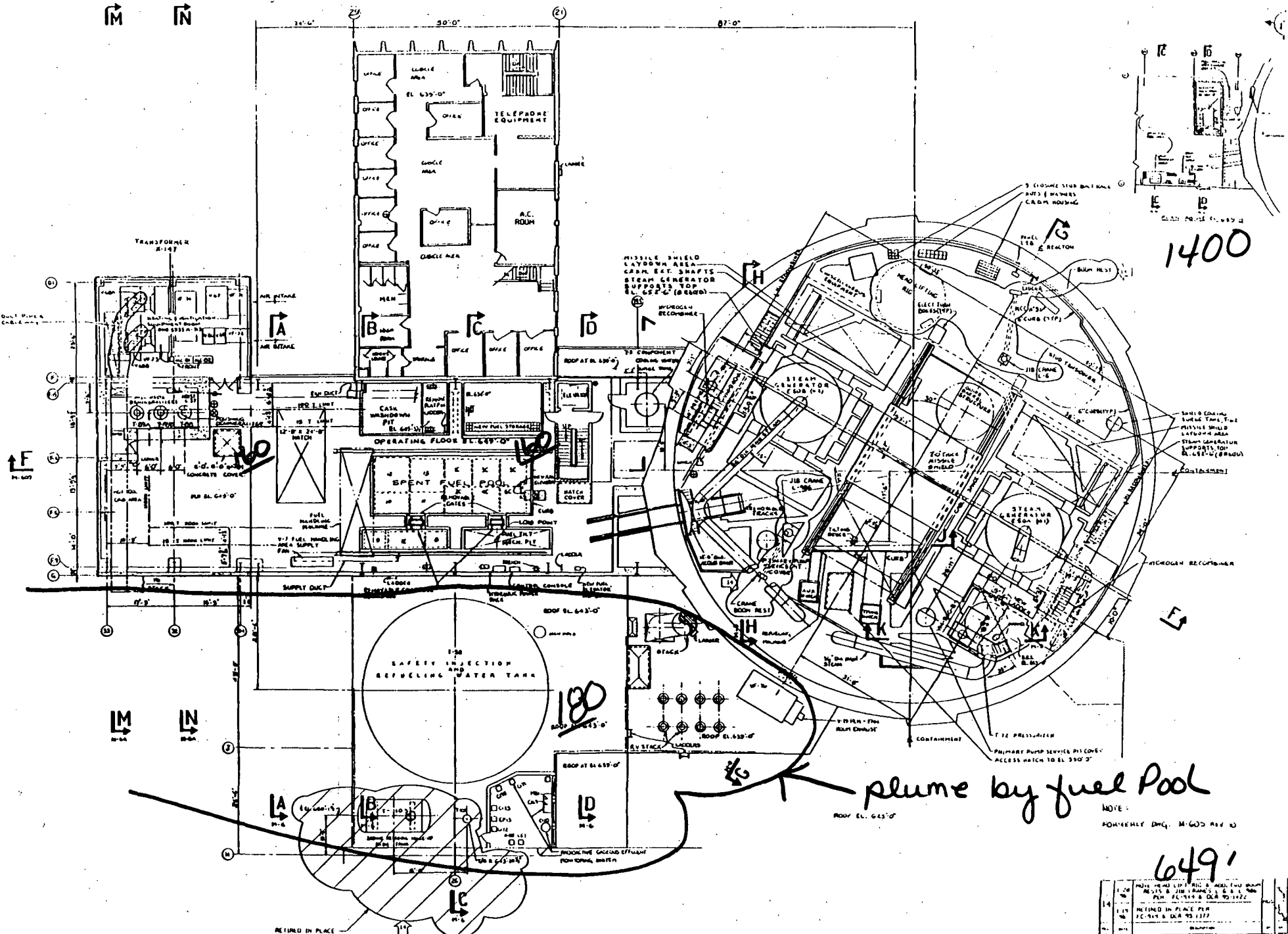
PLAN EL. 636'-0"

FORMERLY DWG. M-604 REV. 14

PLAN EL. 629'-0"  
(1/2" HVAC MECH. ROOM ADDITION)

REACTOR PLAN  
EL. 625'-0"  
(1/2" HVAC MECH. ROOM ADDITION)

18	7/2	REVISION ON DWG. PER D.C. 10/10/68
17	7/2	REVISION ON DWG. PER D.C. 10/10/68
CONSUMERS POWER COMPANY		
EQUIP. LOC. - REACTOR & AUX. BLDG.		
RADWASTE MODIFICATIONS		
PLAN OF EL. 625'-0"		
BLACK W/HT		
M 4		



1400

180

plume by fuel pool

NOTE:  
FORMERLY Dwg. M-603 REV D

649'

1.20	PLANS FOR THE REACTOR AND THE FUEL POOL
1.21	REACTOR AND FUEL POOL
1.22	REACTOR AND FUEL POOL
1.23	REACTOR AND FUEL POOL
1.24	REACTOR AND FUEL POOL
1.25	REACTOR AND FUEL POOL
1.26	REACTOR AND FUEL POOL
1.27	REACTOR AND FUEL POOL
1.28	REACTOR AND FUEL POOL
1.29	REACTOR AND FUEL POOL
1.30	REACTOR AND FUEL POOL
1.31	REACTOR AND FUEL POOL
1.32	REACTOR AND FUEL POOL
1.33	REACTOR AND FUEL POOL
1.34	REACTOR AND FUEL POOL
1.35	REACTOR AND FUEL POOL
1.36	REACTOR AND FUEL POOL
1.37	REACTOR AND FUEL POOL
1.38	REACTOR AND FUEL POOL
1.39	REACTOR AND FUEL POOL
1.40	REACTOR AND FUEL POOL
1.41	REACTOR AND FUEL POOL
1.42	REACTOR AND FUEL POOL
1.43	REACTOR AND FUEL POOL
1.44	REACTOR AND FUEL POOL
1.45	REACTOR AND FUEL POOL
1.46	REACTOR AND FUEL POOL
1.47	REACTOR AND FUEL POOL
1.48	REACTOR AND FUEL POOL
1.49	REACTOR AND FUEL POOL
1.50	REACTOR AND FUEL POOL

CONSUMERS POWER COMPANY

EQUIP. LOC. - AREA B/D/C  
WASTEWATER TREATMENT  
PLAN UP EL. 644'-0"

LEGEND AND CONTROLLERS NOTES

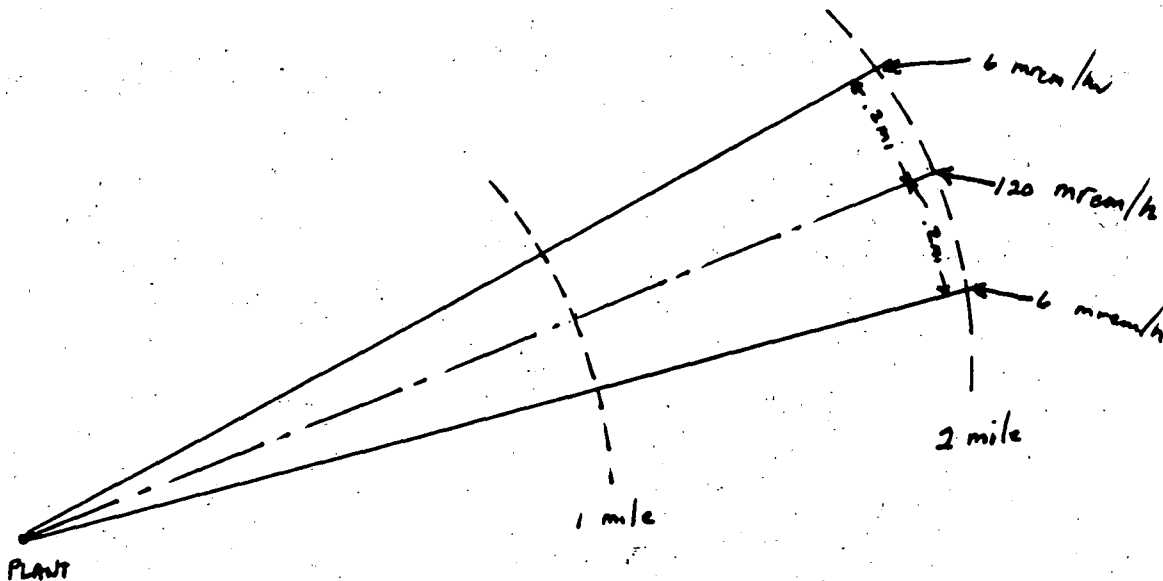
EXAMPLE

6-120-6 MREM\H

\* I2 42K OCPM b

\* I2 370K OCPM f

MREM\H ARE CLOSED WINDOW BETA\GAMMA READING AT THE EDGE, CENTERLINE AND EDGE OF THE PLUME. WIDTH OF PLUME IS 0.1 X DISTANCE FROM PLANT ON EACH SIDE OF CENTERLINE. FOR OPEN WINDOWS USE CLOSED WINDOW + 10% IN THE PLUME.



I2 42K OCPM b IS THE OBSERVED NET CPM FOR A 5 CFM AIR SAMPLE AT CENTERLINE OF PLUME ON THE BACK OF THE FILTER CARTRIDGE. BACKGROUND WILL NEED TO BE ADDED. USE 0-8 HOUR DEFAULT VALUES FOR EFFICIENCIES INSTEAD OF THE TABLE.

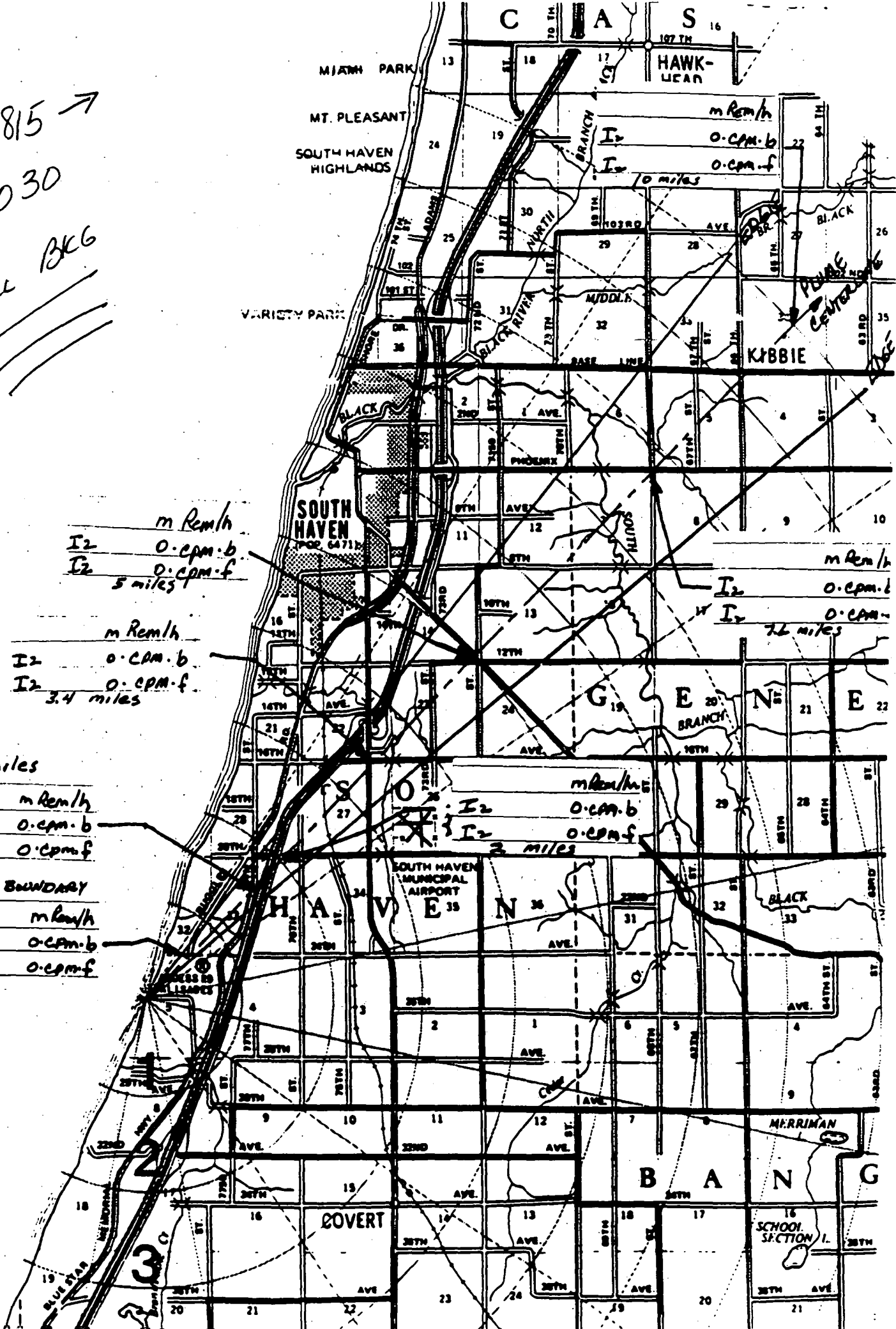
I2 360K OCPM f IS THE OBSERVED NET CPM FOR SAME SAMPLE ON THE FRONT OF THE CARTRIDGE.

THE BACK OF FILTER CARTRIDGE IS THE PREFERRED METHOD.

Divide I2 readings by 2

0815 →  
1030

ALL BCG  
/ / / /



m Rem/h  
I<sub>2</sub> 0.cpm.b  
I<sub>2</sub> 0.cpm.f  
5 miles

m Rem/h  
I<sub>2</sub> 0.cpm.b  
I<sub>2</sub> 0.cpm.f  
3.4 miles

1.6 miles

m Rem/h  
I<sub>2</sub> 0.cpm.b  
I<sub>2</sub> 0.cpm.f

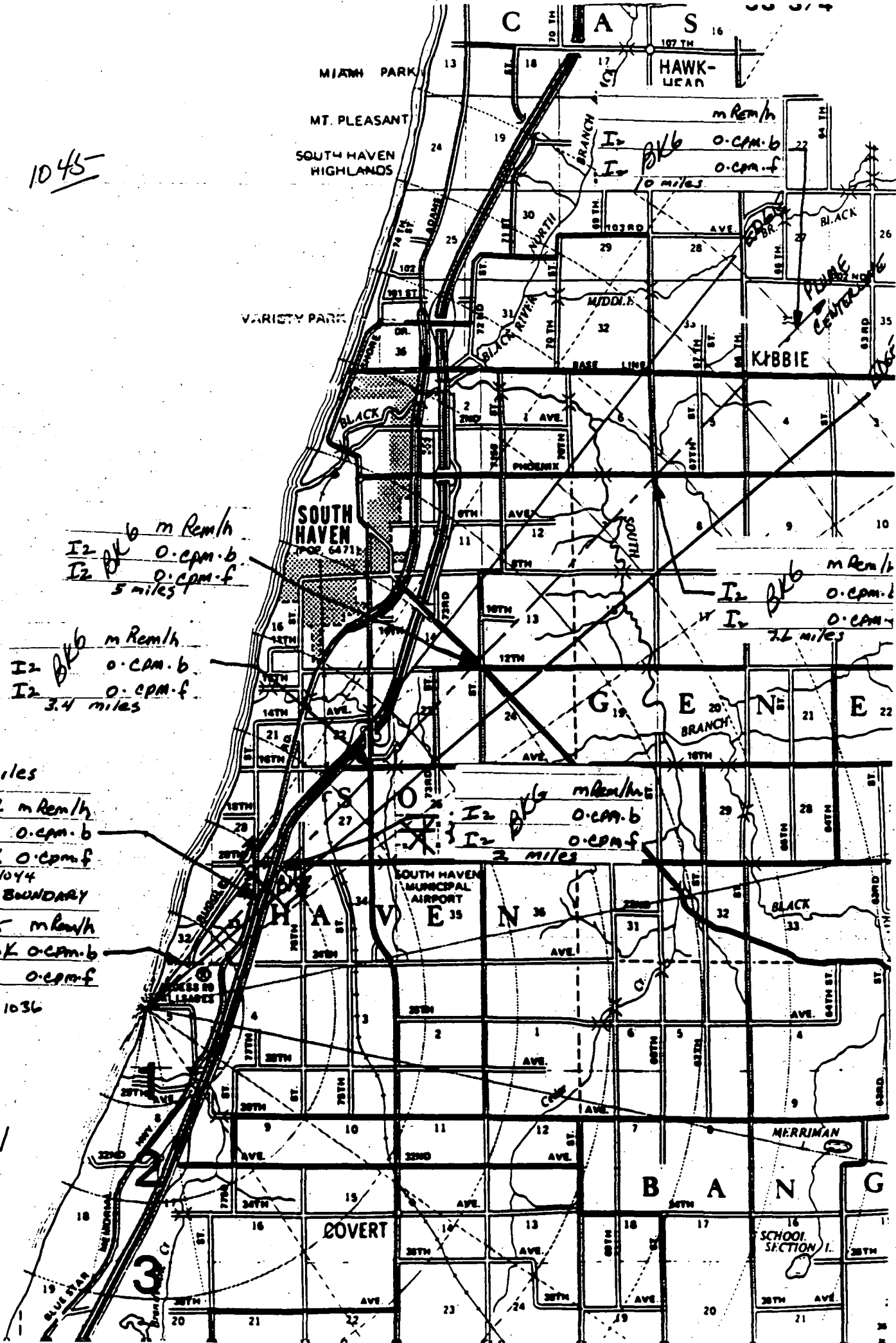
SITE BOUNDARY

m Rem/h  
I<sub>2</sub> 0.cpm.b  
I<sub>2</sub> 0.cpm.f

m Rem/h  
I<sub>2</sub> 0.cpm.b  
I<sub>2</sub> 0.cpm.f  
2 miles

m Rem/h  
I<sub>2</sub> 0.cpm.b  
I<sub>2</sub> 0.cpm.f  
7.6 miles

1045



I2 <sup>b</sup> m Rem/h  
 I2 <sup>pk</sup> 0.cpm.b  
 I2 <sup>pk</sup> 0.cpm.f  
 5 miles

I2 <sup>pk</sup> m Rem/h  
 I2 <sup>pk</sup> 0.cpm.b  
 I2 <sup>pk</sup> 0.cpm.f  
 3.4 miles

1.6 miles

2-33-2 m Rem/h  
 I2 18K 0.cpm.b  
 I2 320K 0.cpm.f  
 arrive 1044  
 SITE BOUNDARY

5-100-5 m Rem/h  
 I2 62.8K 0.cpm.b  
 I2 0.5M 0.cpm.f  
 arrive @ 1036

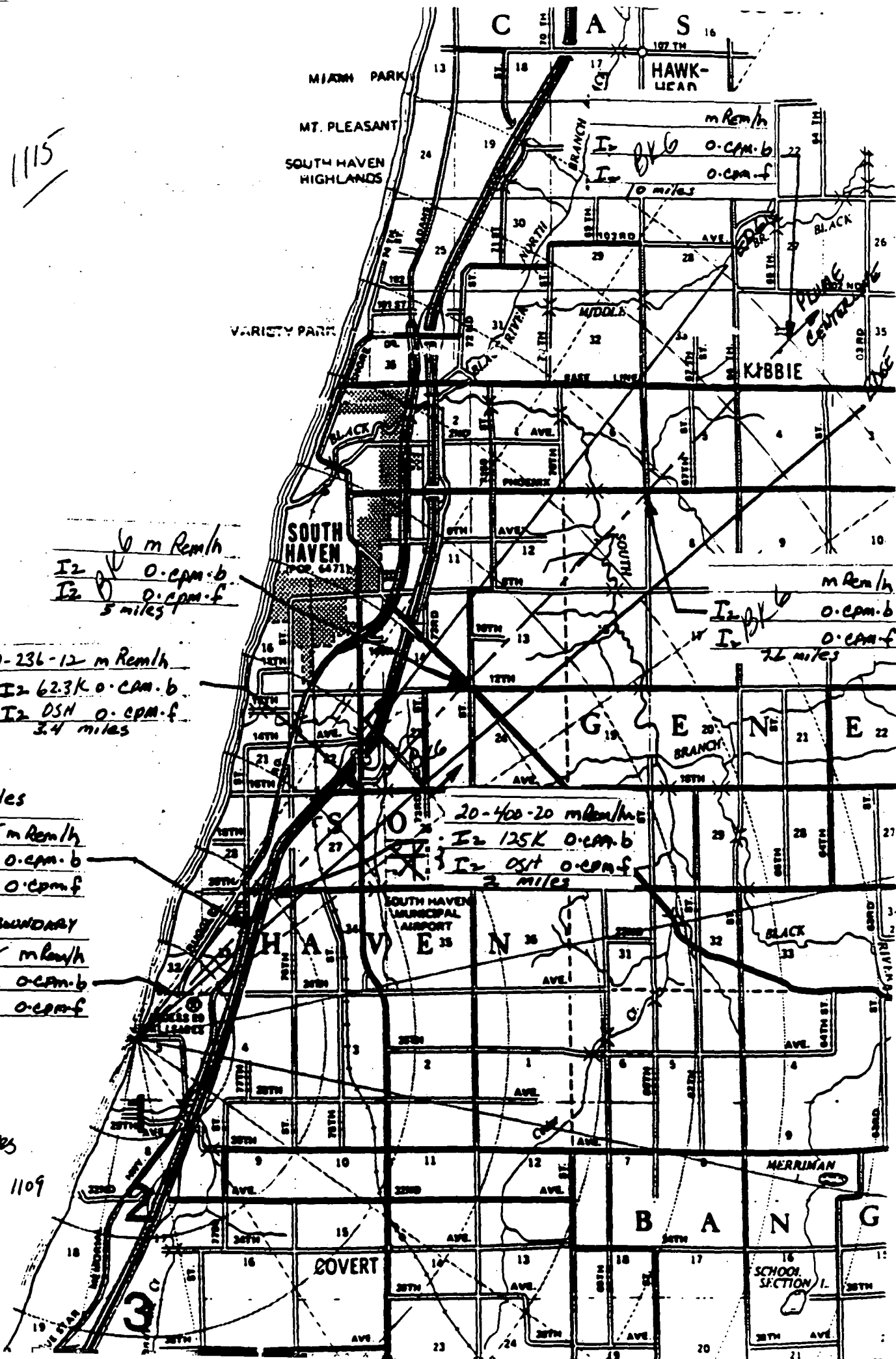
I2 <sup>pk</sup> m Rem/h  
 I2 <sup>pk</sup> 0.cpm.b  
 I2 <sup>pk</sup> 0.cpm.f  
 3 miles

plume travel  
 17 miles





1115



6 m Rem/h  
 I<sub>2</sub> 0.0pm.b  
 I<sub>2</sub> 0.0pm.f  
 5 miles

12-236-12 m Rem/h  
 I<sub>2</sub> 62.3K 0.0pm.b  
 I<sub>2</sub> 0.5H 0.0pm.f  
 3.4 miles

1.6 miles

25-495-25 m Rem/h  
 I<sub>2</sub> 195K 0.0pm.b  
 I<sub>2</sub> 0.5H 0.0pm.f

SITE BOUNDARY

75-1500-75 m Rem/h  
 I<sub>2</sub> 420K 0.0pm.b  
 I<sub>2</sub> 0.5H 0.0pm.f

20-400-20 m Rem/h  
 I<sub>2</sub> 125K 0.0pm.b  
 I<sub>2</sub> 0.5H 0.0pm.f  
 2 miles

m Rem/h  
 I<sub>2</sub> 0.0pm.b  
 I<sub>2</sub> 0.0pm.f  
 7.6 miles

plume arrives  
 @ 4 miles @ 1109

Plume travel  
 3.95 miles

1130

15-290-15 m Rem/h  
I2 62K 0.cpm.b  
I2 05H 0.cpm.f  
5 miles

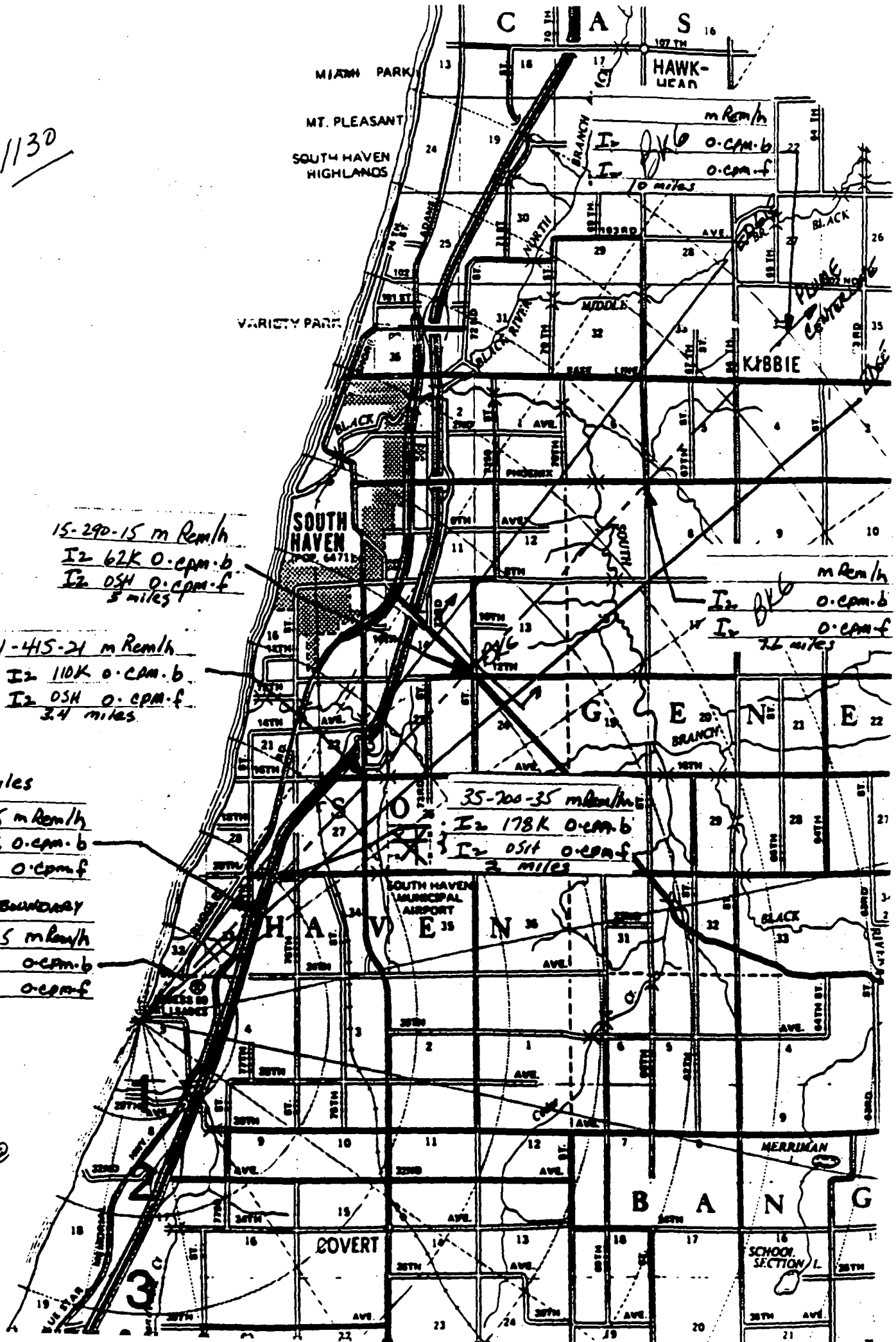
21-415-21 m Rem/h  
I2 110K 0.cpm.b  
I2 05H 0.cpm.f  
2.4 miles

1.6 miles  
45-890-45 m Rem/h  
I2 330K 0.cpm.b  
I2 05H 0.cpm.f

SITE BOUNDARY  
135-2700-135 m Rem/h  
I2 05H 0.cpm.b  
I2 05H 0.cpm.f

35-700-35 m Rem/h  
I2 178K 0.cpm.b  
I2 05H 0.cpm.f  
2 miles

Plume arrives @  
1127  
Plume travel  
5.2 miles



1145

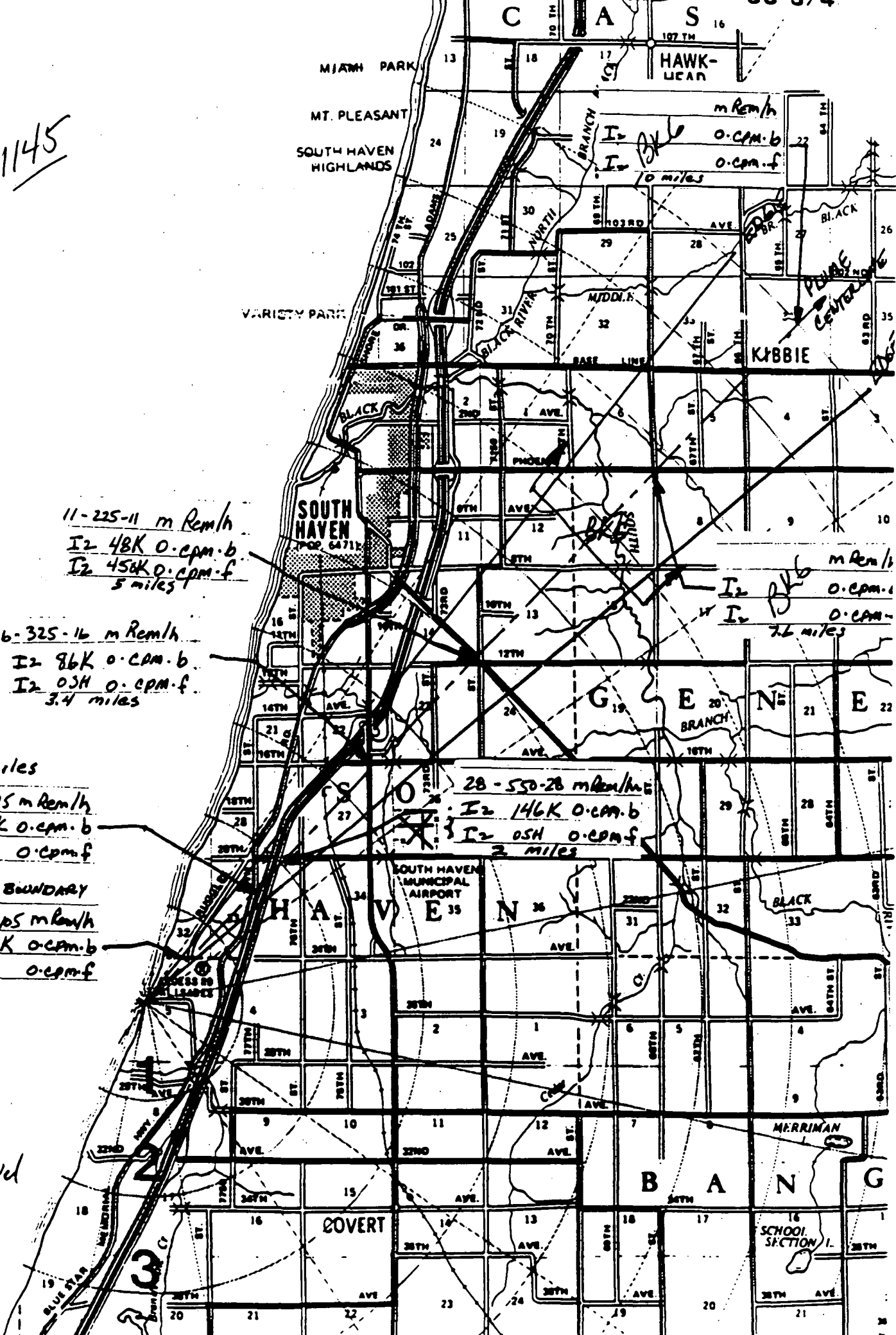
11-225-11 m Rem/h  
I2 48K 0.cpm.b  
I2 45K 0.cpm.f  
5 miles

16-325-16 m Rem/h  
I2 86K 0.cpm.b  
I2 03H 0.cpm.f  
3.4 miles

1.6 miles  
35-690-35 m Rem/h  
I2 260K 0.cpm.b  
I2 03H 0.cpm.f

SITE BOUNDARY  
105-2100-05 m Rem/h  
I2 462K 0.cpm.b  
I2 03H 0.cpm.f

One travel  
6.1 miles



m Rem/h  
I2 0.cpm.b  
I2 0.cpm.f  
10 miles

28-550-28 m Rem/h  
I2 146K 0.cpm.b  
I2 03H 0.cpm.f  
2 miles

SCHOOL SECTION I

1200

9-185-9 m Rem/h  
I2 40K O.cpm.b  
I2 427K O.cpm.f  
5 miles

13-265-13 m Rem/h  
I2 70K O.cpm.b  
I2 OSH O.cpm.f  
3.4 miles

1.6 miles  
28-560-28 m Rem/h  
I2 212K O.cpm.b  
I2 OSH O.cpm.f

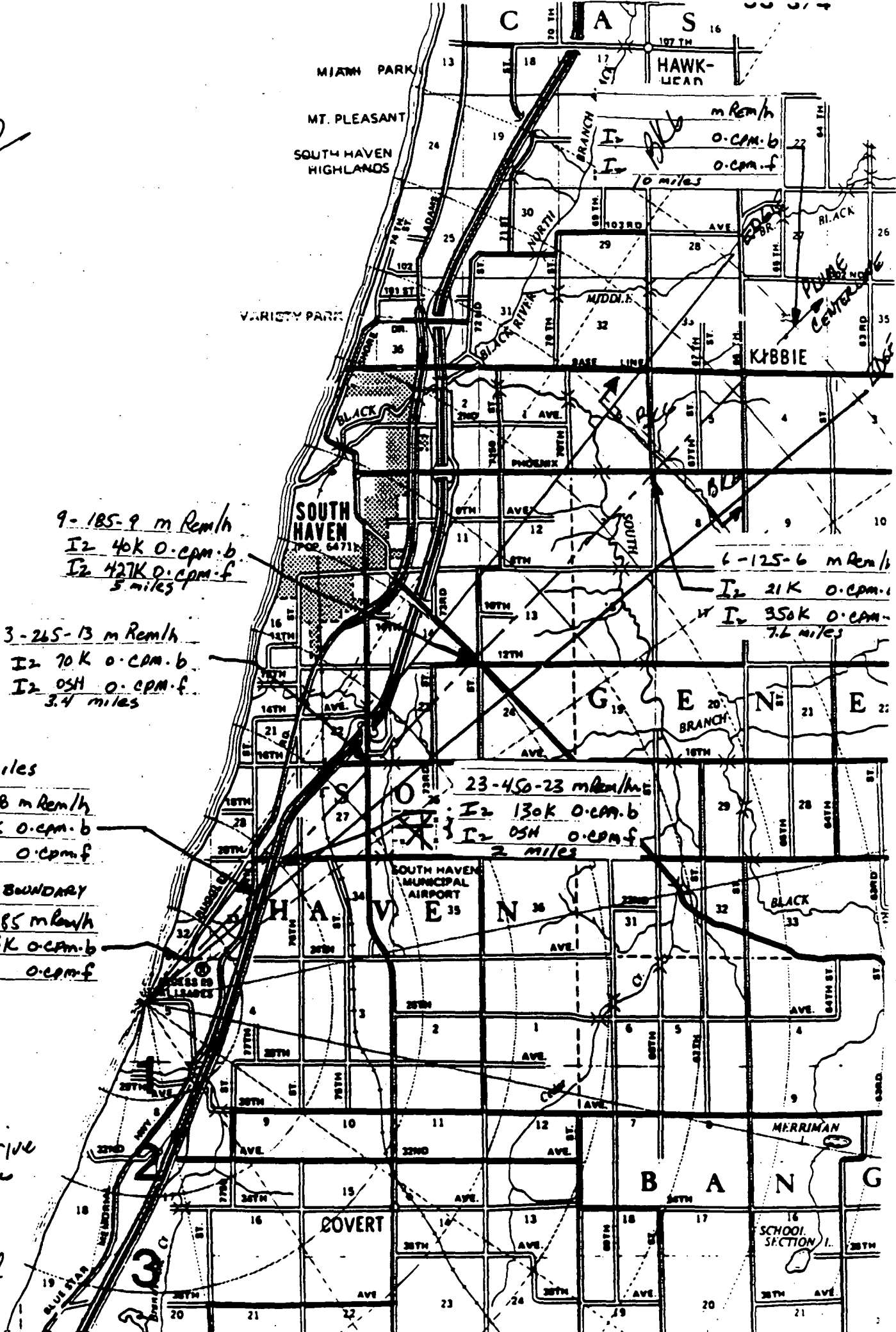
SITE BOUNDARY  
85-1700-85 m Rem/h  
I2 433K O.cpm.b  
I2 OSH O.cpm.f

23-450-23 m Rem/h  
I2 130K O.cpm.b  
I2 OSH O.cpm.f  
2 miles

6-125-6 m Rem/h  
I2 21K O.cpm.b  
I2 350K O.cpm.f  
7.6 miles

Plume arrive  
7.6 miles  
1156

Plume travel  
7.95 miles



1215

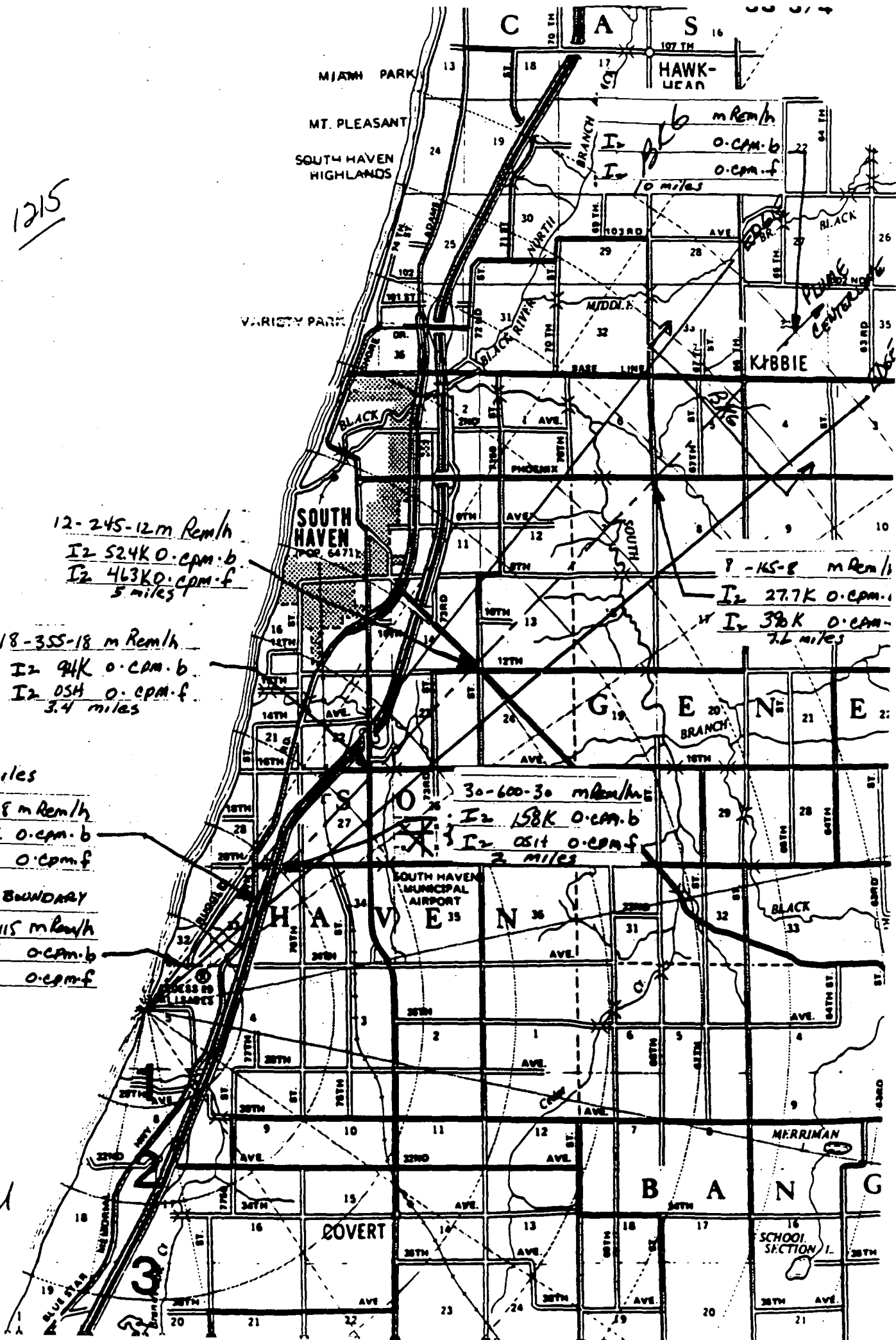
12-245-12 m Rem/h  
I2 524K 0.cpm.b  
I2 463K 0.cpm.f  
5 miles

18-355-18 m Rem/h  
I2 94K 0.cpm.b  
I2 0SH 0.cpm.f  
3.4 miles

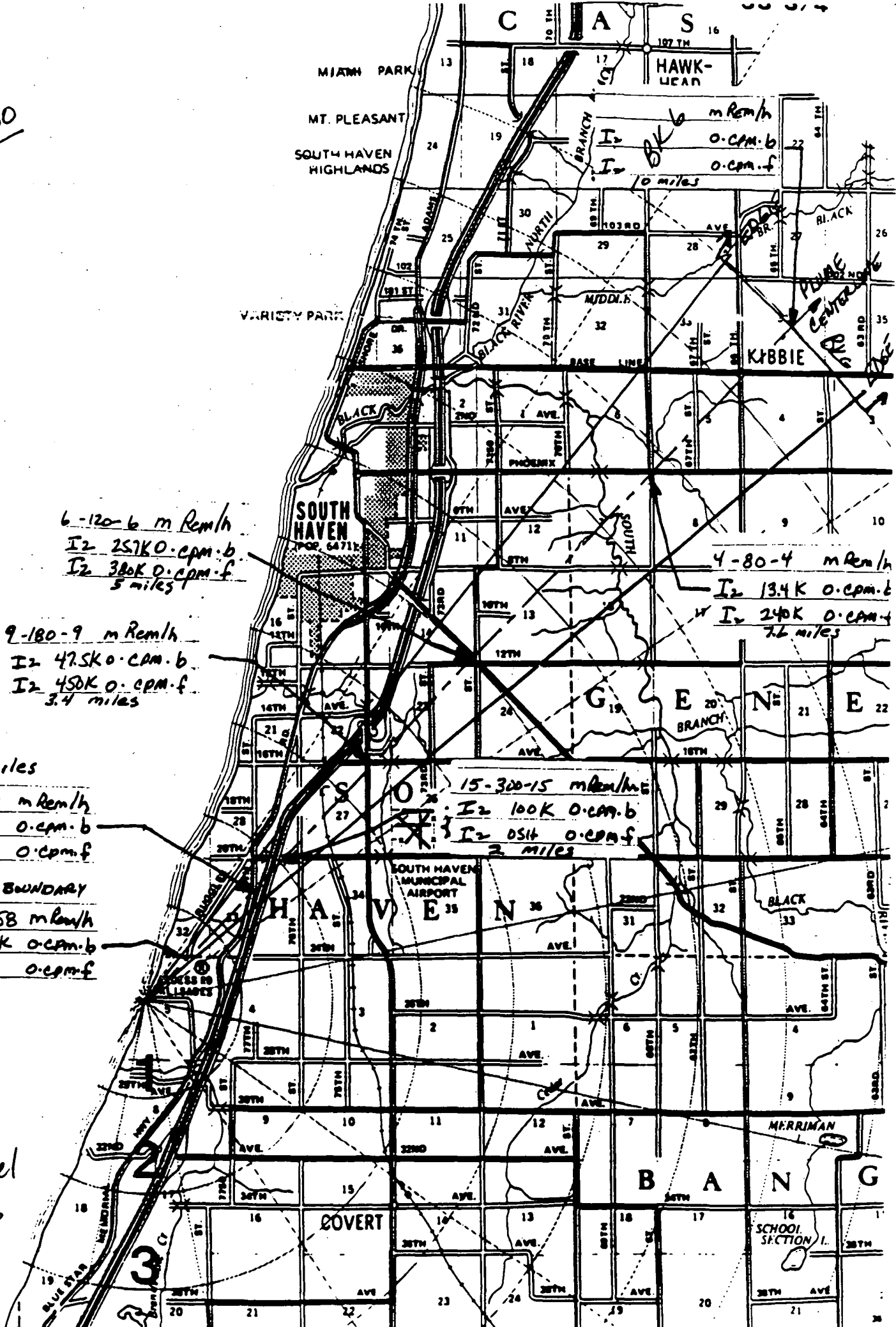
1.6 miles  
38-760-38 m Rem/h  
I2 295K 0.cpm.b  
I2 0SH 0.cpm.f

SITE BOUNDARY  
115-2300-115 m Rem/h  
I2 0SH 0.cpm.b  
I2 0SH 0.cpm.f

Plane travel  
8.7 miles



1230



6-120-6 m Rem/h  
 I2 257K O.C.M.b  
 I2 380K O.C.M.f  
 5 miles

9-180-9 m Rem/h  
 I2 475K O.C.M.b  
 I2 450K O.C.M.f  
 3.4 miles

1.6 miles

19-380-19 m Rem/h  
 I2 165K O.C.M.b  
 I2 05H O.C.M.f

SITE BOUNDARY

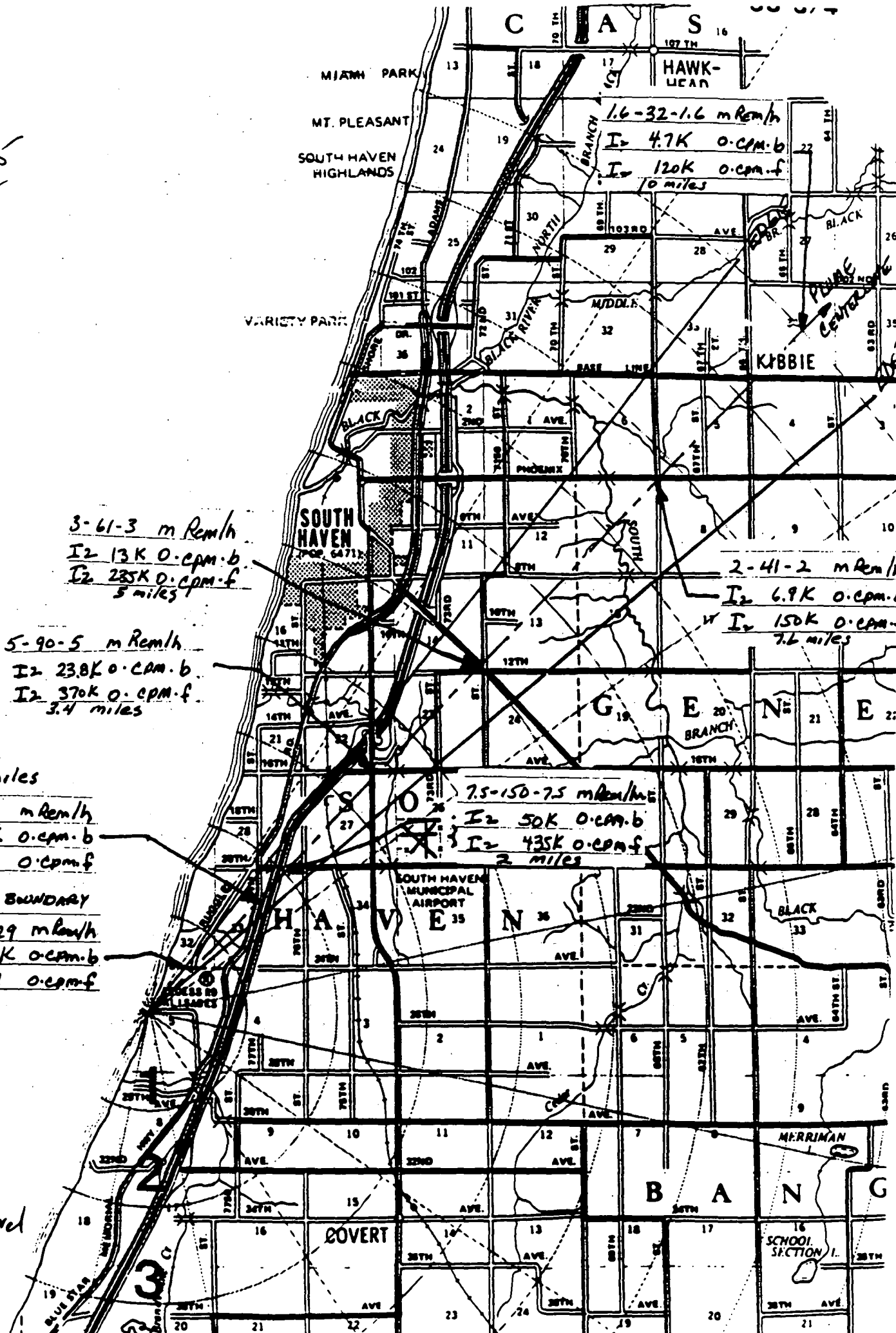
58-1150-58 m Rem/h  
 I2 390K O.C.M.b  
 I2 05H O.C.M.f

15-300-15 m Rem/h  
 I2 100K O.C.M.b  
 I2 05H O.C.M.f  
 2 miles

4-80-4 m Rem/h  
 I2 134K O.C.M.b  
 I2 240K O.C.M.f  
 7.6 miles

Travel  
 9.95 miles

1245



3-61-3 m Rem/h  
 I2 13K O.cpm.b  
 I2 285K O.cpm.f  
 5 miles

5-90-5 m Rem/h  
 I2 238K O.cpm.b  
 I2 370K O.cpm.f  
 3.4 miles

1.6 miles  
 9-188-9 m Rem/h  
 I2 102K O.cpm.b  
 I2 0SH O.cpm.f

SITE BOUNDARY  
 29-570-29 m Rem/h  
 I2 250K O.cpm.b  
 I2 0SH O.cpm.f

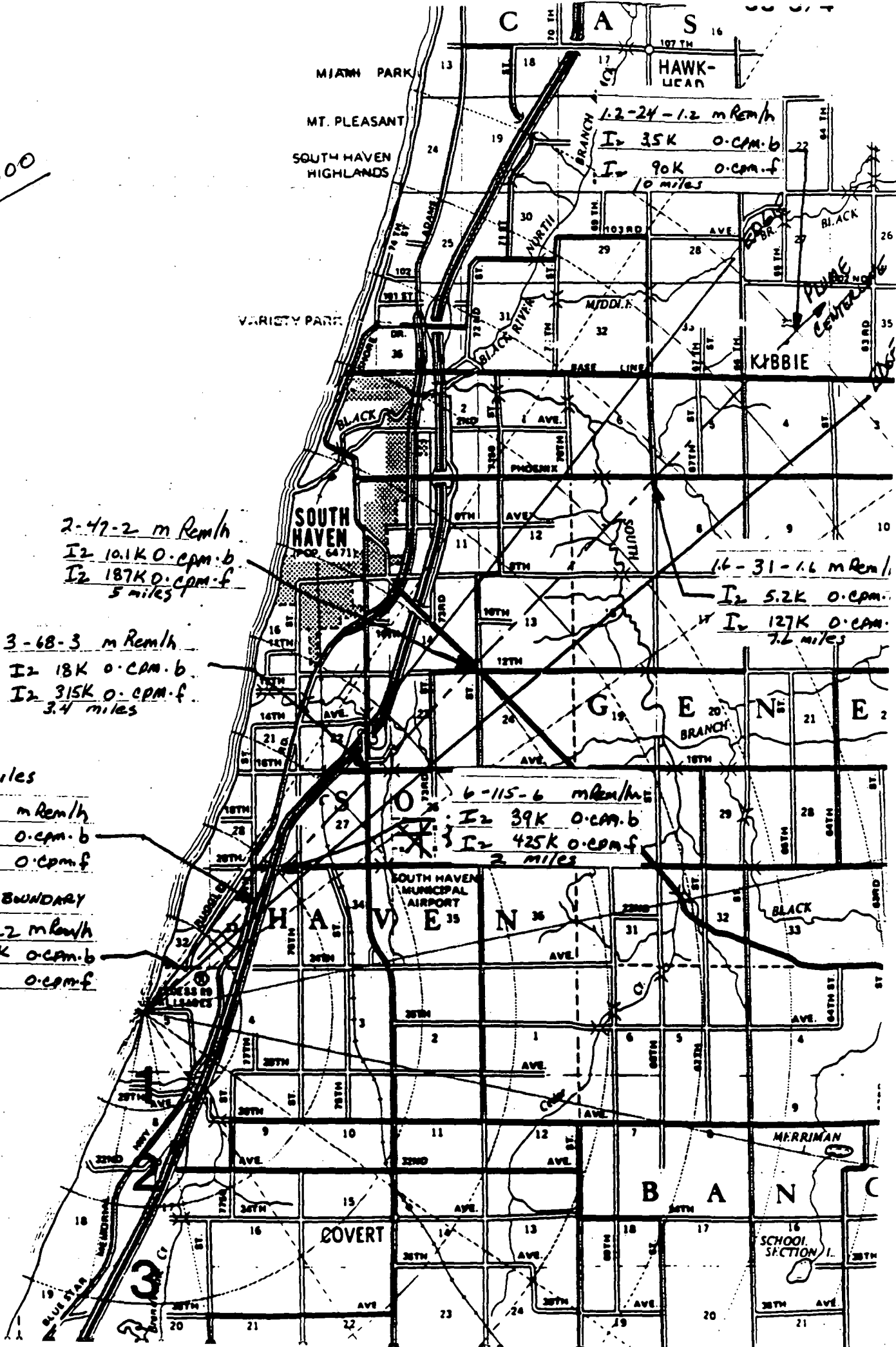
7.5-150-7.5 m Rem/h  
 I2 50K O.cpm.b  
 I2 435K O.cpm.f  
 2 miles

2-41-2 m Rem/h  
 I2 6.9K O.cpm.b  
 I2 150K O.cpm.f  
 7.6 miles

Volume travel  
 11.95 miles



1300



2-47-2 m Rem/h  
 I2 10.1K 0.cpm.b  
 I2 187K 0.cpm.f  
 5 miles

3-68-3 m Rem/h  
 I2 18K 0.cpm.b  
 I2 315K 0.cpm.f  
 3.4 miles

1.6 miles  
 7-145-7 m Rem/h  
 I2 79K 0.cpm.b  
 I2 05H 0.cpm.f

SITE BOUNDARY  
 22-440-22 m Rem/h  
 I2 200K 0.cpm.b  
 I2 05H 0.cpm.f

6-115-6 m Rem/h  
 I2 39K 0.cpm.b  
 I2 425K 0.cpm.f  
 2 miles

1.4-31-1.6 m Rem/h  
 I2 5.2K 0.cpm.  
 I2 127K 0.cpm.  
 7.6 miles

1315

2-47-2 m Rem/h  
I2 10.1K O.cpm.b  
I2 187K O.cpm.f  
5 miles

3-68-5 m Rem/h  
I2 18K O.cpm.b  
I2 315K O.cpm.f  
3.4 miles

1.6 miles

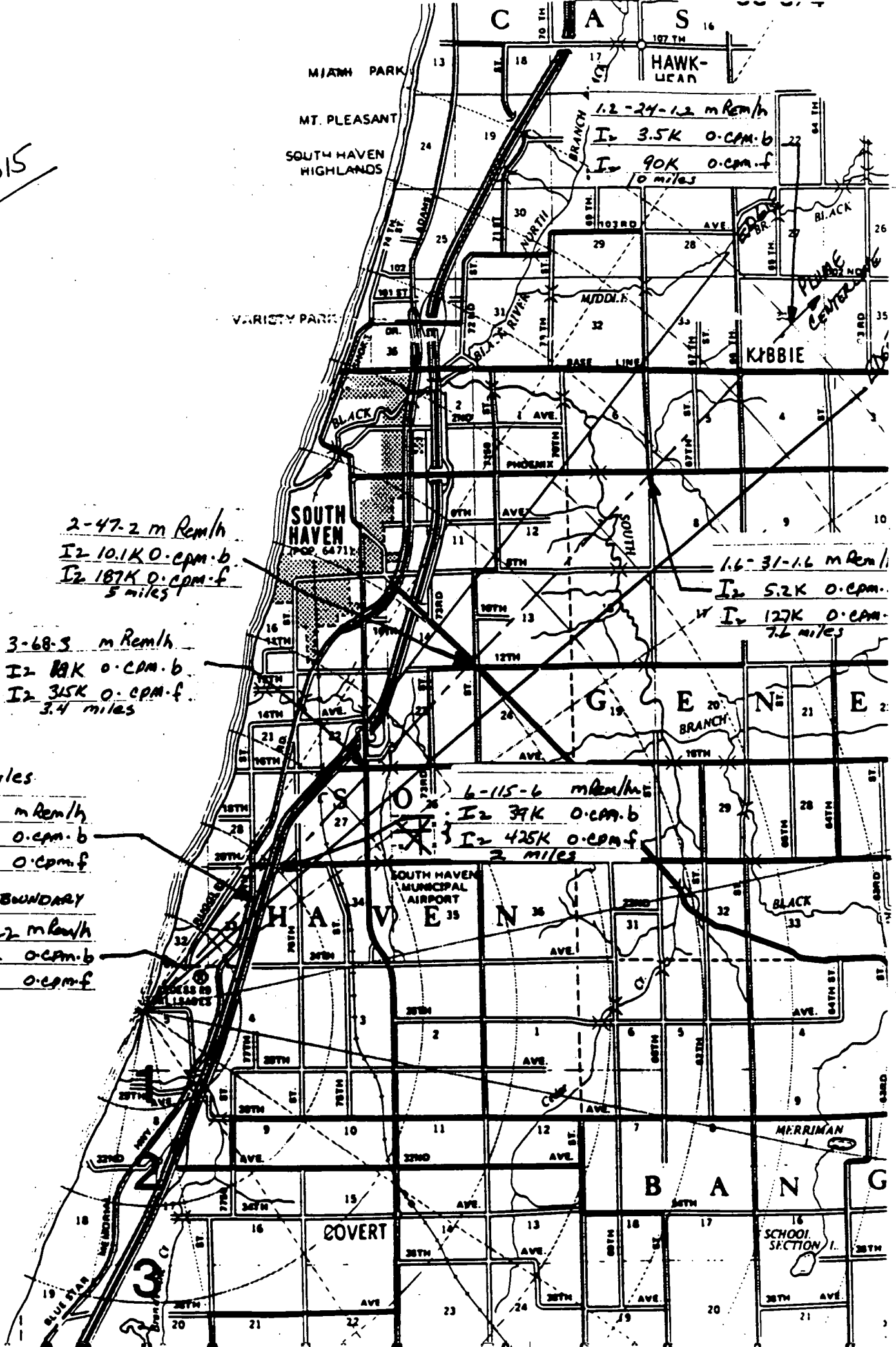
7-145-7 m Rem/h  
I2 79K O.cpm.b  
I2 05H O.cpm.f

SITE BOUNDARY

22-440-22 m Rem/h  
I2 200K O.cpm.b  
I2 05H O.cpm.f

1.6-31-1.6 m Rem/h  
I2 52K O.cpm.  
I2 127K O.cpm.  
7.6 miles

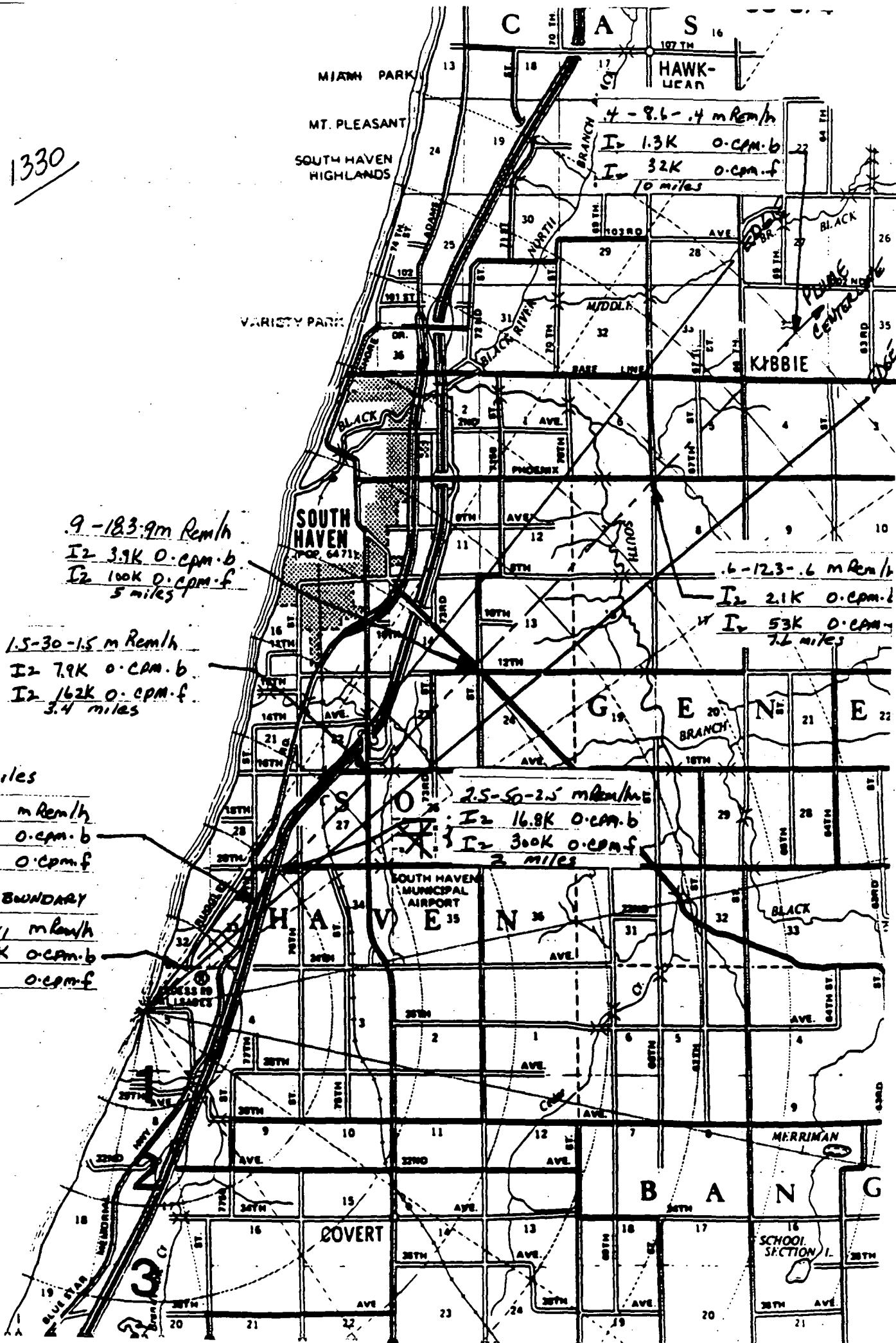
6-115-6 m Rem/h  
I2 39K O.cpm.b  
I2 425K O.cpm.f  
2 miles



3

SCHOOL SECTION I.

1330



9-183.9m Rem/h  
 I2 3.9K 0.cpm.b  
 I2 100K 0.cpm.f  
 5 miles

1.5-30-1.5 m Rem/h  
 I2 7.9K 0.cpm.b  
 I2 162K 0.cpm.f  
 3.4 miles

1.6 miles

4-75-4 m Rem/h  
 I2 40.9 0.cpm.b  
 I2 430K 0.cpm.f

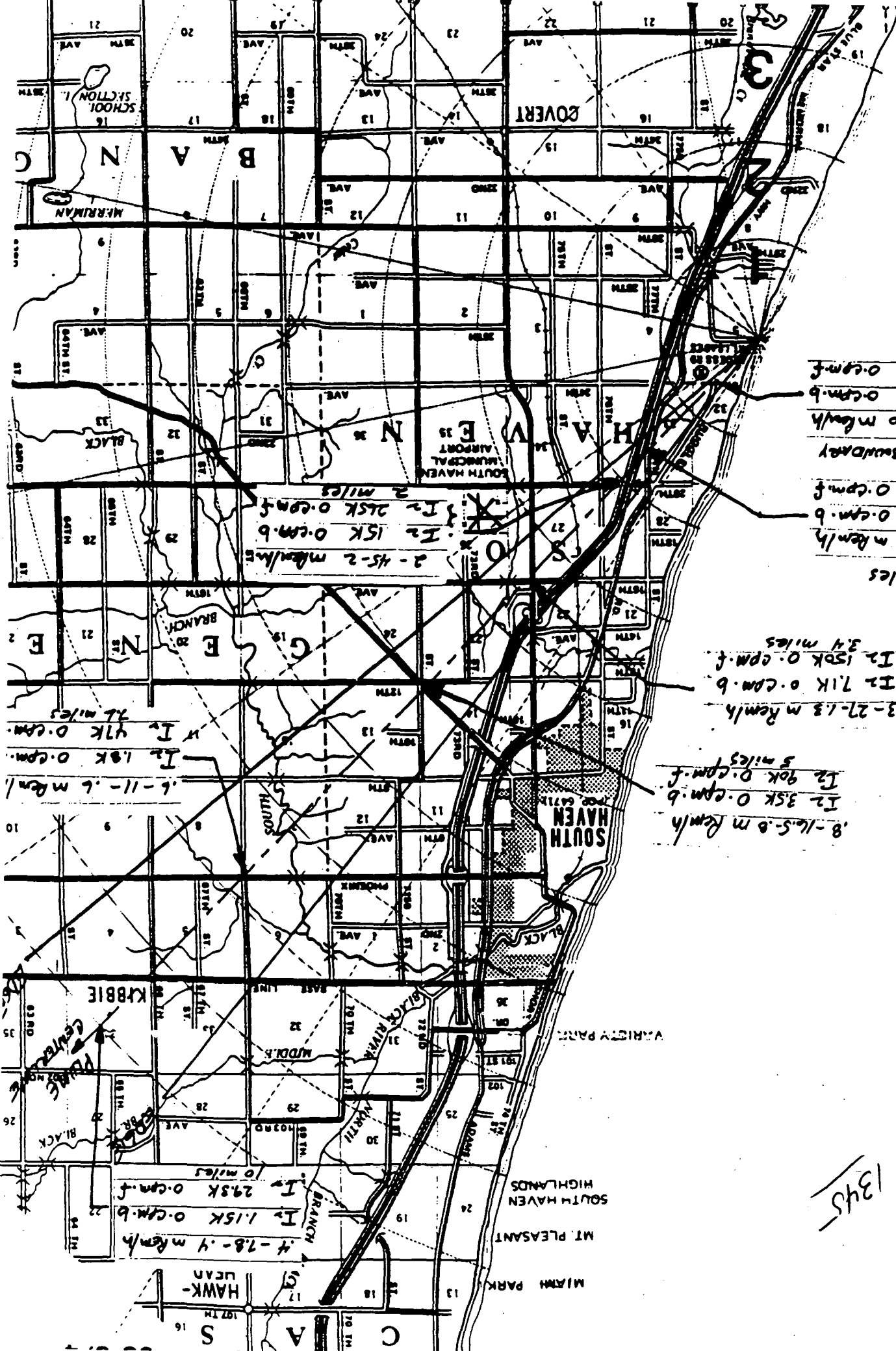
SITE BOUNDARY

11-226-11 m Rem/h  
 I2 132K 0.cpm.b  
 I2 0.5K 0.cpm.f

2.5-50-2.5 m Rem/h  
 I2 16.8K 0.cpm.b  
 I2 300K 0.cpm.f  
 2 miles

6-123-.6 m Rem/h  
 I2 2.1K 0.cpm.b  
 I2 53K 0.cpm.f  
 7.6 miles

4-8.6-.4 m Rem/h  
 I2 1.3K 0.cpm.b  
 I2 32K 0.cpm.f  
 10 miles



1.6 miles  
 3-67-3 m Rem/h  
 I 36.5 0.0pm.b  
 I 40K 0.0pm.f  
 SITE BOUNDARY  
 10-204-10 m Rem/h  
 I 122K 0.0pm.b  
 I 2 054 0.0pm.f

13-27-13 m Rem/h  
 I 7.1K 0.0pm.b  
 I 150K 0.0pm.f  
 3.4 miles

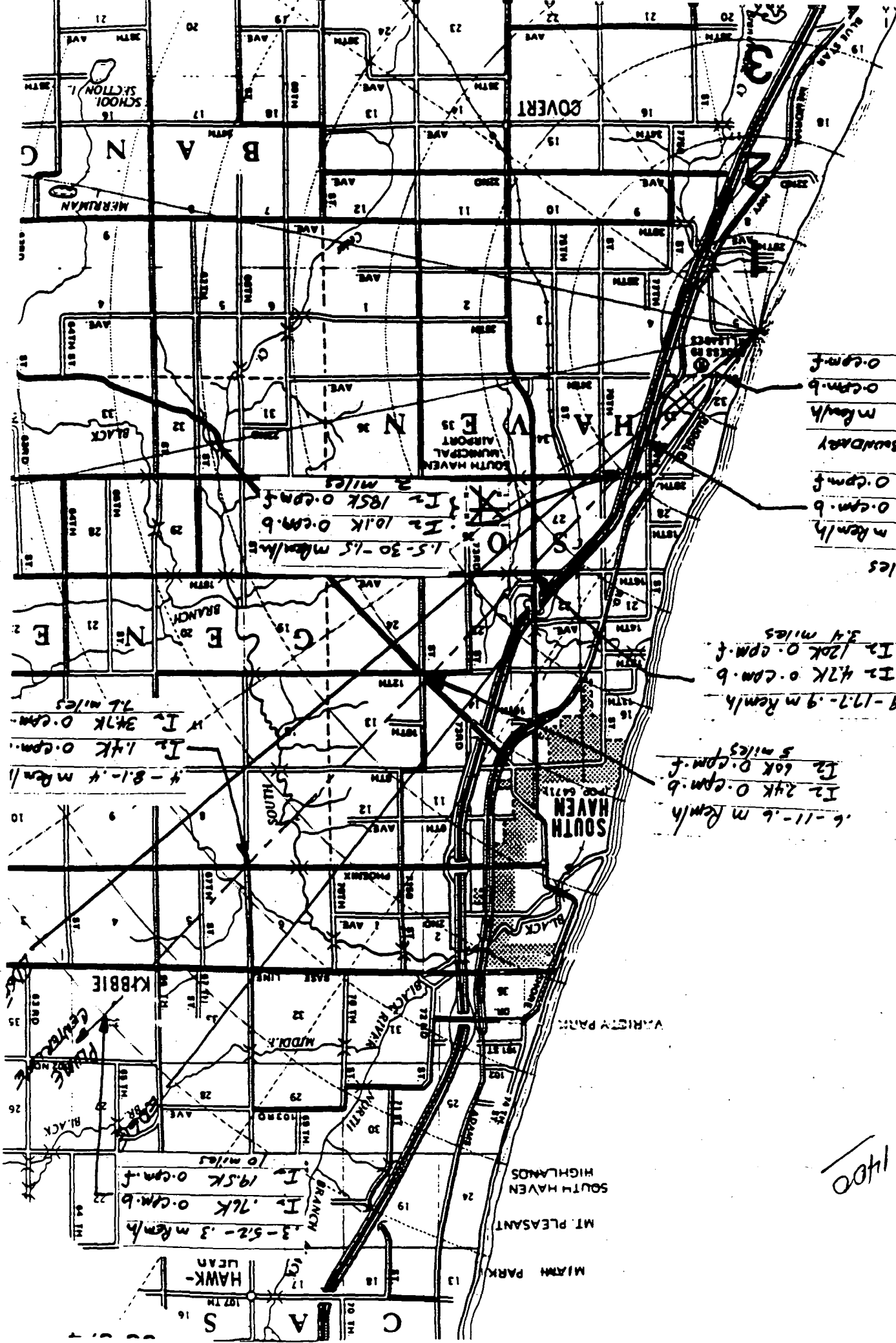
8-16.5-8 m Rem/h  
 I 35K 0.0pm.b  
 I 90K 0.0pm.f  
 5 miles

2-45-2 m Rem/h  
 I 15K 0.0pm.b  
 I 25K 0.0pm.f  
 2 miles

6-11-6 m Rem/h  
 I 1.9K 0.0pm.f  
 I 47K 0.0pm.f  
 7.6 miles

4-78-4 m Rem/h  
 I 1.15K 0.0pm.b  
 I 295K 0.0pm.f  
 10 miles

1345



I2 05H 0.0cm.f  
 I2 854 0.0cm.b  
 7-136-7 m Rem/h  
 SITE BOUNDARY  
 I2 375K 0.0cm.f  
 I2 24.5 0.0cm.b  
 2.2-45-2.2 m Rem/h  
 1.6 miles

I2 47K 0.0cm.b  
 9-177-9 m Rem/h  
 I2 120K 0.0cm.f  
 3.4 miles

I2 24K 0.0cm.b  
 I2 60K 0.0cm.f  
 5 miles  
 6-11-6 m Rem/h

I2 14K 0.0cm.f  
 I2 37K 0.0cm.f  
 7.6 miles  
 4-81-4 m Rem/h

I2 71K 0.0cm.b  
 I2 195K 0.0cm.f  
 10 miles  
 3-52-3 m Rem/h

1400

# ENVIRONMENTAL OVERVIEW

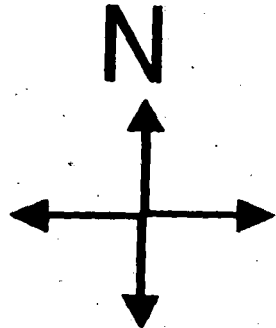
PAL  
10/22/76  
0800

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



METEOROLOGICAL TOWER

TEMPERATURE 3.0 deg C  
WIND SPEED 13 mph  
DIRECTION 227 degrees



PLANT

STACK GAS RADIATION

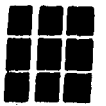
✓ cpm  
✓ cpm

SOOT GAS RADIATION

3900 cpm

CONTROL ROOM RADIATION

.10 mrem/hr



10/22/76

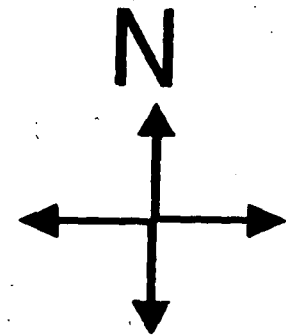
0815

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



### METEOROLOGICAL TOWER

TEMPERATURE 3.2 deg C  
 WIND SPEED 13 mph  
 DIRECTION 222 degrees



PLANT

### STACK GAS RADIATION

✓ cpm  
 ✓ cpm

### CHMT GAS RADIATION

3900 cpm

### CONTROL ROOM RADIATION

.10 mrem/hr



10/22/96

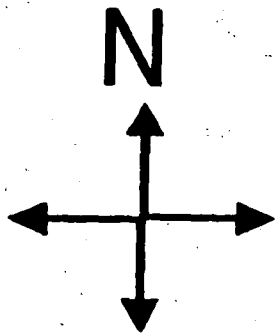
0830

LIQUID DISCHARGE RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



METEOROLOGICAL TOWER

TEMPERATURE	3.5	deg C
WIND SPEED	18	mph
DIRECTION	229	degrees



PLANT

STACK GAS RADIATION

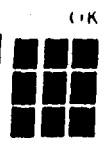
∨ cpm  
 ∨ cpm

CHMT GAS RADIATION

3900 cpm

CONTROL ROOM RADIATION

.10 mrem/hr





10/22/76

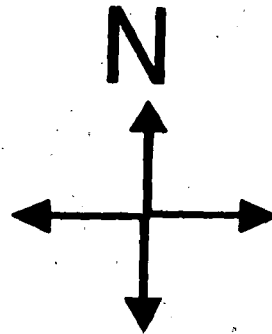
0845

LIQUID  
DISCHARGE  
ASSOCIATION

454 cpm

HI RAD

LAKE MICHIGAN



METEOROLOGICAL TOWER

TEMPERATURE	3.5	deg C
WIND SPEED	22	mph
DIRECTION	221	degrees

STACK GAS RADIATION

V	cpm
V	cpm

UNMT GAS RADIATION

3900 cpm

PLANT

CONTROL ROOM RADIATION

.10 mrem/hr

CFMS

F7 ENVIRON  
MENU

F8

F9 METEOR-  
OLOGICAL

F10 RADIO-  
LOGICAL

F11

F12

F13

F14

F15

RESET



OK

10/22/96

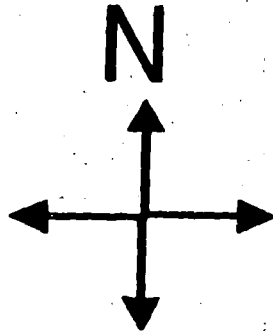
0900

LIQUID  
DISCHARGE  
ASSOCIATION

454 cpm

HI RAD

LAKE MICHIGAN



### METEOROLOGICAL TOWER

TEMPERATURE 3.7 deg C  
 WIND SPEED 19 mph  
 DIRECTION 219 degrees



PLANT

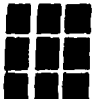
### STACK GAS RADIATION

V cpm  
 Y cpm

### CONTROL ROOM RADIATION

.10 mrem/hr

3900 cpm



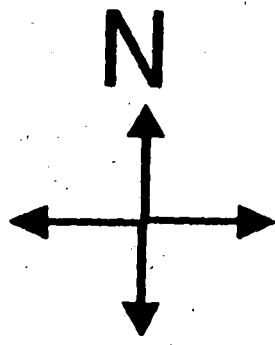
PAL  
10/22/96  
0915

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



### METEOROLOGICAL TOWER

TEMPERATURE	4.0	deg C
WIND SPEED	15	mph
DIRECTION	225	degrees

### STACK GAS RADIATION

✓	cpm
✓	cpm

### CONTROL ROOM RADIATION

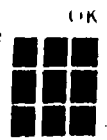
3900 cpm



PLANT

### CONTROL ROOM RADIATION

.10 mrem/hr



# ENVIRONMENTAL OVERVIEW

PAL

10/22/76

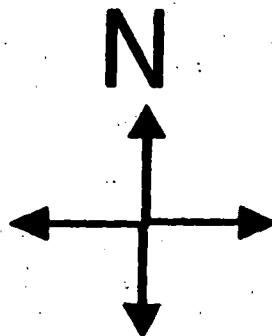
0930

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



## METEOROLOGICAL TOWER

TEMPERATURE	4.5	deg C
WIND SPEED	13	mph
DIRECTION	230	degrees

## STACK GAS RADIATION

V	cpm
V	cpm

## UNIT GAS RADIATION

3900 cpm

PLANT

CONTROL ROOM RADIATION

.10 mrem/hr

CFMS

ENVIRON  
MENU

METEOR-  
LOGICAL

RADIO-  
LOGICAL

F11

F12

F13

F14

F15

0000

OK

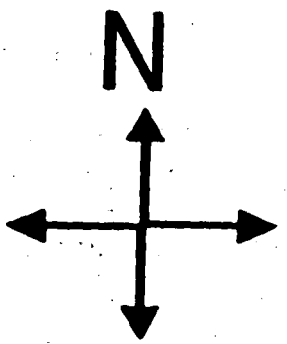


1410070  
0945

UID  
CHARGE  
RADIATION  
454 cpm

MI RAD

KE MICHIGAN



METEOROLOGICAL TOWER  
TEMPERATURE 4.6 deg C  
WIND SPEED 15 mph  
DIRECTION 224 degrees



PLANT

STACK GAS RADIATION  
V cpm  
V cpm

ENVT GAS RADIATION  
3900 cpm

CONTROL ROOM RADIATION  
.10 rem/hr

10/22/96

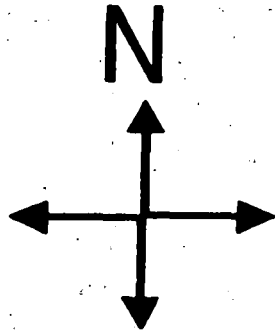
1000

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



### METEOROLOGICAL TOWER

TEMPERATURE	4.9	deg C
WIND SPEED	12	mph
DIRECTION	219	degrees

### STACK GAS RADIATION

V	cpm
V	cpm

### UNIT GAS RADIATION

3900 cpm



PLANT

CONTROL ROOM RADIATION

.10 mrem/hr

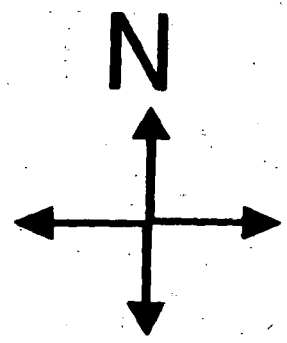
10/22/76  
1015

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



METEOROLOGICAL TOWER

TEMPERATURE 5.2 deg C  
WIND SPEED 8 mph  
DIRECTION 224 degrees



PLANT

STACK GAS RADIATION

V cpm  
V cpm

CONTROL ROOM RADIATION

.10 mrem/hr

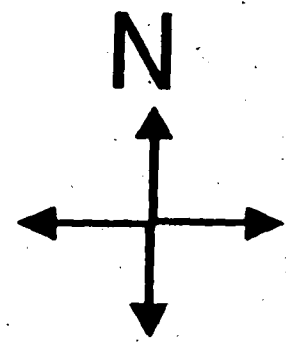
3900 cpm



LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD



### METEOROLOGICAL TOWER

TEMPERATURE	5.5	deg C
WIND SPEED	9	mph
DIRECTION	223	degrees

LAKE MICHIGAN



PLANT

### STACK GAS RADIATION

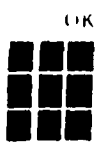
∇	cpm
∇	cpm

### ENVIRONMENTAL GAS RADIATION

3900 cpm

### CONTROL ROOM RADIATION

.10 mrem/hr





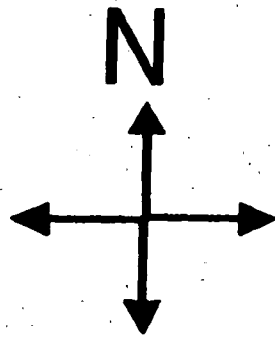
10/22/96  
1045

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



### METEOROLOGICAL TOWER

TEMPERATURE	6	deg C
WIND SPEED	7	mph
DIRECTION	221	degrees



PLANT

### STACK GAS RADIATION

✓	cpm
✓	cpm

### DNMT GAS RADIATION

3900 cpm

### CONTROL ROOM RADIATION

.54 mrem/hr



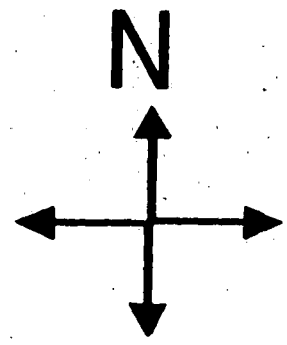
10/22/96  
1100

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



METEOROLOGICAL TOWER

TEMPERATURE 6.2 deg C  
WIND SPEED 5 mph  
DIRECTION 226 degrees



PLANT

STACK GAS RADIATION

V cpm  
V cpm

DNMT GAS RADIATION

3900 cpm

CONTROL ROOM RADIATION

.78 mrem/hr



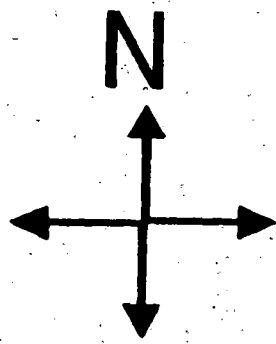
PAL  
10/22/76  
1115

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



METEOROLOGICAL TOWER

TEMPERATURE 6.8 deg C  
WIND SPEED 4 mph  
DIRECTION 227 degrees



PLANT

STACK GAS RADIATION

V cpm  
V cpm

CONTROL ROOM RADIATION

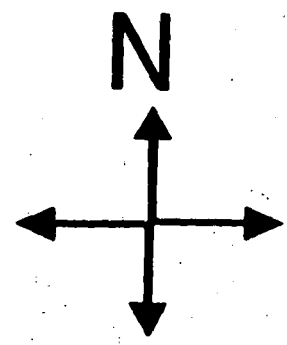
4.7 mrem/hr

3900 cpm



PAL  
10/22/96  
1130

LIQUID  
DISCHARGE  
RADIATION  
454 cpm  
HI RAD  
LAKE MICHIGAN



METEOROLOGICAL TOWER  
TEMPERATURE 7.1 deg C  
WIND SPEED 5 mph  
DIRECTION 223 degrees



PLANT

STACK GAS RADIATION  
V cpm  
Y cpm

DNMT GAS RADIATION  
3900 cpm

CONTROL ROOM RADIATION  
10.3 mrem/hr



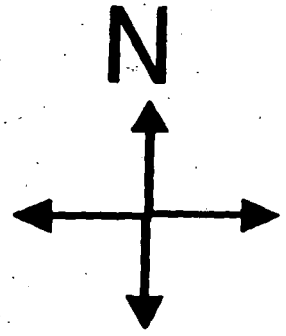
10/22/96

1145

GUIDE  
DISCHARGE  
STATION

454 cpm

H1 RAD



METEOROLOGICAL TOWER

TEMPERATURE 7.3 deg C  
 WIND SPEED 6 mph  
 DIRECTION 228 degrees

LAKE MICHIGAN



PLANT

STACK GAS RADIATION

∨ cpm  
 ∨ cpm

CHMT GAS RADIATION

3900 cpm

CONTROL ROOM RADIATION

9.7 mrem/hr

10/22/76

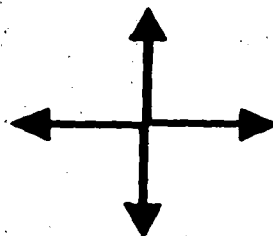
1200

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

N



METEOROLOGICAL TOWER

TEMPERATURE 7.3 deg C

WIND SPEED 5 mph

DIRECTION 225 degrees

LAKE MICHIGAN



PLANT

STACK GAS RADIATION

V cpm

V cpm

UNIT GAS RADIATION

3900 cpm

CONTROL ROOM RADIATION

6.6 mrem/hr

F5

F7 ENVIRON  
MENU

F8

F9 METEOR-  
LOGICAL

F10 RADIO-  
LOGICAL

F11

F12

F13

F14

F15

81211



OK

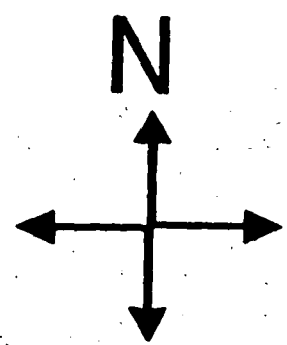
10/22/96  
1215

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



### METEOROLOGICAL TOWER

TEMPERATURE	7.5	deg C
WIND SPEED	3	mph
DIRECTION	229	degrees



PLANT

### STACK GAS RADIATION

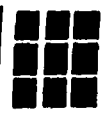
∨	cpm
∨	cpm

### UNMT GAS RADIATION

3900 cpm

### CONTROL ROOM RADIATION

5.3 mrem/hr



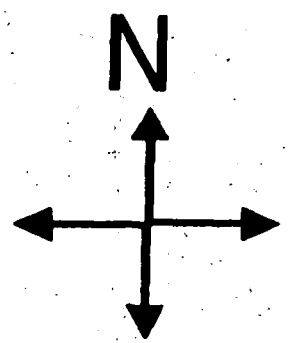
PAL  
10/22/76  
1230

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



METEOROLOGICAL TOWER

TEMPERATURE 8.2 deg C  
WIND SPEED 5 mph  
DIRECTION 225 degrees



PLANT

STACK GAS RADIATION

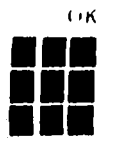
V cpm  
V cpm

ENVT GAS RADIATION

3900 cpm

CONTROL ROOM RADIATION

4.4 mrem/hr





10/22/96

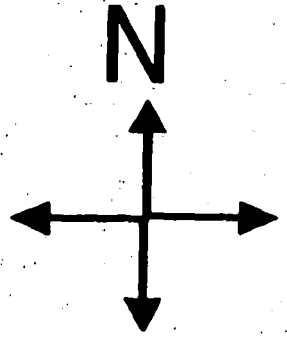
1245

LIQUID DISCHARGE RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



METEOROLOGICAL TOWER

TEMPERATURE 8.5 deg C

WIND SPEED 8 mph

DIRECTION 223 degrees

STACK GAS RADIATION

V cpm

V cpm

CONT GAS RADIATION

3900 cpm



PLANT

CONTROL ROOM RADIATION

3.5 mrem/hr

10/22/96

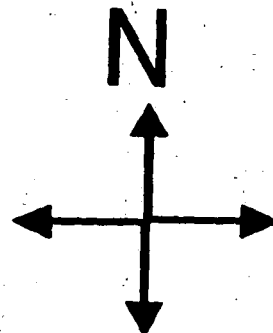
1300

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



METEOROLOGICAL TOWER

TEMPERATURE 8.7 deg c  
WIND SPEED 9 mph  
DIRECTION 219 degrees



PLANT

STACK GAS RADIATION

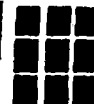
V cpm  
Y cpm

CHMT GAS RADIATION

3900 cpm

CONTROL ROOM RADIATION

3.1 mrem/hr



10/22/96

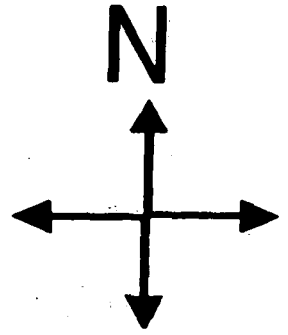
1315

LIQUID DISCHARGE RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



METEOROLOGICAL TOWER

TEMPERATURE	9.3	deg C
WIND SPEED	8	mph
DIRECTION	230	degrees

STACK GAS RADIATION

V cpm  
 Y cpm

CONTROL ROOM RADIATION

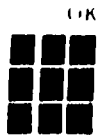
3900 cpm



PLANT

CONTROL ROOM RADIATION

2.7 mrem/hr



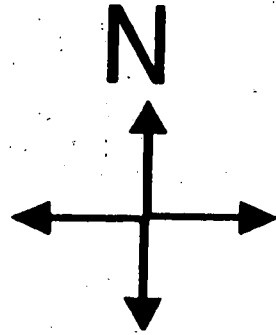
10/22/76

1330

LIQUID DISCHARGE RADIATION

454 cpm

HI RAD



METEOROLOGICAL TOWER

TEMPERATURE 9.2 deg C

WIND SPEED 11 mph

DIRECTION 225 degrees

LAKE MICHIGAN



PLANT

STACK GAS RADIATION

✓ cpm

✓ cpm

UNMT GAS RADIATION

3900 cpm

CONTROL ROOM RADIATION

2.7 mrem/hr

# ENVIRONMENTAL OVERVIEW

PAL

10/22/96

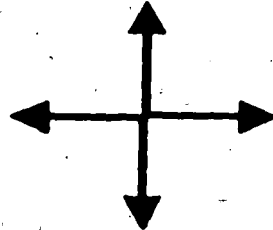
1345

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

N



METEOROLOGICAL TOWER

TEMPERATURE 9.5 deg C

WIND SPEED 10 mph

DIRECTION 220 degrees

LAKE MICHIGAN



PLANT

STACK GAS RADIATION

V cpm

V cpm

ENMT GAS RADIATION

3900 cpm

CONTROL ROOM RADIATION

2.2 mrem/hr

CFMS

F7 ENVIRON  
MENT

F8

F9 METEOR-  
OLOGICAL

F10 RADIO-  
LOGICAL

F11

F12

F13

F14

F15

00000

OK



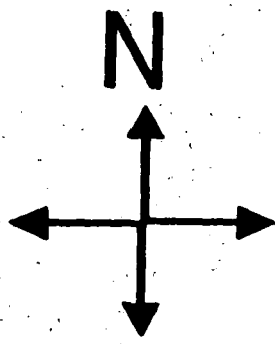
PAL  
10/22/76  
1400

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



### METEOROLOGICAL TOWER

TEMPERATURE	9.1	deg C
WIND SPEED	12	mph
DIRECTION	221	degrees



PLANT

### STACK GAS RADIATION

✓	cpm
✓	cpm

### CONTROL ROOM RADIATION

3900 cpm

### CONTROL ROOM RADIATION

1.8 mrem/hr

CFMS

F7 ENVIRON  
MENU

F8 METEOR-  
OLOGICAL

F9 RADIO-  
LOGICAL

F11

F12

F13

F14

F15

61016



OK

10/22/96

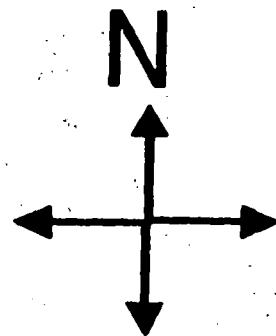
1415

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD

LAKE MICHIGAN



METEOROLOGICAL TOWER

TEMPERATURE 8.9 deg C

WIND SPEED 13 mph

DIRECTION 223 degrees

STACK GAS RADIATION

✓ cpm

✓ cpm

CHMT GAS RADIATION

3900 cpm

PLANT

CONTROL ROOM RADIATION

1.4 mrem/hr

CFMS

F7 ENVIRON  
MENU

F8

F9 METEOR-  
LOGICAL

F10 RADIO-  
LOGICAL

F11

F12

F13

F14

F15

66666



OK

# ENVIRONMENTAL OVERVIEW

PAL

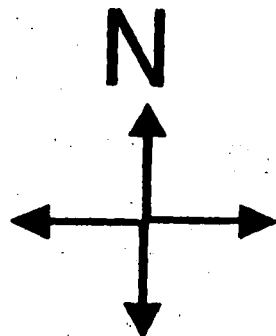
10/22/96

1430

LIQUID  
DISCHARGE  
RADIATION

454 cpm

HI RAD



### METEOROLOGICAL TOWER

TEMPERATURE 8.0 deg C  
WIND SPEED 7 mph  
DIRECTION 226 degrees

LAKE MICHIGAN



PLANT

### STACK GAS RADIATION

✓ cpm  
✓ cpm

### UNMT GAS RADIATION

3900 cpm

CONTROL ROOM RADIATION

1.1 mrem/hr

CFMS

F1 ENVIRON  
MENU

F2

F3 METEOR-  
OLOGICAL

F4 RADIO-  
LOGICAL

F5

F6

F7

F8

F9

EXIT





10/22/96

0825

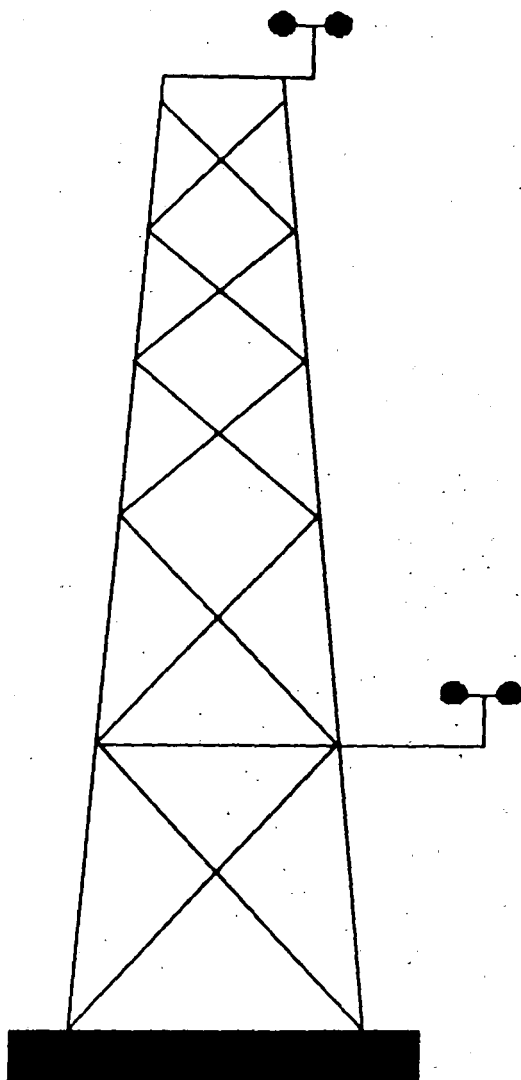
HEIGHT 60 METERS

WIND DIRECTION	227	CIRCULAR DEGREES
STD DEVIATION	7.2	CIRCULAR DEGREES
WIND SPEED	17	MPH

DELTA TEMPERATURE	-0.4	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	227	CIRCULAR DEGREES
STD DEVIATION	7.2	CIRCULAR DEGREES
WIND SPEED	13	MPH
TEMPERATURE	3.0	DEG C



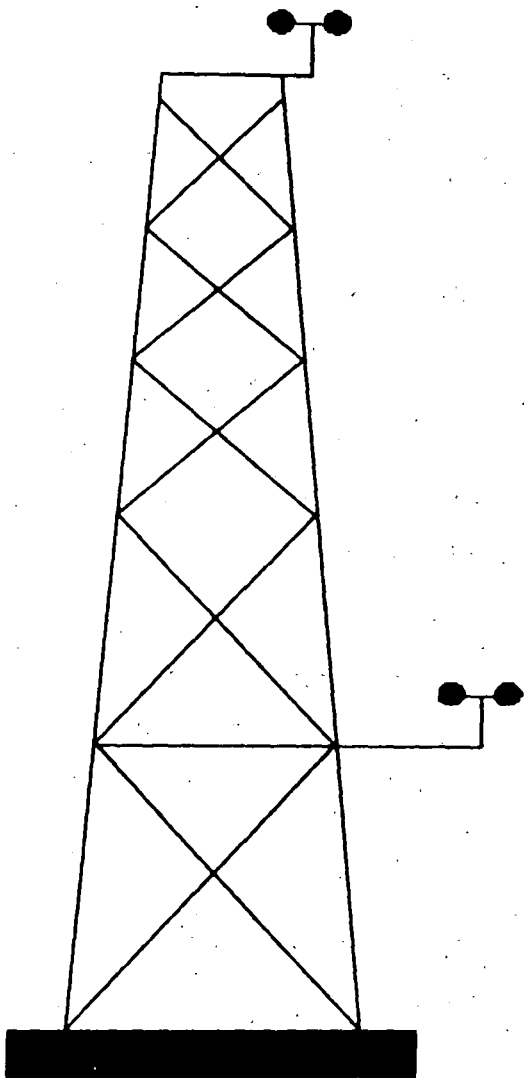
HEIGHT 60 METERS

WIND DIRECTION	222	CIRCULAR DEGREES
STD DEVIATION	11.2	CIRCULAR DEGREES
WIND SPEED	17	MPH

DELTA TEMPERATURE	-0.9	DEG C
STABILITY	D	PASQ

HEIGHT 10 METERS

WIND DIRECTION	222	CIRCULAR DEGREES
STD DEVIATION	11.2	CIRCULAR DEGREES
WIND SPEED	13	MPH
TEMPERATURE	3.2	DEG C



10/22/96

0830

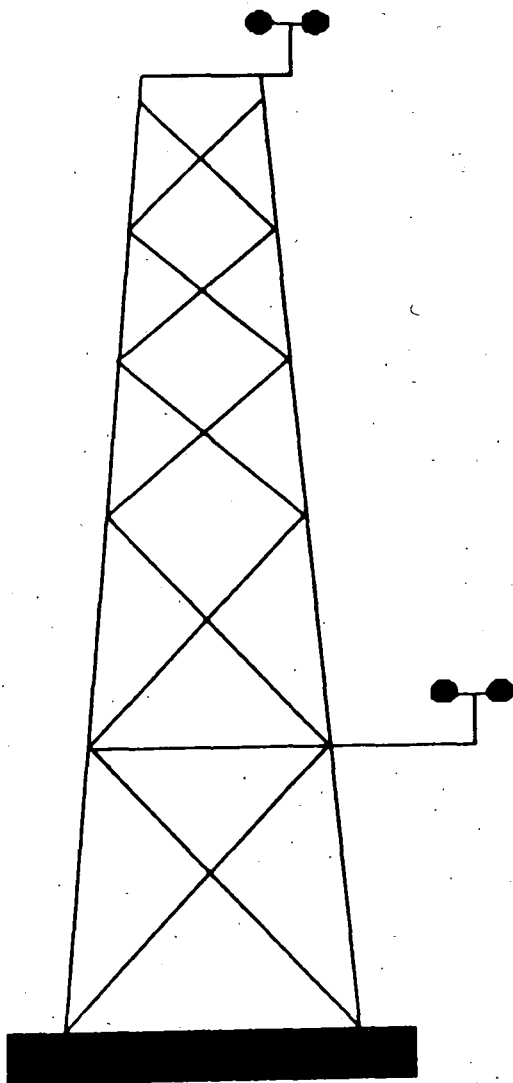
HEIGHT 60 METERS

WIND DIRECTION	229	CIRCULAR DEGREES
STD DEVIATION	9.5	CIRCULAR DEGREES
WIND SPEED	23	MPH

DELTA TEMPERATURE	-1.1	DEG C
STABILITY	D	PASQ

HEIGHT 10 METERS

WIND DIRECTION	229	CIRCULAR DEGREES
STD DEVIATION	9.5	CIRCULAR DEGREES
WIND SPEED	18	MPH
TEMPERATURE	3.5	DEG C



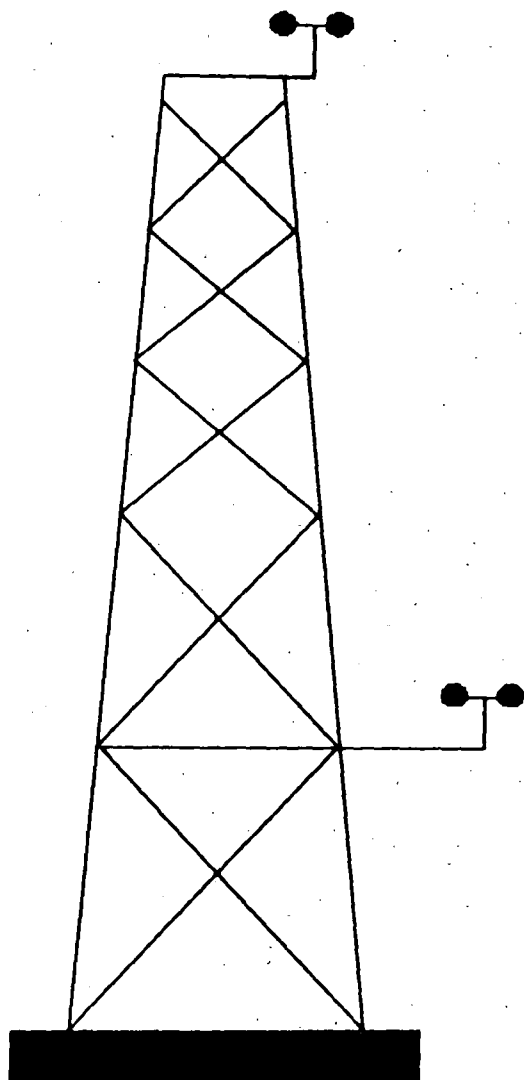
HEIGHT 60 METERS

WIND DIRECTION	221	CIRCULAR DEGREES
STD DEVIATION	12	CIRCULAR DEGREES
WIND SPEED	28	MPH

DELTA TEMPERATURE	-1.2	DEG C
STABILITY	D	PASQ

HEIGHT 10 METERS

WIND DIRECTION	221	CIRCULAR DEGREES
STD DEVIATION	12	CIRCULAR DEGREES
WIND SPEED	22	MPH
TEMPERATURE	3.5	DEG C



10/22/96

0900

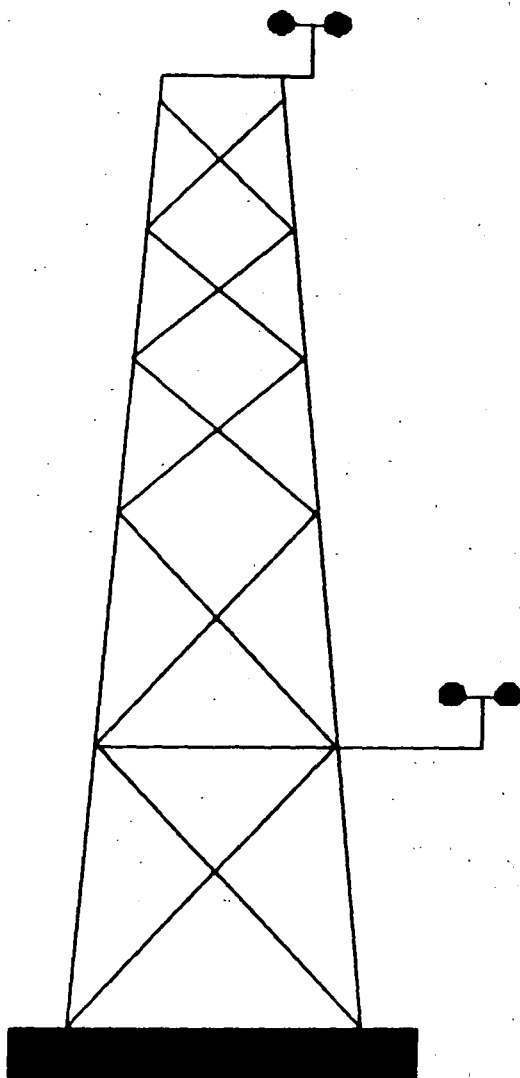
HEIGHT 60 METERS

WIND DIRECTION	219	CIRCULAR DEGREES
STD DEVIATION	10.4	CIRCULAR DEGREES
WIND SPEED	24	MPH

DELTA TEMPERATURE	-1.3	DEG C
STABILITY	D	PASQ

HEIGHT 10 METERS

WIND DIRECTION	219	CIRCULAR DEGREES
STD DEVIATION	10.4	CIRCULAR DEGREES
WIND SPEED	19	MPH
TEMPERATURE	3.7	DEG C



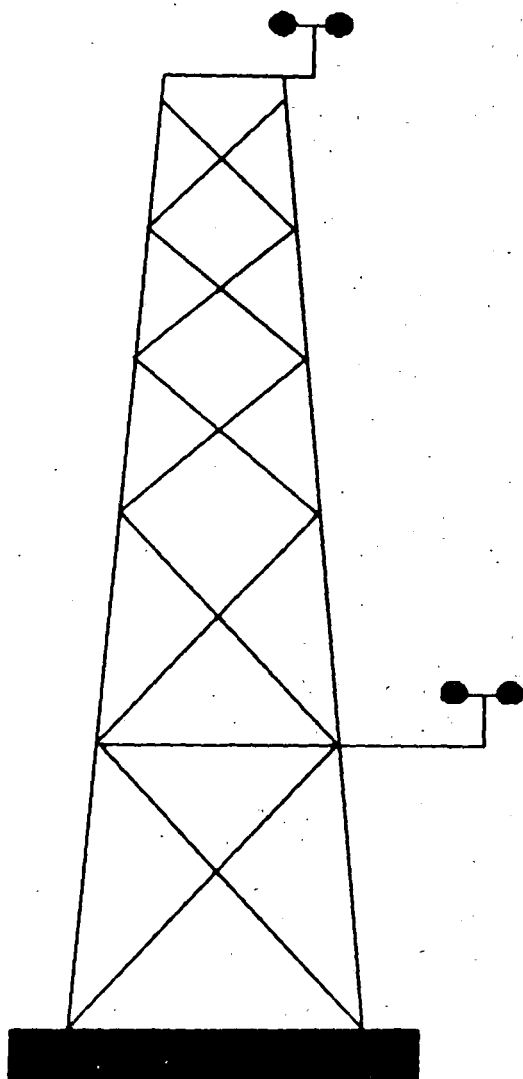
HEIGHT 60 METERS

WIND DIRECTION	225	CIRCULAR DEGREES
STD DEVIATION	9.2	CIRCULAR DEGREES
WIND SPEED	20	MPH

DELTA TEMPERATURE	-1.1	DEG C
STABILITY	D	PASQ

HEIGHT 10 METERS

WIND DIRECTION	225	CIRCULAR DEGREES
STD DEVIATION	9.2	CIRCULAR DEGREES
WIND SPEED	15	MPH
TEMPERATURE	4.0	DEG C



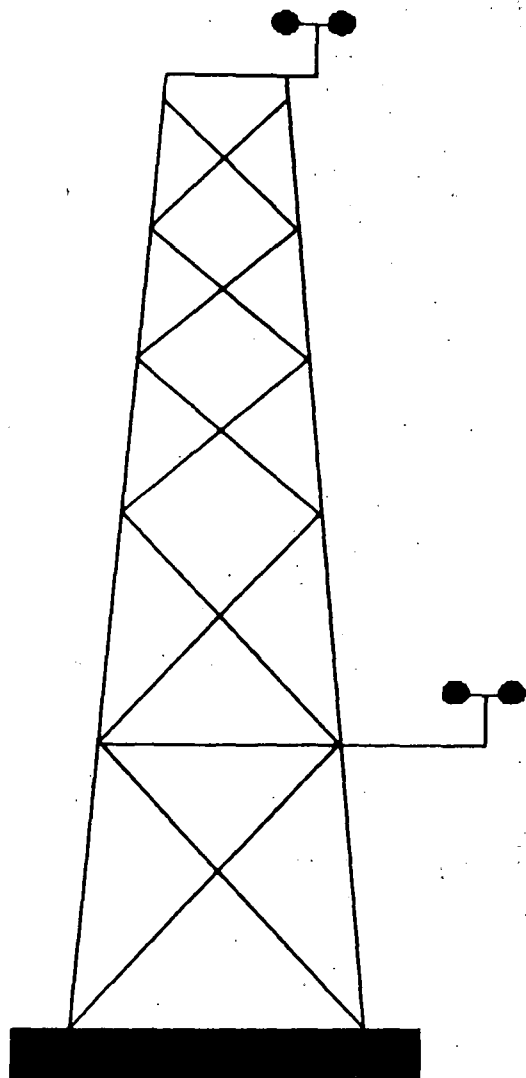
HEIGHT 60 METERS

WIND DIRECTION	230	CIRCULAR DEGREES
STD DEVIATION	7.9	CIRCULAR DEGREES
WIND SPEED	17	MPH

DELTA TEMPERATURE	-0.9	DEG C
STABILITY	D	PASQ

HEIGHT 10 METERS

WIND DIRECTION	230	CIRCULAR DEGREES
STD DEVIATION	7.9	CIRCULAR DEGREES
WIND SPEED	13	MPH
TEMPERATURE	4.5	DEG C



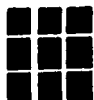
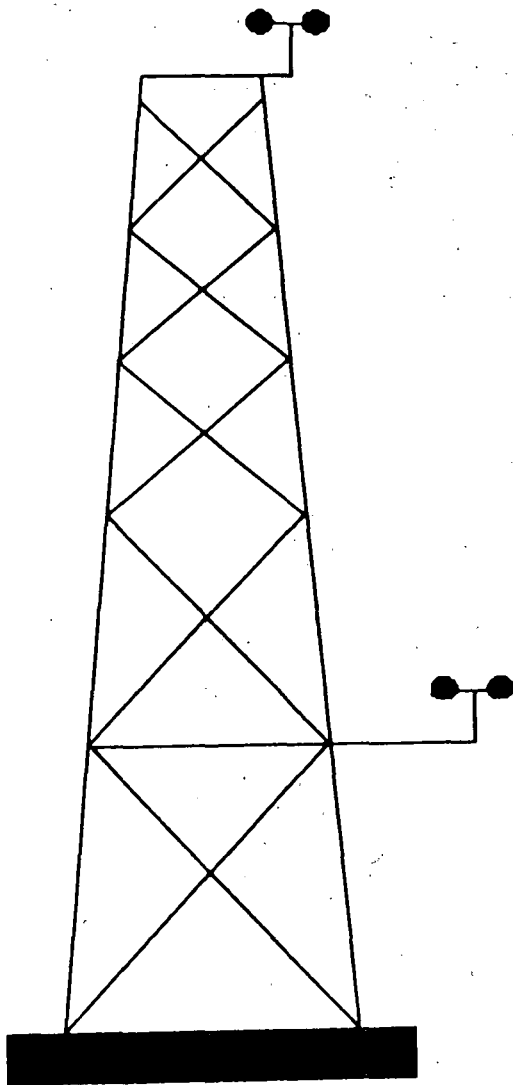
HEIGHT 60 METERS

WIND DIRECTION	224	CIRCULAR DEGREES
STD DEVIATION	83	CIRCULAR DEGREES
WIND SPEED	20	MPH

DELTA TEMPERATURE	-0.8	DEG C
STABILITY	D	PASQ

HEIGHT 10 METERS

WIND DIRECTION	224	CIRCULAR DEGREES
STD DEVIATION	8.3	CIRCULAR DEGREES
WIND SPEED	15	MPH
TEMPERATURE	4.6	DEG C





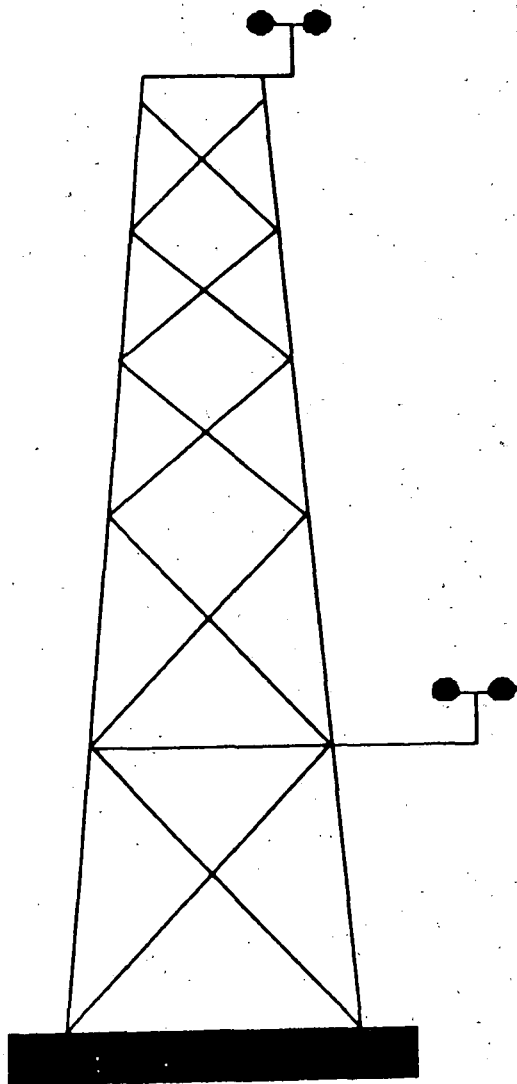
HEIGHT 60 METERS

WIND DIRECTION	219	CIRCULAR DEGREES
STD DEVIATION	8.1	CIRCULAR DEGREES
WIND SPEED	16	MPH

DELTA TEMPERATURE	-0.7	DEG C
STABILITY	D	PASQ

HEIGHT 10 METERS

WIND DIRECTION	219	CIRCULAR DEGREES
STD DEVIATION	8.1	CIRCULAR DEGREES
WIND SPEED	12	MPH
TEMPERATURE	4.9	DEG C



10/22/96

1015

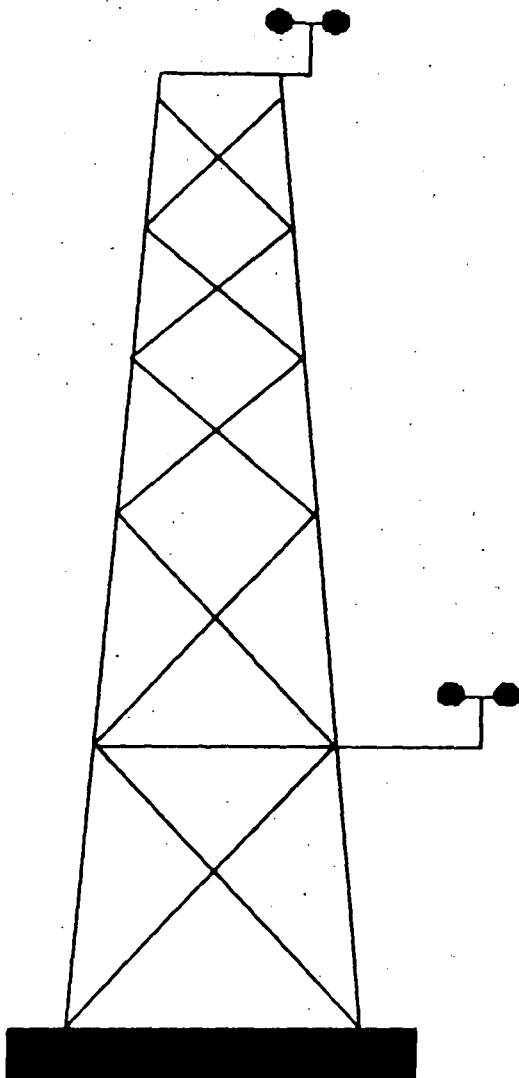
HEIGHT 60 METERS

WIND DIRECTION	224	CIRCULAR DEGREES
STD DEVIATION	7.2	CIRCULAR DEGREES
WIND SPEED	10	MPH

DELTA TEMPERATURE	-0.3	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	224	CIRCULAR DEGREES
STD DEVIATION	7.2	CIRCULAR DEGREES
WIND SPEED	8	MPH
TEMPERATURE	5.2	DEG C



10/22/96

1030

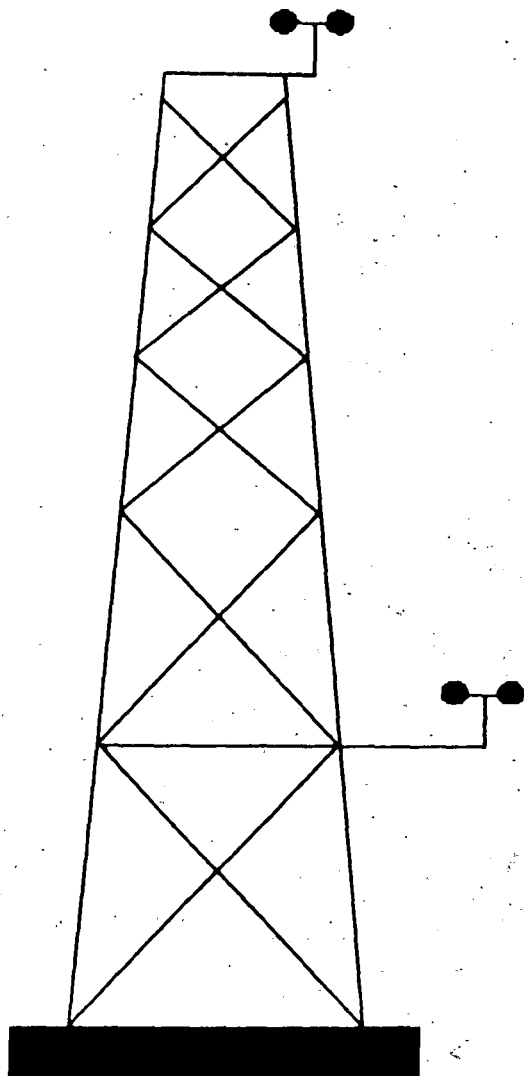
HEIGHT 60 METERS

WIND DIRECTION	223	CIRCULAR DEGREES
STD DEVIATION	7.0	CIRCULAR DEGREES
WIND SPEED	11	MPH

DELTA TEMPERATURE	-0.2	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	223	CIRCULAR DEGREES
STD DEVIATION	7.0	CIRCULAR DEGREES
WIND SPEED	9	MPH
TEMPERATURE	5.5	DEG C



10/22/96

1045

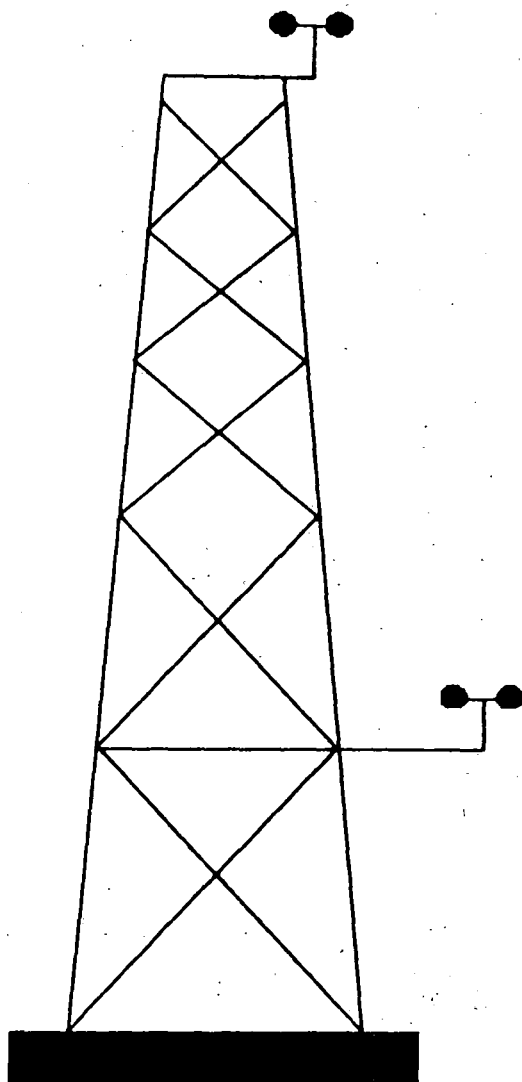
HEIGHT 60 METERS

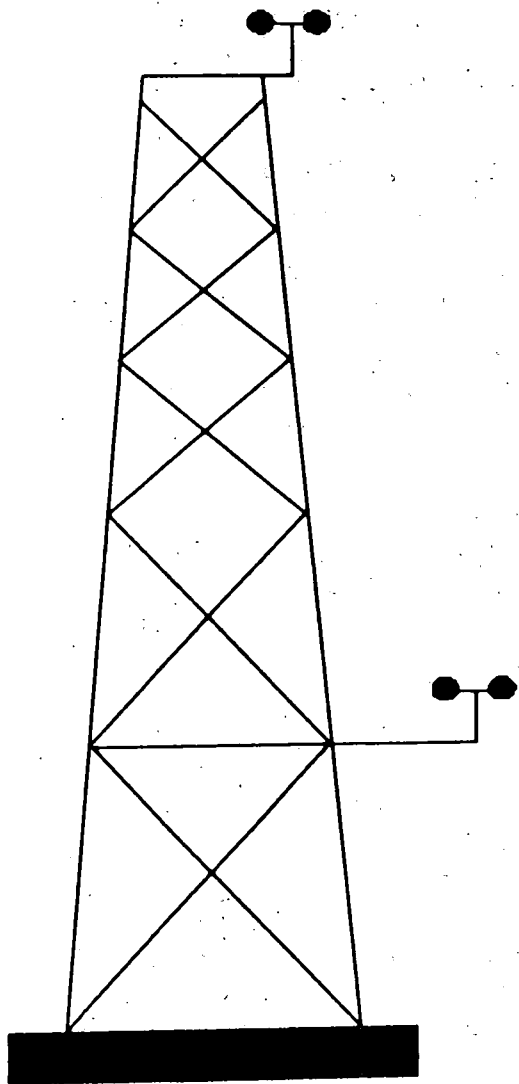
WIND DIRECTION	221	CIRCULAR DEGREES
STD DEVIATION	6.9	CIRCULAR DEGREES
WIND SPEED	9	MPH

DELTA TEMPERATURE	-0.4	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	221	CIRCULAR DEGREES
STD DEVIATION	6.9	CIRCULAR DEGREES
WIND SPEED	7	MPH
TEMPERATURE	6.0	DEG C





HEIGHT 60 METERS

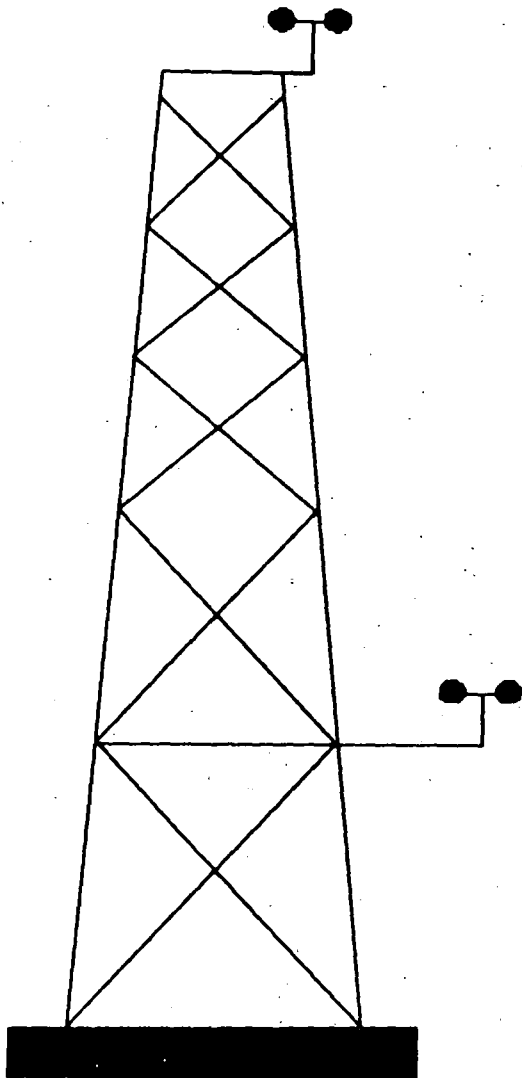
WIND DIRECTION	226	CIRCULAR DEGREES
STD DEVIATION	7.0	CIRCULAR DEGREES
WIND SPEED	7	MPH

DELTA TEMPERATURE	-0.5	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	226	CIRCULAR DEGREES
STD DEVIATION	7.0	CIRCULAR DEGREES
WIND SPEED	5	MPH
TEMPERATURE	6.2	DEG C





HEIGHT 60 METERS

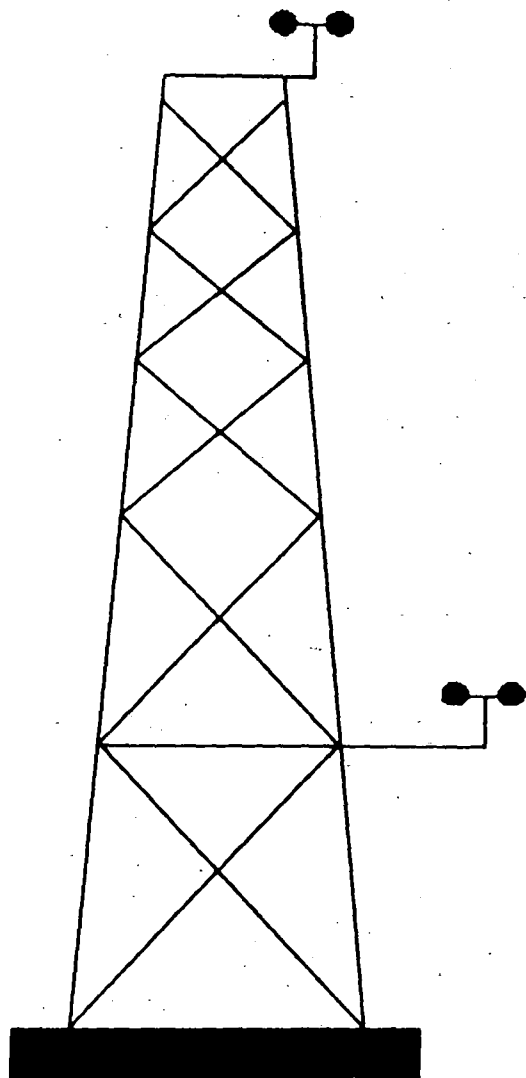
WIND DIRECTION	227	CIRCULAR DEGREES
STD DEVIATION	7.0	CIRCULAR DEGREES
WIND SPEED	5	MPH

DELTA TEMPERATURE	-0.4	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	227	CIRCULAR DEGREES
STD DEVIATION	7.0	CIRCULAR DEGREES
WIND SPEED	4	MPH
TEMPERATURE	6.8	DEG C





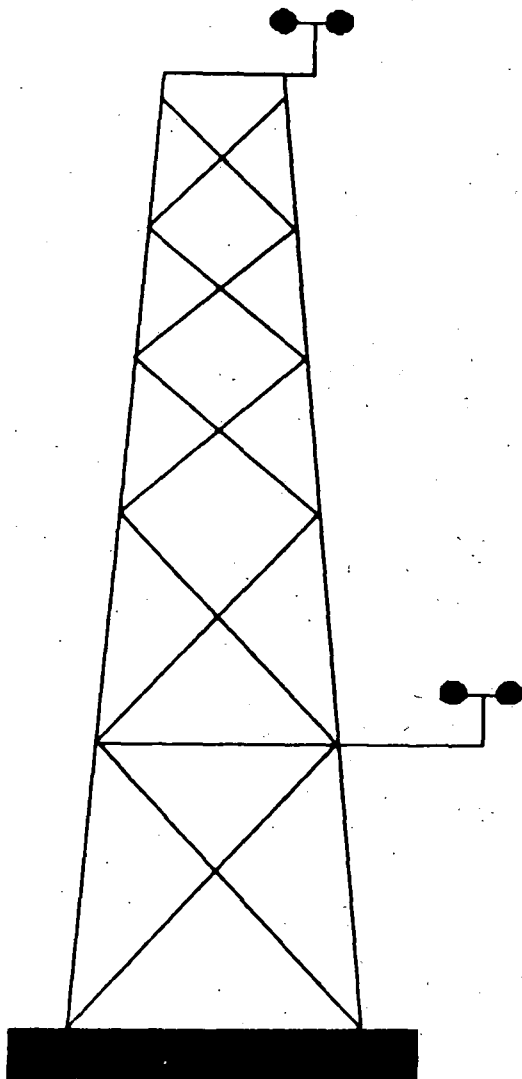
HEIGHT 60 METERS

WIND DIRECTION	223	CIRCULAR DEGREES
STD DEVIATION	6.8	CIRCULAR DEGREES
WIND SPEED	7	MPH

DELTA TEMPERATURE	-0.3	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	223	CIRCULAR DEGREES
STD DEVIATION	6.8	CIRCULAR DEGREES
WIND SPEED	5	MPH
TEMPERATURE	7.1	DEG C



HEIGHT 60 METERS

WIND DIRECTION	228	CIRCULAR DEGREES
STD DEVIATION	6.5	CIRCULAR DEGREES
WIND SPEED	8	MPH

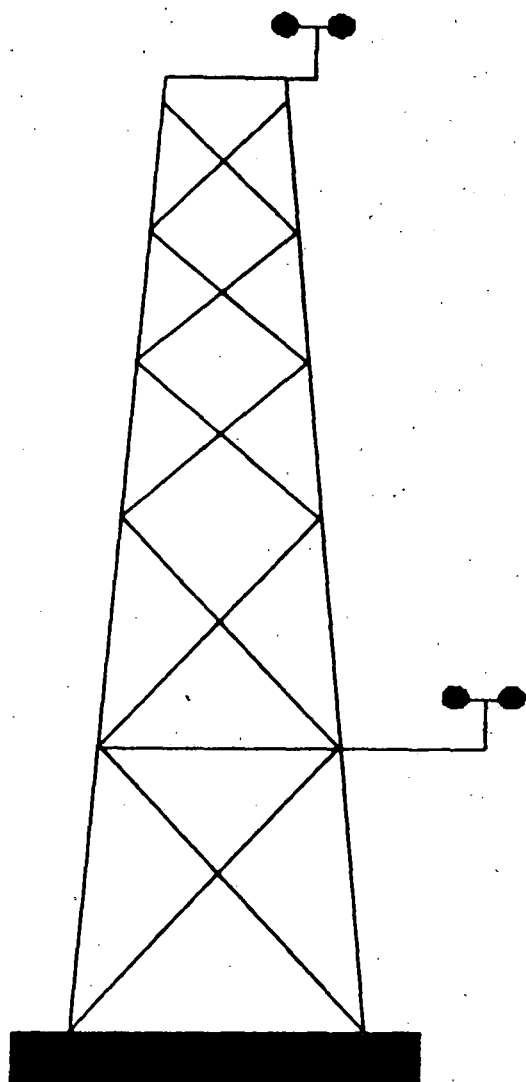
DELTA TEMPERATURE	-0.2	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	228	CIRCULAR DEGREES
STD DEVIATION	6.5	CIRCULAR DEGREES
WIND SPEED	6	MPH
TEMPERATURE	7.3	DEG C







HEIGHT 60 METERS

WIND DIRECTION	225	CIRCULAR DEGREES
STD DEVIATION	7.0	CIRCULAR DEGREES
WIND SPEED	7	MPH

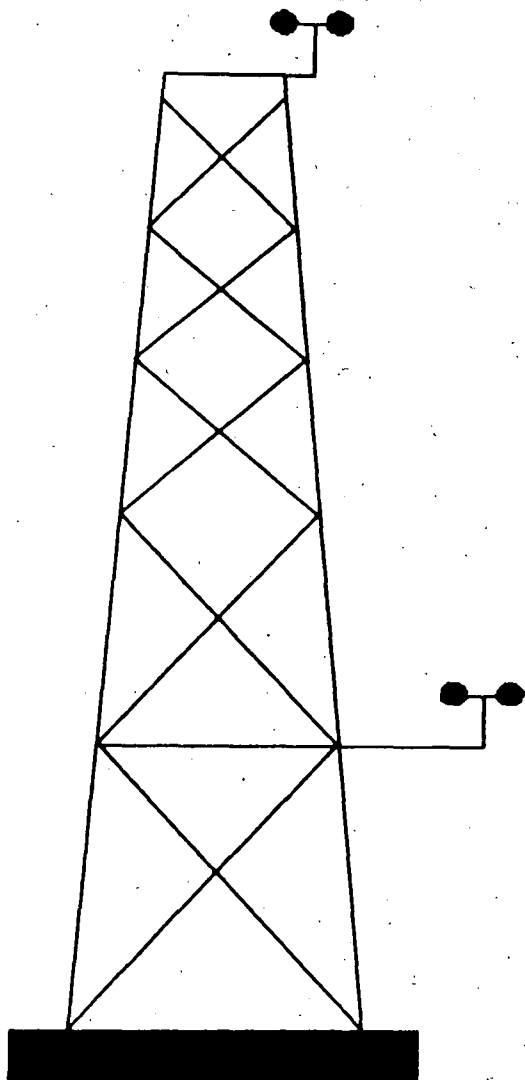
DELTA TEMPERATURE	-0.3	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	225	CIRCULAR DEGREES
STD DEVIATION	7.0	CIRCULAR DEGREES
WIND SPEED	5	MPH
TEMPERATURE	7.3	DEG C

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1215



HEIGHT 60 METERS

WIND DIRECTION	229	CIRCULAR DEGREES
STD DEVIATION	6.7	CIRCULAR DEGREES
WIND SPEED	4	MPH

DELTA TEMPERATURE	-0.5	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	229	CIRCULAR DEGREES
STD DEVIATION	6.7	CIRCULAR DEGREES
WIND SPEED	3	MPH
TEMPERATURE	7.5	DEG C



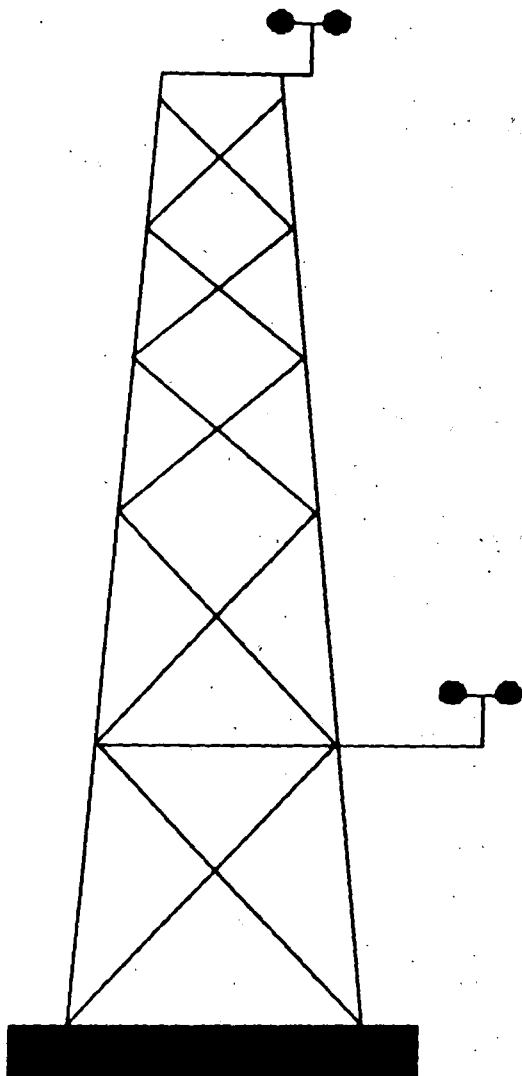
HEIGHT 60 METERS

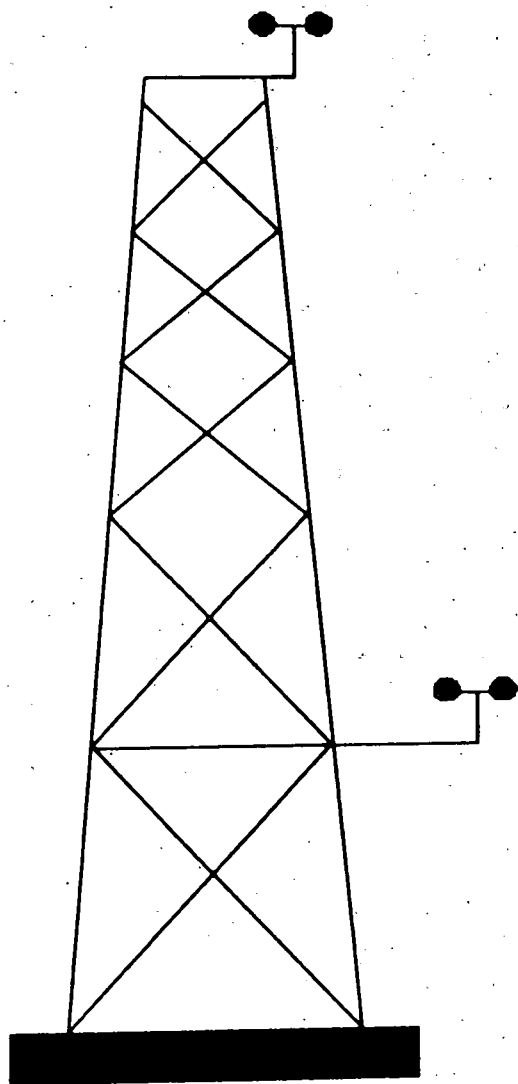
WIND DIRECTION	225	CIRCULAR DEGREES
STD DEVIATION	6.9	CIRCULAR DEGREES
WIND SPEED	7	MPH

DELTA TEMPERATURE	-0.3	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	225	CIRCULAR DEGREES
STD DEVIATION	6.9	CIRCULAR DEGREES
WIND SPEED	5	MPH
TEMPERATURE	8.2	DEG C





HEIGHT 60 METERS

WIND DIRECTION	223	CIRCULAR DEGREES
STD DEVIATION	6.0	CIRCULAR DEGREES
WIND SPEED	10	MPH

DELTA TEMPERATURE	-0.3	DEG C
STABILITY	K	PASQ

HEIGHT 10 METERS

WIND DIRECTION	223	CIRCULAR DEGREES
STD DEVIATION	6.0	CIRCULAR DEGREES
WIND SPEED	8	MPH
TEMPERATURE	8.5	DEG C



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1300

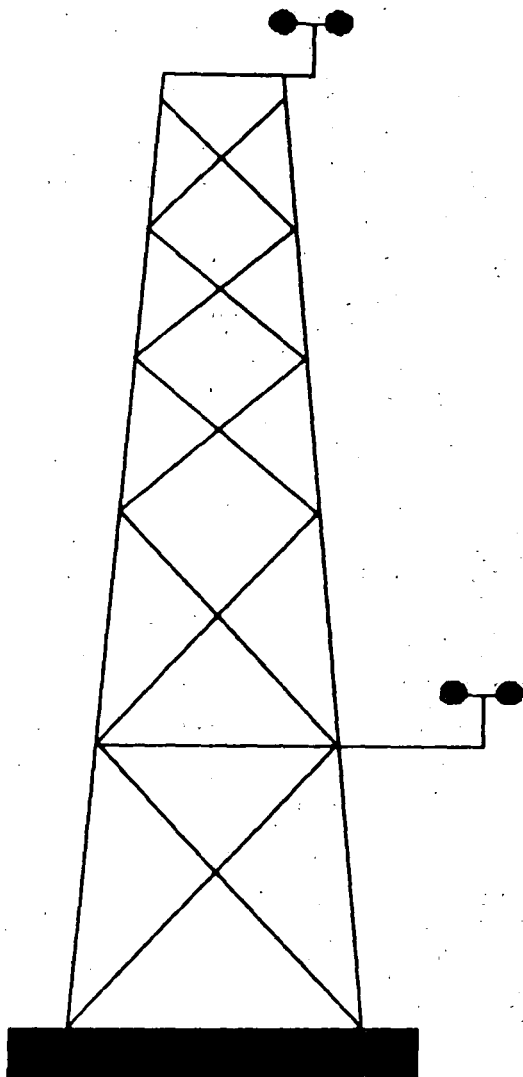
HEIGHT 60 METERS

WIND DIRECTION	219	CIRCULAR DEGREES
STD DEVIATION	6.2	CIRCULAR DEGREES
WIND SPEED	11	MPH

DELTA TEMPERATURE	-0.4	DEG C
STABILITY	E	PASQ

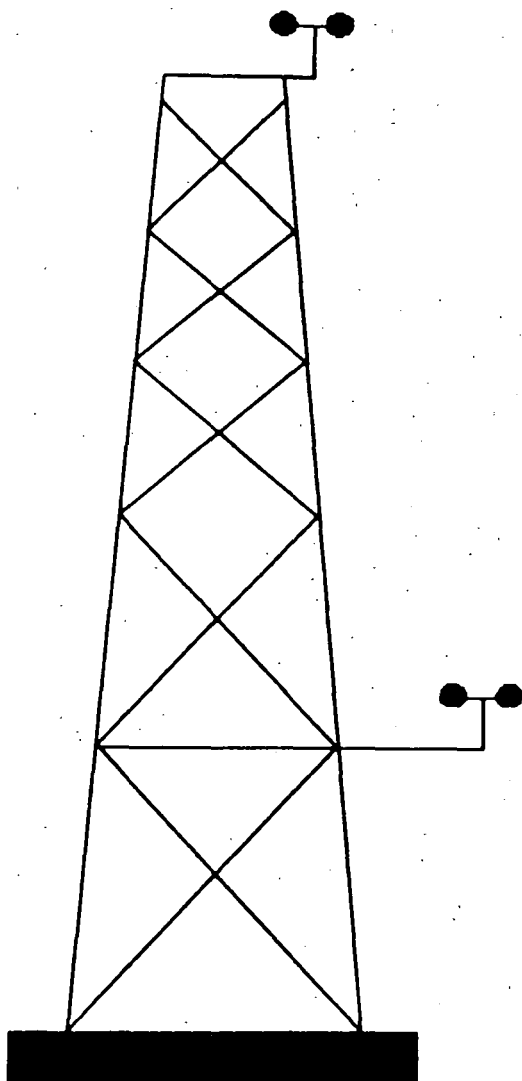
HEIGHT 10 METERS

WIND DIRECTION	219	CIRCULAR DEGREES
STD DEVIATION	6.2	CIRCULAR DEGREES
WIND SPEED	9	MPH
TEMPERATURE	8.7	DEG C



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1315



HEIGHT 60 METERS

WIND DIRECTION	230	CIRCULAR DEGREES
STD DEVIATION	5.5	CIRCULAR DEGREES
WIND SPEED	10	MPH

DELTA TEMPERATURE	-0.3	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	230	CIRCULAR DEGREES
STD DEVIATION	5.5	CIRCULAR DEGREES
WIND SPEED	8	MPH
TEMPERATURE	9.3	DEG C



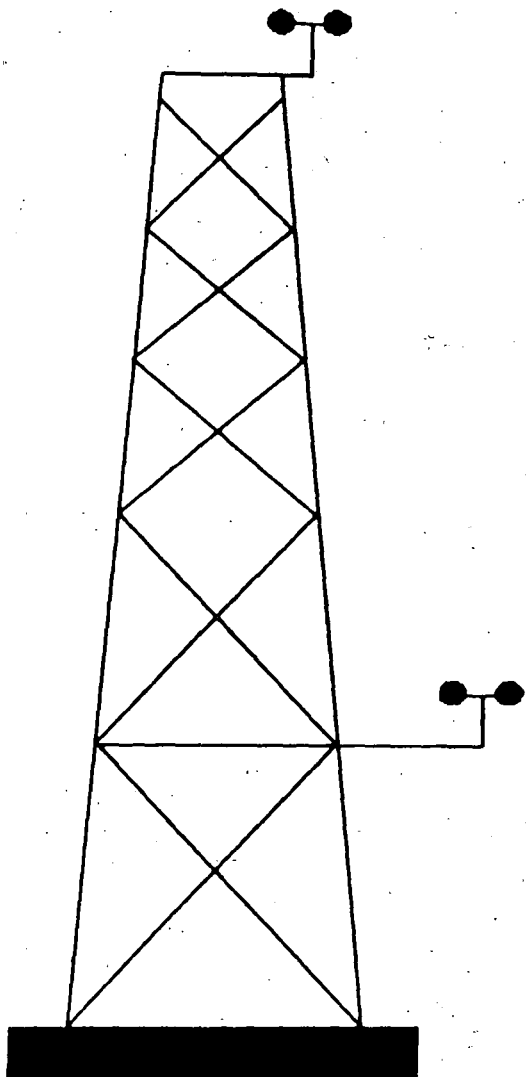
HEIGHT 60 METERS

WIND DIRECTION	225	CIRCULAR DEGREES
STD DEVIATION	8.2	CIRCULAR DEGREES
WIND SPEED	14	MPH

DELTA TEMPERATURE	-0.6	DEG C
STABILITY	D	PASQ

HEIGHT 10 METERS

WIND DIRECTION	225	CIRCULAR DEGREES
STD DEVIATION	8.2	CIRCULAR DEGREES
WIND SPEED	11	MPH
TEMPERATURE	9.2	DEG C



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1345

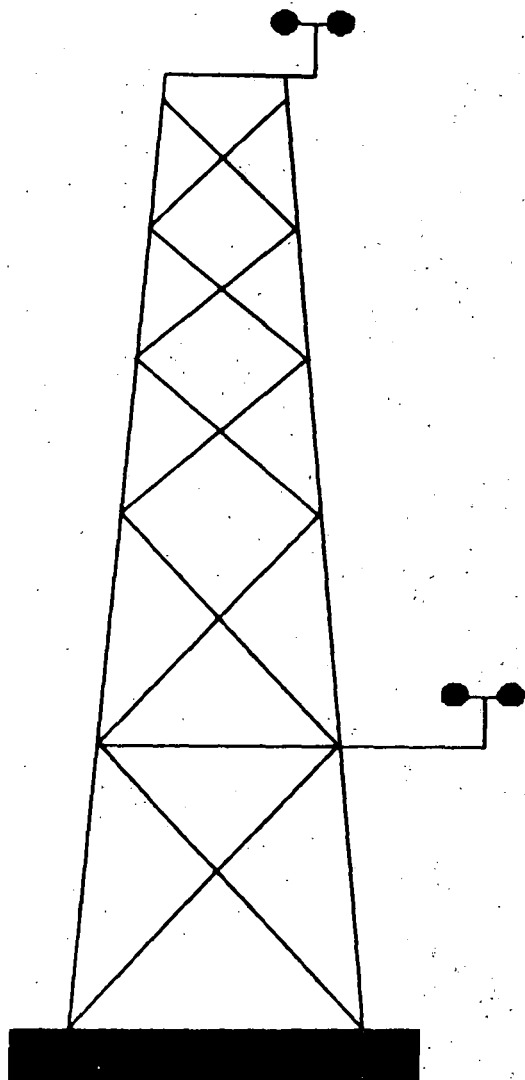
HEIGHT 60 METERS

WIND DIRECTION	228	CIRCULAR DEGREES
STD DEVIATION	8.9	CIRCULAR DEGREES
WIND SPEED	13	MPH

DELTA TEMPERATURE	-0.8	DEG C
STABILITY	D	PASQ

HEIGHT 10 METERS

WIND DIRECTION	228	CIRCULAR DEGREES
STD DEVIATION	8.9	CIRCULAR DEGREES
WIND SPEED	10	MPH
TEMPERATURE	9.5	DEG C





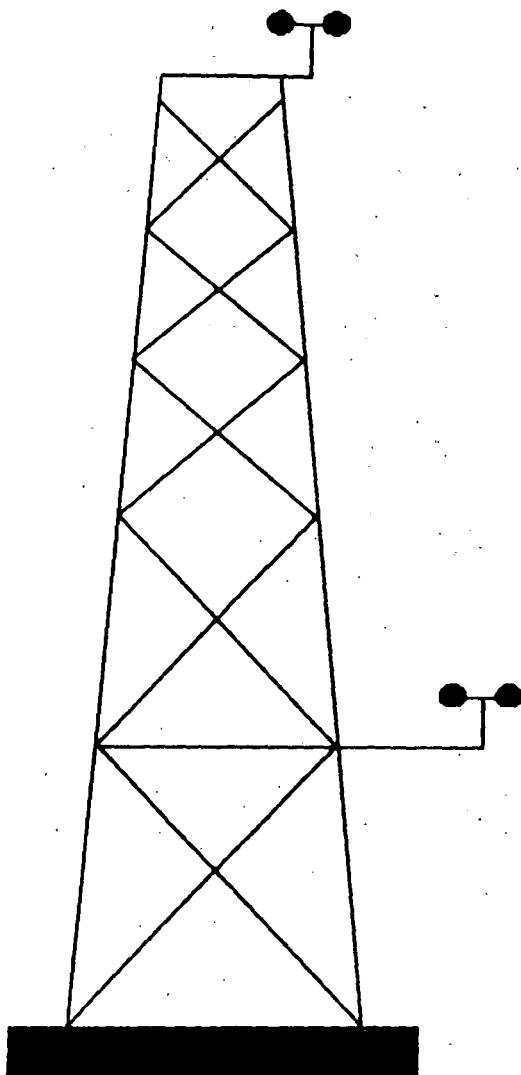
HEIGHT 60 METERS

WIND DIRECTION	221	CIRCULAR DEGREES
STD DEVIATION	8.2	CIRCULAR DEGREES
WIND SPEED	16	MPH

DELTA TEMPERATURE	-0.6	DEG C
STABILITY	D	PASQ

HEIGHT 10 METERS

WIND DIRECTION	221	CIRCULAR DEGREES
STD DEVIATION	8.2	CIRCULAR DEGREES
WIND SPEED	12	MPH
TEMPERATURE	9.1	DEG C



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1415

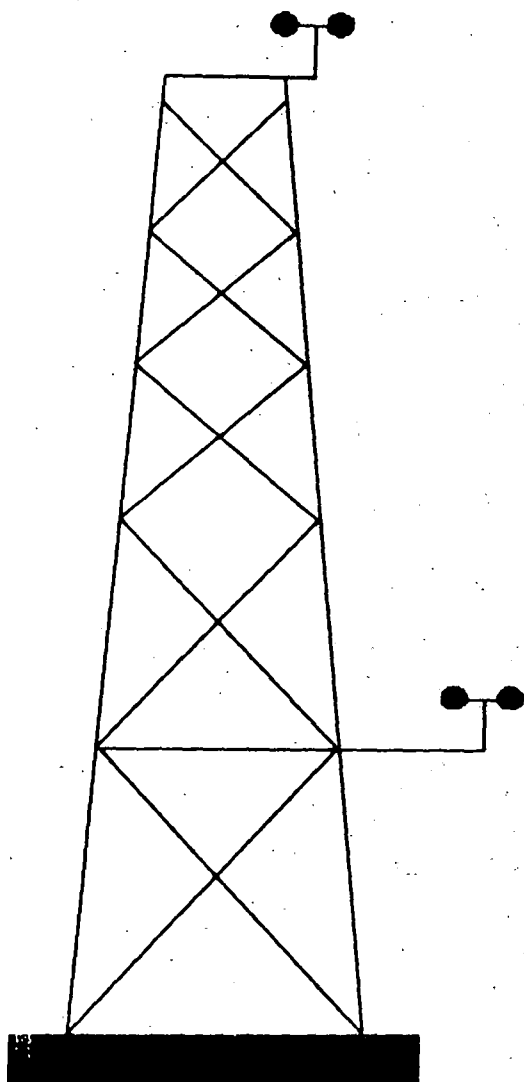
HEIGHT 60 METERS

WIND DIRECTION	223	CIRCULAR DEGREES
STD DEVIATION	8.1	CIRCULAR DEGREES
WIND SPEED	17	MPH

DELTA TEMPERATURE	-0.7	DEG C
STABILITY	D	PASQ

HEIGHT 10 METERS

WIND DIRECTION	223	CIRCULAR DEGREES
STD DEVIATION	8.1	CIRCULAR DEGREES
WIND SPEED	13	MPH
TEMPERATURE	8.9	DEG C



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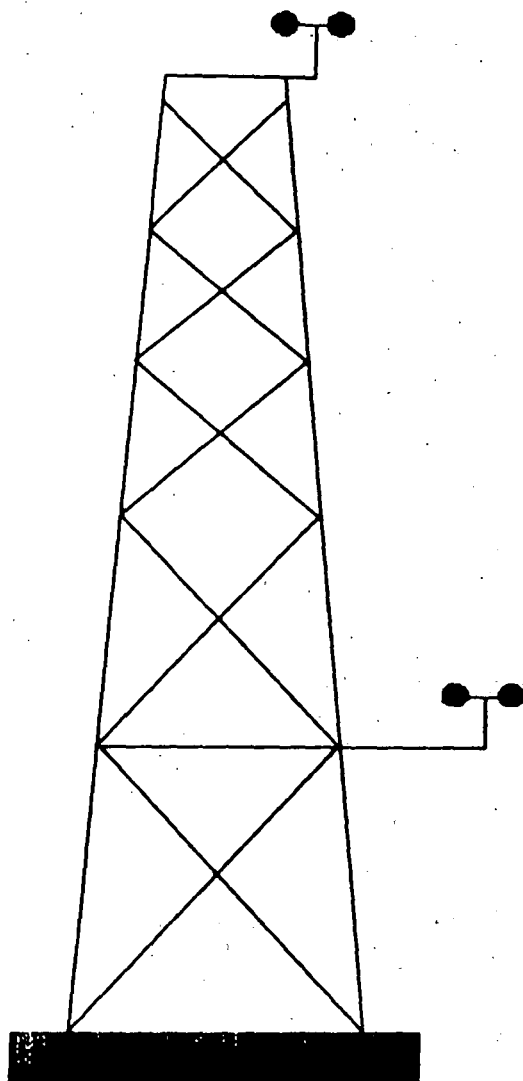
130

HEIGHT 60 METERS

WIND DIRECTION	226	CIRCULAR DEGREES
STD DEVIATION	7.1	CIRCULAR DEGREES
WIND SPEED	9	MPH
DELTA TEMPERATURE	-0.5	DEG C
STABILITY	E	PASQ

HEIGHT 10 METERS

WIND DIRECTION	226	CIRCULAR DEGREES
STD DEVIATION	7.1	CIRCULAR DEGREES
WIND SPEED	7	MPH
TEMPERATURE	8.8	DEG C



STACK MONITORS

QUID RADIATION MONITORS

MPONENT COOLING TOWER

130 cpm

SERVICE WATER

380 cpm

WASTE DISCHG

454 cpm

GEN BLOWDOWN

1300 cpm

MIXING BASIN

280 cpm

MAILED FUEL

2.47E04 cpm

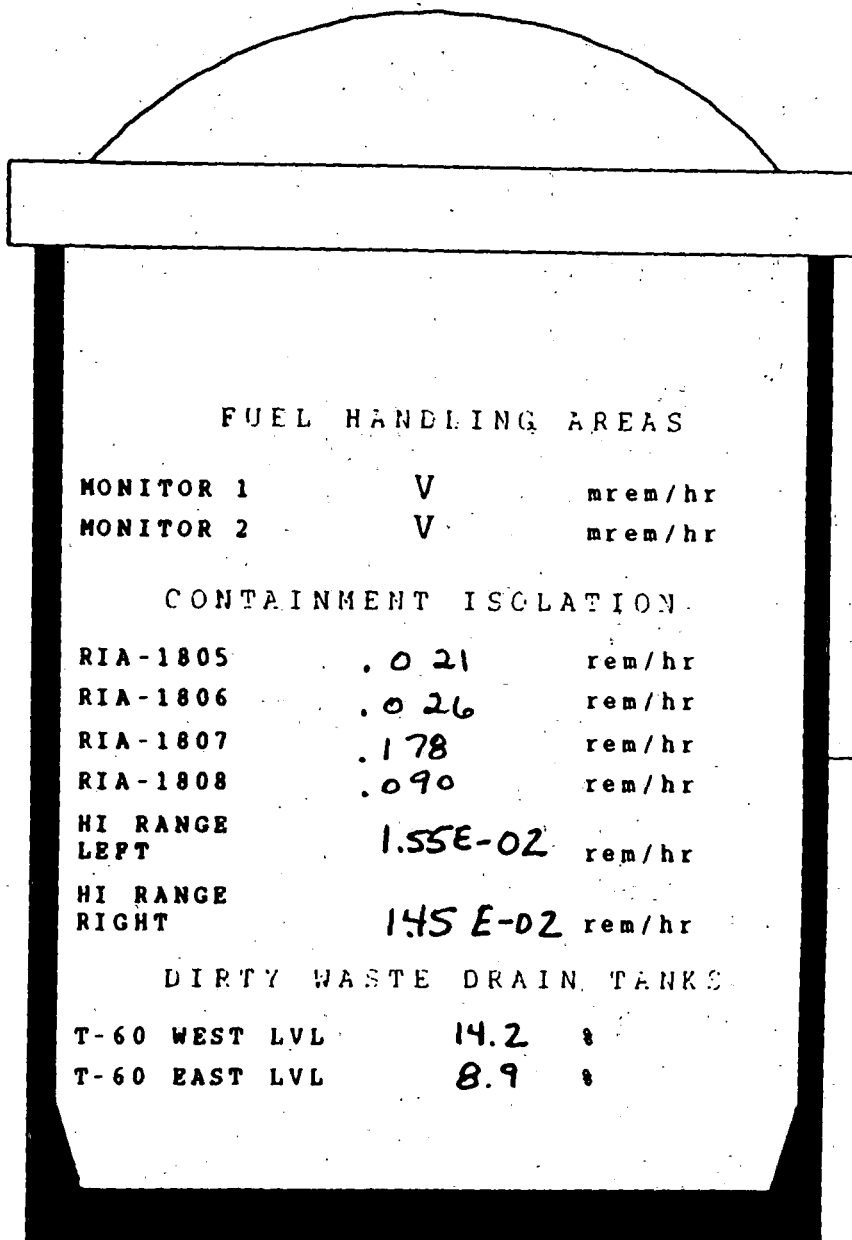
MAIN STEAM A

40 cpm

MAIN STEAM B

20 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



FUEL HANDLING AREAS

MONITOR 1 V mrem/hr  
MONITOR 2 V mrem/hr

CONTAINMENT ISOLATION

RIA-1805 .021 rem/hr  
RIA-1806 .026 rem/hr  
RIA-1807 .178 rem/hr  
RIA-1808 .090 rem/hr  
HI RANGE LEFT 1.55E-02 rem/hr  
HI RANGE RIGHT 1.45E-02 rem/hr

DIRTY WASTE DRAIN TANKS

T-60 WEST LVL 14.2  
T-60 EAST LVL 8.9

LO RNG NOBLE GASES

60.7 cpm

HI RNG NOBLE GASES

1.10E-01 mrem/hr

GAS RAD INTR A

V cpm

GAS RAD INST B

V cpm

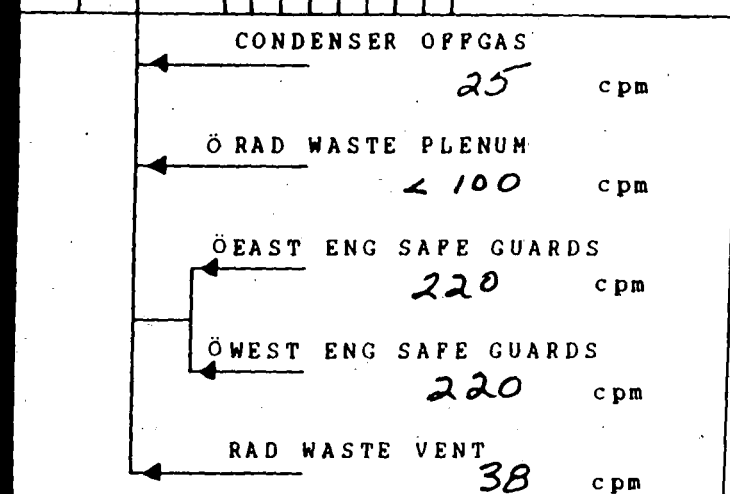
CONTROL ROOM RAD

.10 mrem/hr

SPENT FUEL POOL

NORTH 0.12 mrem/hr

SOUTH 0.1 mrem/hr



CONDENSER OFFGAS

25 cpm

RAD WASTE PLENUM

<100 cpm

EAST ENG SAFE GUARDS

220 cpm

WEST ENG SAFE GUARDS

220 cpm

RAD WASTE VENT

38 cpm

STACK MONITORS

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

130 cpm

SERVICE WATER

380 cpm

WASTE DISCHG

454 cpm

GEN BLOWDOWN

1300 cpm

MIXING BASIN

280 cpm

MAILED FUEL

247E04 cpm

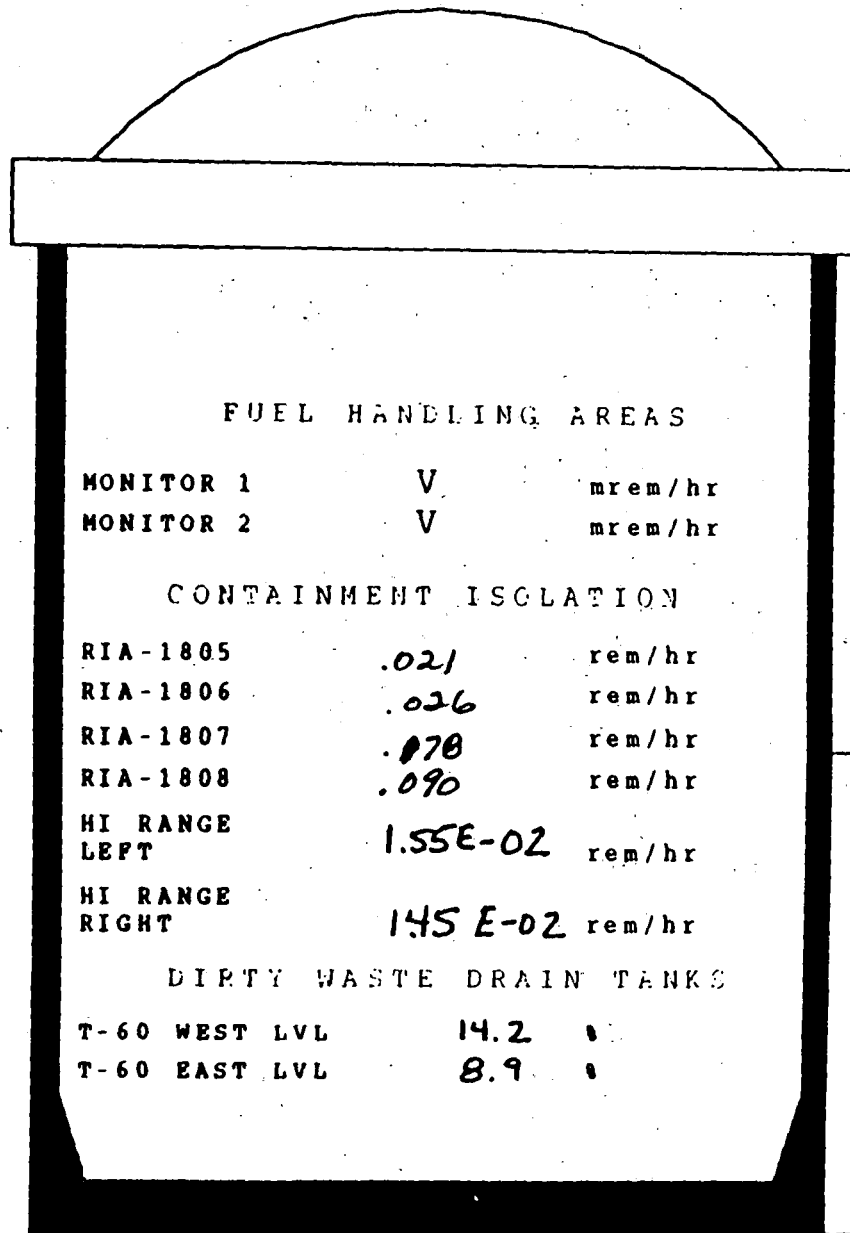
MAIN STEAM A

40 cpm

MAIN STEAM B

20 cpm

DEPENDENT ON CONTROL ROOM SWITCH POSITION



LO RNG NOBLE GASES

61.2 cpm

HI RNG NOBLE GASES

1.10 E-01 mrem/hr

GAS RAD INTR A

V cpm

GAS RAD INST B

V cpm

CONTROL ROOM RAD

.10 mrem/hr

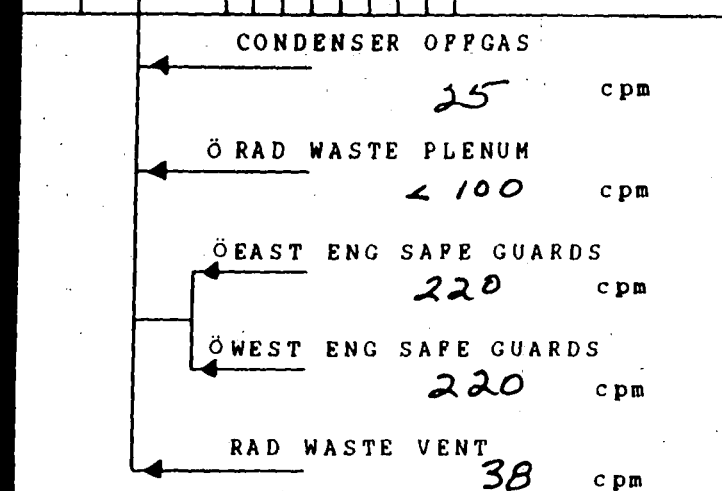
SPENT FUEL POOL

NORTH

0.12 mrem/hr

SOUTH

0.10 mrem/hr



## STACK MONITORS

LO RNG NOBLE GASES  
61.7 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
.10 mrem/hr

SPENT FUEL POOL  
NORTH  
0.12 mrem/hr

SOUTH  
0.10 mrem/hr

CONDENSER OFFGAS  
25 cpm

Ø RAD WASTE PLENUM  
< 100 cpm

Ø EAST ENG SAFE GUARDS  
220 cpm

Ø WEST ENG SAFE GUARDS  
220 cpm

RAD WASTE VENT  
38 cpm

## FUEL HANDLING AREAS

MONITOR 1 V mrem/hr

MONITOR 2 V mrem/hr

## CONTAINMENT ISOLATION

RIA-1805 .021 rem/hr

RIA-1806 .026 rem/hr

RIA-1807 .178 rem/hr

RIA-1808 .090 rem/hr

HI RANGE LEFT 1.55E-02 rem/hr

HI RANGE RIGHT 1.45 E-02 rem/hr

## DIRTY WASTE DRAIN TANKS

T-60 WEST LVL 14.2

T-60 EAST LVL 8.9

## LIQUID RADIATION MONITORS

COMPONENT COOLING WATER  
130 cpm

SERVICE WATER  
380 cpm

RAD WASTE DISCHG  
454 cpm

STM GEN BLOWDOWN  
1300 cpm

FIXING BASIN  
280 cpm

MAILED FUEL  
2.47E04 cpm

MAIN STEAM A  
40 cpm

MAIN STEAM B  
20 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION

CFMS

F7 ENVIRON  
MENU

F8 ENVIRON

F9 METEOR-  
LOGICAL

F10

F11

F12

F13

F14

F15

EXIT

OK

10/22/96

6

QUID RADIATION MONITORS

COMPONENT COOLING WATER

130 cpm

SERVICE WATER

380 cpm

DIRTY WASTE DISCHG

454 cpm

GEN BLOWDOWN

2.28 E04 cpm

EXHAUST BASIN

280 cpm

EXHAUST FUEL

2.38 E04 cpm

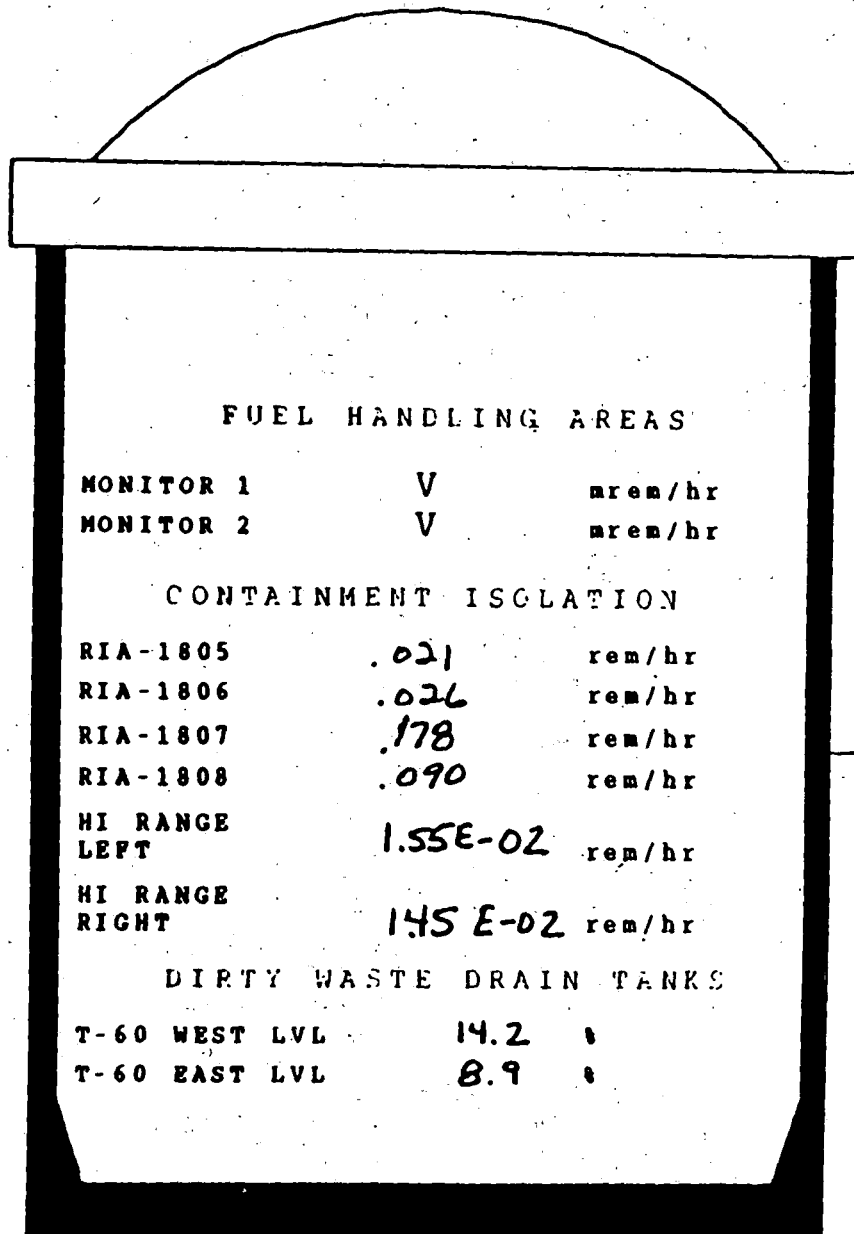
EXHAUST STEAM A

40 cpm

EXHAUST STEAM B

PEAK AT 400 → 48 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



STACK MONITORS

LO RNG NOBLE GASES  
62.1 cpm

HI RNG NOBLE GASES  
1.10 E-01 nrem/hr

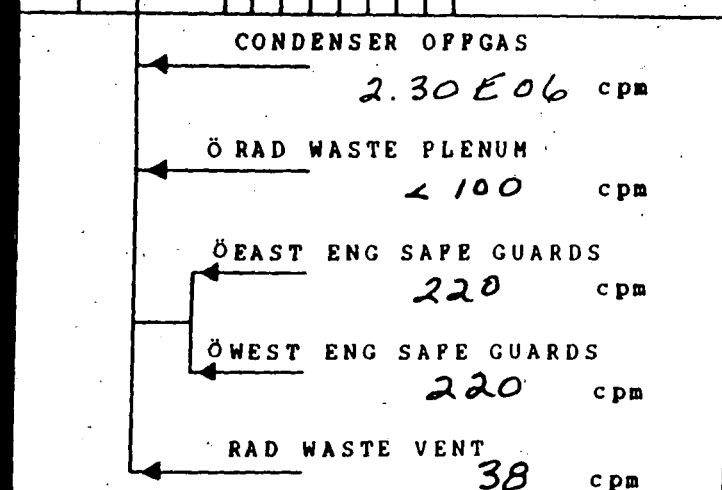
GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

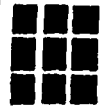
CONTROL ROOM RAD  
.10 nrem/hr

SPENT FUEL POOL  
NORTH  
0.12 nrem/hr

SOUTH  
0.10 nrem/hr



OK



STACK MONITORS

LIQUID RADIATION MONITORS

REACTOR COOLING WATER

130 cpm

CONDENSATE WATER

380 cpm

WASTE DISCHARGE

454 cpm

REACTOR BLOWDOWN

2.55 E-04 cpm

STEAM BASIN

280 cpm

ENRICHED FUEL

1.17 E-04 cpm

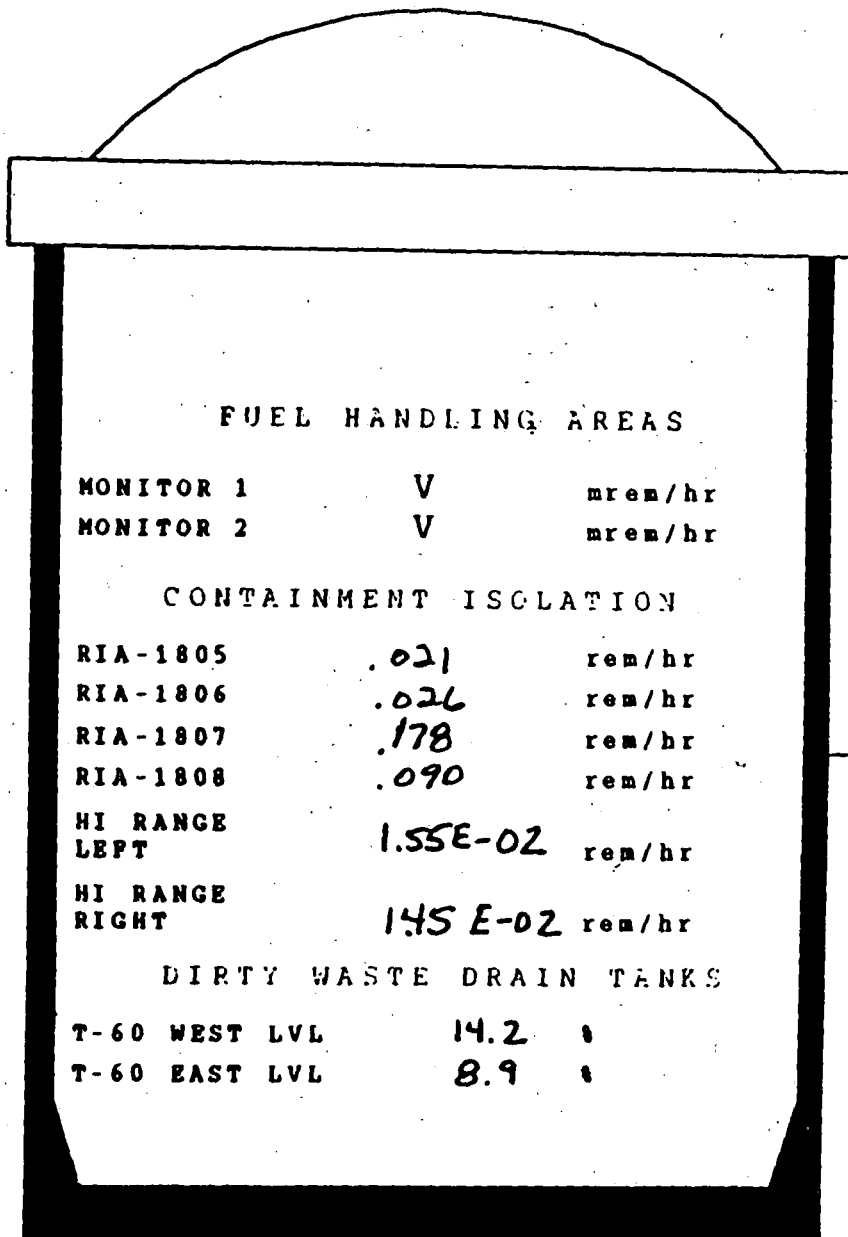
IN STEAM A

40 cpm

IN STEAM B

48 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



FUEL HANDLING AREAS

MONITOR 1 V mrem/hr  
MONITOR 2 V mrem/hr

CONTAINMENT ISOLATION

RIA-1805 .021 rem/hr  
RIA-1806 .026 rem/hr  
RIA-1807 .178 rem/hr  
RIA-1808 .090 rem/hr  
HI RANGE LEFT 1.55E-02 rem/hr  
HI RANGE RIGHT 1.45E-02 rem/hr

DIRTY WASTE DRAIN TANKS

T-60 WEST LVL 14.2  
T-60 EAST LVL 8.9

LO RNG NOBLE GASES 63.8 cpm  
HI RNG NOBLE GASES 1.10 E-01 mrem/hr  
GAS RAD INTR A V cpm  
GAS RAD INST B V cpm  
CONTROL ROOM RAD .10 mrem/hr  
SPENT FUEL POOL NORTH 0.12 mrem/hr  
SOUTH 0.10 mrem/hr

CONDENSER OFFGAS 5.95 E06 cpm  
RAD WASTE PLENUM < 100 cpm  
EAST ENG SAFE GUARDS 220 cpm  
WEST ENG SAFE GUARDS 220 cpm  
RAD WASTE VENT 38 cpm





10/22/96

L

QUID RADIATION  
MONITORSMPONENT COOLING  
TOWER

130 cpm

## SERVICE WATER

380 cpm

## D. WASTE DISCHG

454 cpm

## PM GEN BLOWDOWN

05H cpm

## SXING BASIN

280 cpm

## MAILED FUEL

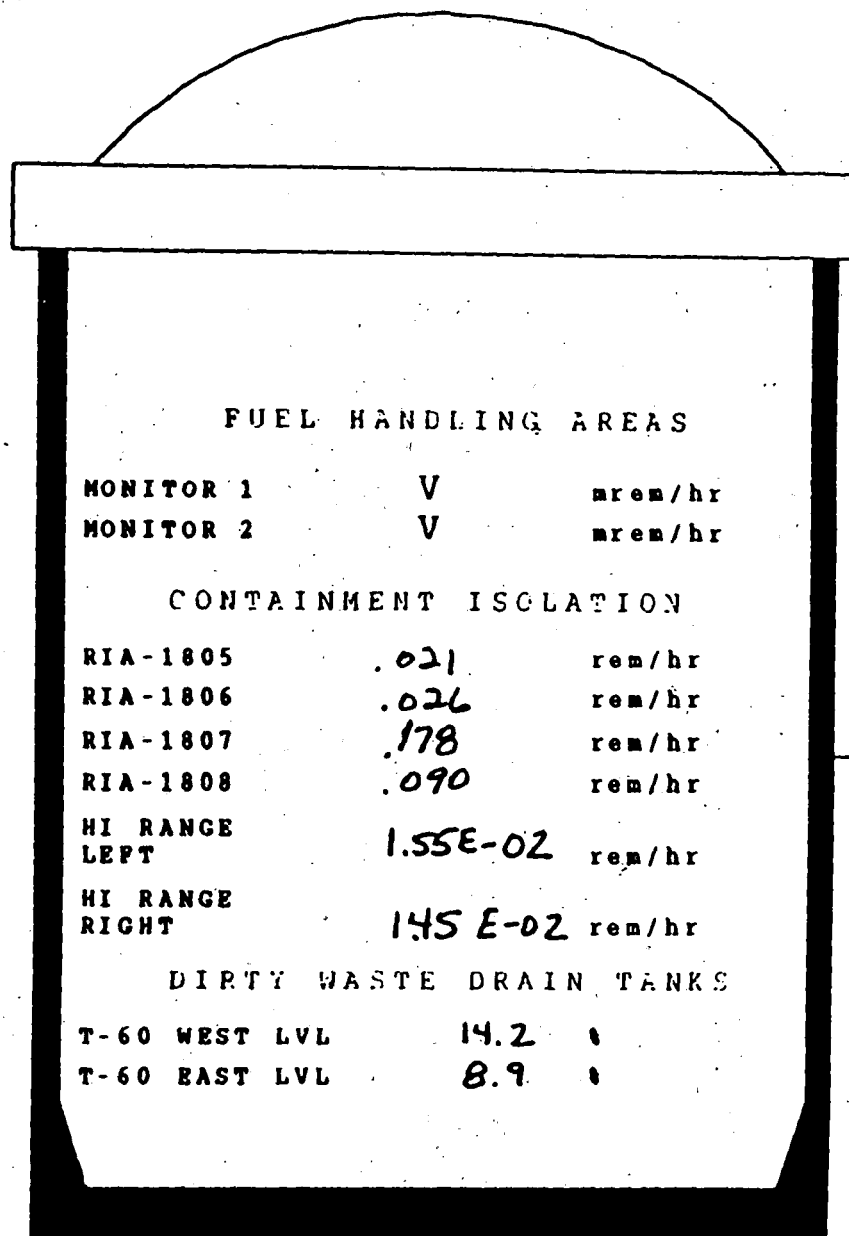
2.46 E-04 cpm

## MAIN STEAM A

40 cpm

## MAIN STEAM B

48 cpm

DECADE DEPENDENT ON  
CONTROL ROOM SWITCH  
POSITION

## STACK MONITORS

## LO RNG NOBLE GASES

62.4 cpm

## HI RNG NOBLE GASES

1.10 E-01 mrem/hr

## GAS RAD INTR A

V cpm

## GAS RAD INST B

V cpm

## CONTROL ROOM RAD

.10 mrem/hr

## SPENT FUEL POOL

## NORTH

0.12 mrem/hr

## SOUTH

0.10 mrem/hr

## CONDENSER OFFGAS

2.5E03 cpm

## RAD WASTE PLENUM

&lt; 100 cpm

## EAST ENG SAFE GUARDS

220 cpm

## WEST ENG SAFE GUARDS

220 cpm

## RAD WASTE VENT

38 cpm

CFMS

F7 ENVIRON  
MENU

F8 ENVIRON

F9 METEOR-  
LOGICAL

F10

F11

F12

F13

F14

F15

MENU

OK

## STACK MONITORS

LO RNG NOBLE GASES  
61.6 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
.10 mrem/hr

SPENT FUEL POOL  
NORTH  
0.12 mrem/hr

SOUTH  
0.10 mrem/hr

## CONDENSER OFFGAS

2.5E03 cpm

## Ø RAD WASTE PLENUM

&lt; 100 cpm

## Ø EAST ENG SAFE GUARDS

220 cpm

## Ø WEST ENG SAFE GUARDS

220 cpm

## RAD WASTE VENT

38 cpm

OK

## LIQUID RADIATION MONITORS

COMPONENT COOLING WATER  
130 cpm

SERVICE WATER  
380 cpm

RAD WASTE DISCHG  
454 cpm

ATM GEN BLOWDOWN  
0.5H cpm

FIXING BASIN  
280 cpm

RAILED FUEL  
2.45 E04 cpm

MAIN STEAM A  
40 cpm

MAIN STEAM B  
48 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION

## FUEL HANDLING AREAS

MONITOR 1 V mrem/hr

MONITOR 2 V mrem/hr

## CONTAINMENT ISOLATION

RIA-1805 .021 rem/hr

RIA-1806 .026 rem/hr

RIA-1807 .178 rem/hr

RIA-1808 .090 rem/hr

HI RANGE LEFT 1.55E-02 rem/hr

HI RANGE RIGHT 1.45 E-02 rem/hr

## DIRTY WASTE DRAIN TANKS

T-60 WEST LVL 14.2

T-60 EAST LVL 8.9

CFMS

F7 ENVIRON  
MENU

F8 ENVIRON

F9 METEOR-  
LOGICAL

F10

F11

F12

F13

F14

F15

MENU



10/22/96

09

STACK MONITORS

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

130 cpm

380 cpm

454 cpm

05H cpm

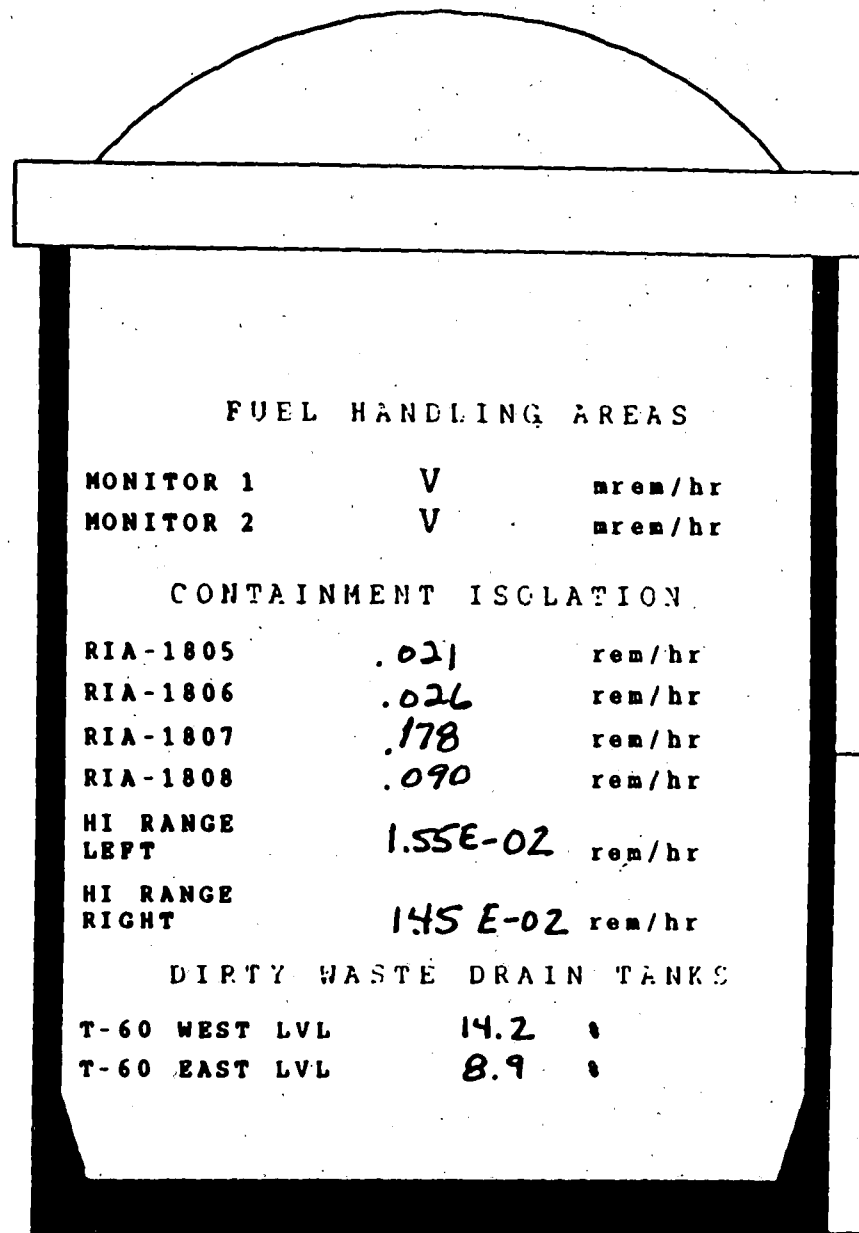
280 cpm

2.44E04 cpm

40 cpm

47 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



LO RNG NOBLE GASES

62.4 cpm

HI RNG NOBLE GASES

1.10 E-01 mrem/hr

GAS RAD INSTR A

V cpm

GAS RAD INSTR B

V cpm

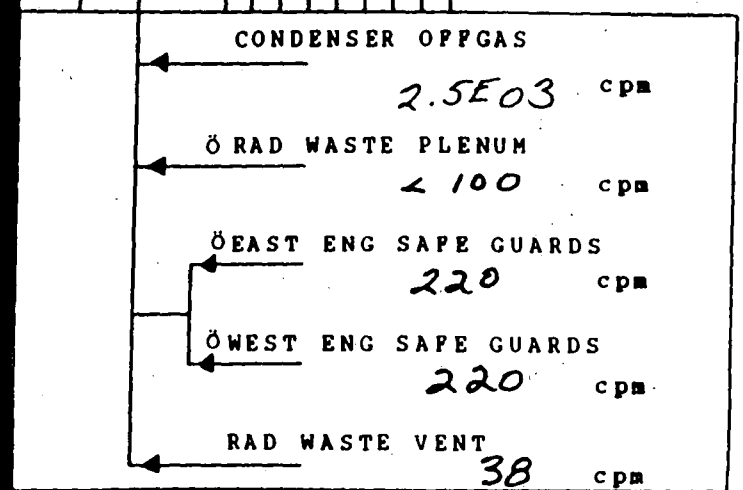
CONTROL ROOM RAD

.10 mrem/hr

SPENT FUEL POOL

NORTH 0.12 mrem/hr

SOUTH 0.10 mrem/hr



STACK MONITORS

LOW RNG NOBLE GASES  
60.6 cpm

HIGH RNG NOBLE GASES  
1.10 E-01 mrem/hr

GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
.10 mrem/hr

SPENT FUEL POOL  
NORTH  
0.12 mrem/hr

SOUTH  
0.10 mrem/hr

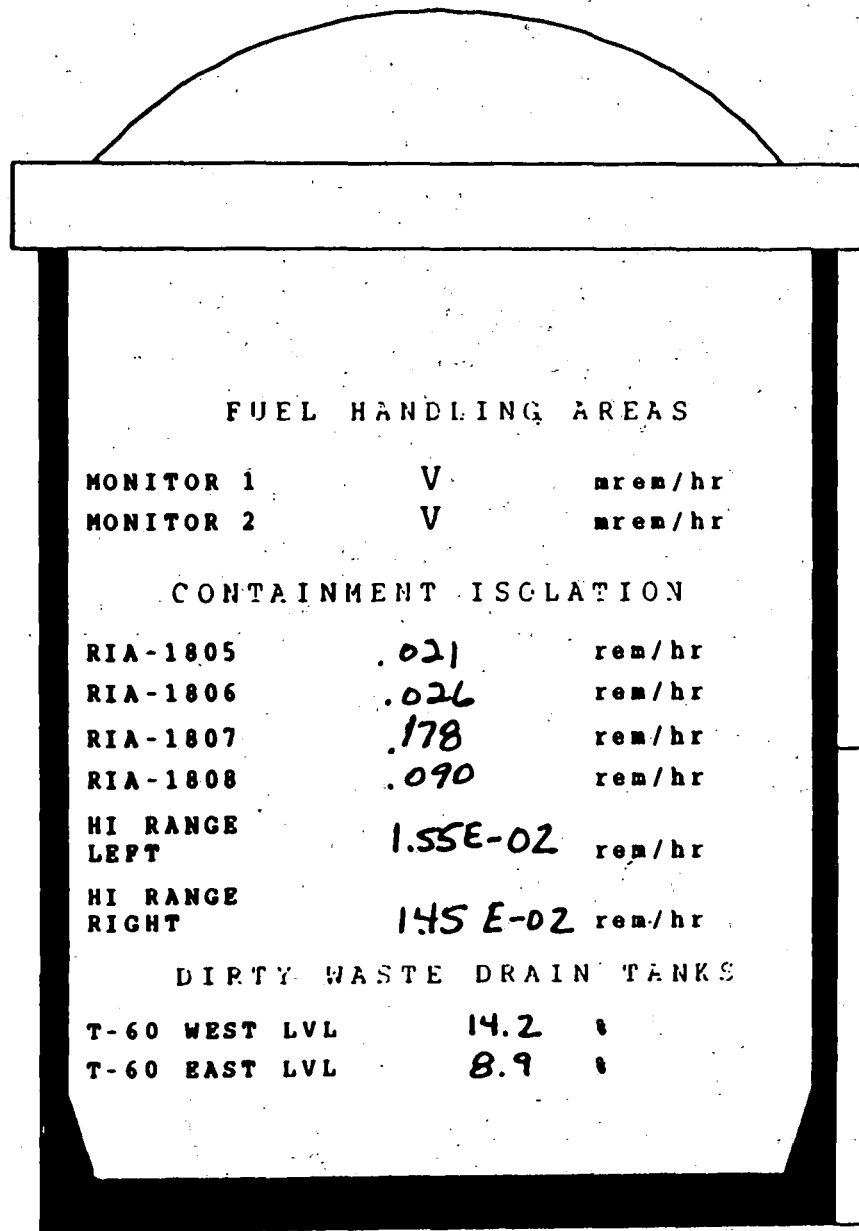
CONDENSER OFFGAS  
2.5E03 cpm

RAD WASTE PLENUM  
< 100 cpm

EAST ENG SAFE GUARDS  
220 cpm

WEST ENG SAFE GUARDS  
220 cpm

RAD WASTE VENT  
38 cpm



FUEL HANDLING AREAS

MONITOR 1 V mrem/hr

MONITOR 2 V mrem/hr

CONTAINMENT ISOLATION

RIA-1805 .021 rem/hr

RIA-1806 .026 rem/hr

RIA-1807 .178 rem/hr

RIA-1808 .090 rem/hr

HI RANGE LEFT 1.55E-02 rem/hr

HI RANGE RIGHT 1.45 E-02 rem/hr

DIRTY WASTE DRAIN TANKS

T-60 WEST LVL 14.2

T-60 EAST LVL 8.9

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER  
130 cpm

SERVICE WATER  
380 cpm

RAD WASTE DISCHG  
454 cpm

TRIM GEN BLOWDOWN  
0.5H cpm

TRIMMING BASIN  
280 cpm

TRIMMED FUEL  
1.36 E04 cpm

MAIN STEAM A  
40 cpm

MAIN STEAM B  
47 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION

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QUID RADIATION MONITORS

COMPONENT COOLING WATER

130 cpm

SERVICE WATER

380 cpm

WASTE DISCHARGE

454 cpm

GEN BLOWDOWN

OSH cpm

WATER BASIN

280 cpm

WASTED FUEL

2.42E04 cpm

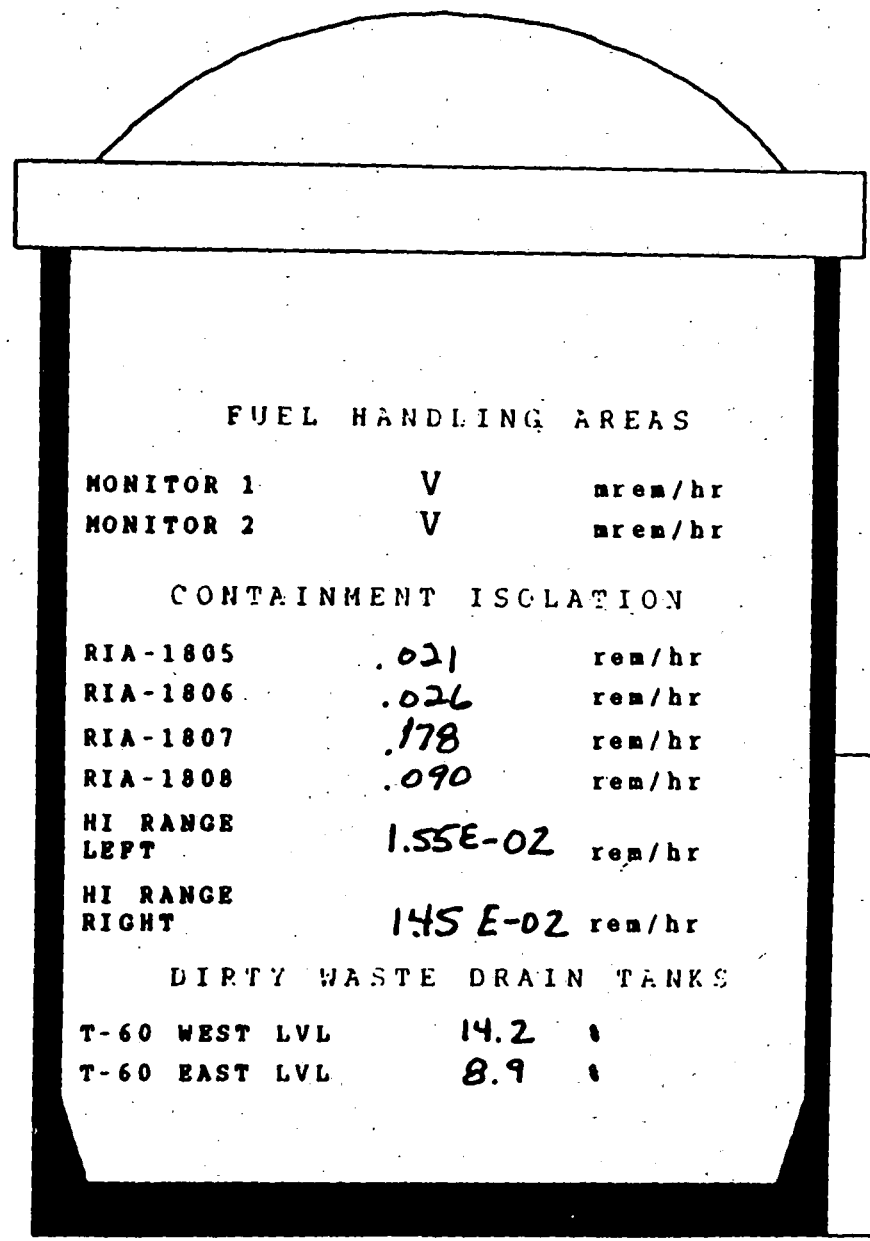
MAIN STEAM A

40 cpm

MAIN STEAM B

47 cpm

DEPENDENT ON CONTROL ROOM SWITCH POSITION



STACK MONITORS

LO RNG NOBLE GASES  
61.7 cpm

HI RNG NOBLE GASES  
1.10E-01 mrem/hr

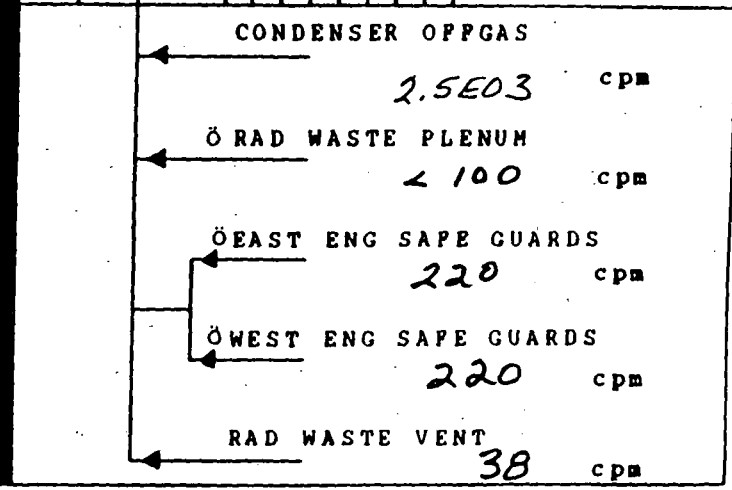
GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
.10 mrem/hr

SPENT FUEL POOL  
NORTH  
0.12 mrem/hr

SOUTH  
0.10 mrem/hr



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10.

STACK MONITORS

QUID RADIATION MONITORS

COMPONENT COOLING WATER

130 cpm

SERVICE WATER

380 cpm

CONDENSATE WASTE DISCHG

454 cpm

REACTOR GEN BLOWDOWN

05H cpm

EXHAUSTING BASIN

280 cpm

UNDEPLETED FUEL

2.4E-04 cpm

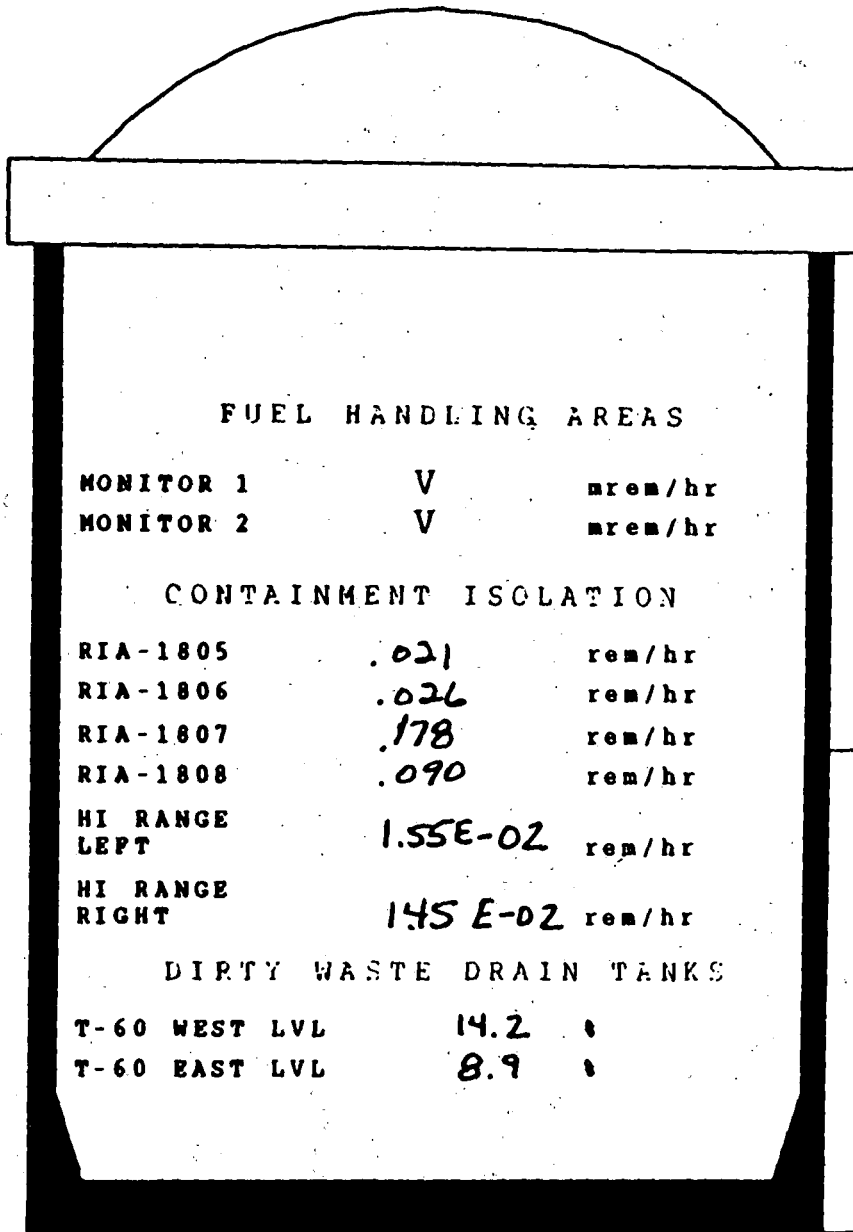
MAIN STEAM A

40 cpm

MAIN STEAM B

47 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



FUEL HANDLING AREAS

MONITOR 1 V nrem/hr  
MONITOR 2 V nrem/hr

CONTAINMENT ISOLATION

RIA-1805 .021 rem/hr  
RIA-1806 .026 rem/hr  
RIA-1807 .178 rem/hr  
RIA-1808 .090 rem/hr  
HI RANGE LEFT 1.55E-02 rem/hr  
HI RANGE RIGHT 1.45E-02 rem/hr

DIRTY WASTE DRAIN TANKS

T-60 WEST LVL 14.2  
T-60 EAST LVL 8.9

LO RNG NOBLE GASES

60.5 cpm

HI RNG NOBLE GASES

1.10E-01 nrem/hr

GAS RAD INTR A

V cpm

GAS RAD INST B

V cpm

CONTROL ROOM RAD

.10 nrem/hr

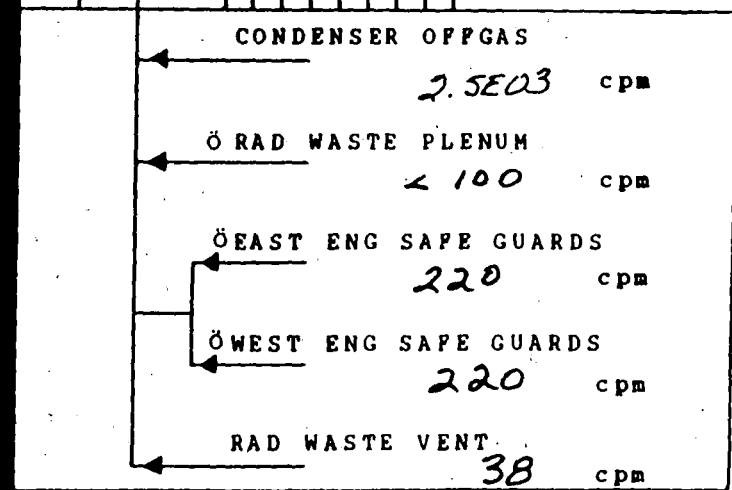
SPENT FUEL POOL

NORTH

0.12 nrem/hr

SOUTH

0.10 nrem/hr



CONDENSER OFFGAS

2.5E-03 cpm

RAD WASTE PLENUM

< 100 cpm

EAST ENG SAFE GUARDS

220 cpm

WEST ENG SAFE GUARDS

220 cpm

RAD WASTE VENT

38 cpm



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STACK MONITORS

LO RNG NOBLE GASES  
60.5 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
.54 mrem/hr

SPENT FUEL POOL  
NORTH  
50 mrem/hr

SOUTH  
50 mrem/hr

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

05H cpm

SERVICE WATER  
380 cpm

RAID WASTE DISCHG  
454 cpm

FROM GEN BLOWDOWN  
05H cpm

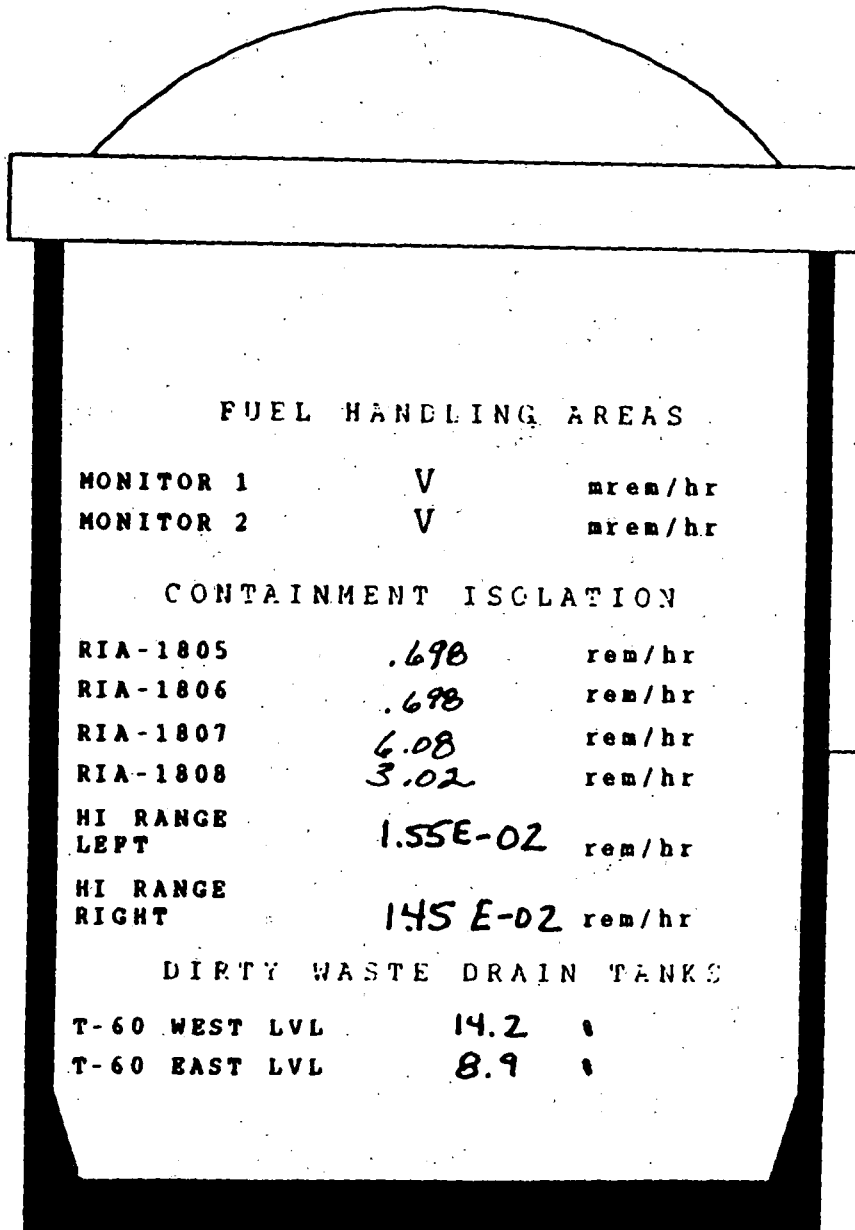
TRIXING BASIN  
280 cpm

TRIAILED FUEL  
1.00 E05 cpm

TRIAIN STEAM A  
50 cpm

TRIAIN STEAM B  
7550 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



FUEL HANDLING AREAS

MONITOR 1 V mrem/hr

MONITOR 2 V mrem/hr

CONTAINMENT ISOLATION

RIA-1805 .698 rem/hr

RIA-1806 .698 rem/hr

RIA-1807 6.08 rem/hr

RIA-1808 3.02 rem/hr

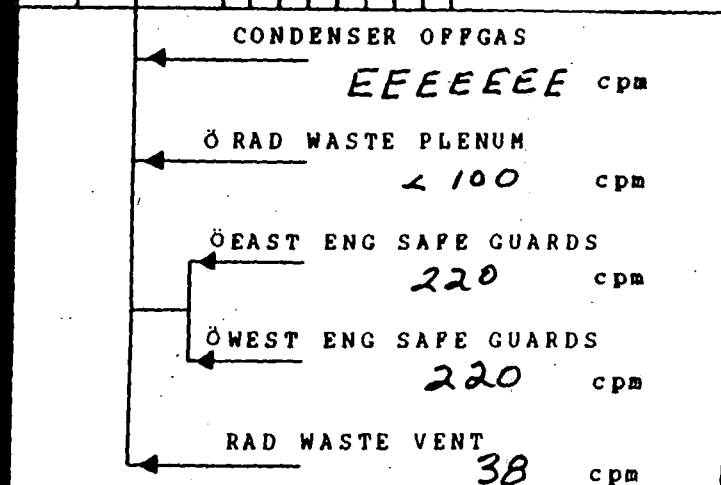
HI RANGE LEFT 1.55E-02 rem/hr

HI RANGE RIGHT 145 E-02 rem/hr

DIRTY WASTE DRAIN TANKS

T-60 WEST LVL 14.2

T-60 EAST LVL 8.9



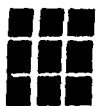
CONDENSER OFFGAS  
EEEEEEE cpm

RAD WASTE PLENUM  
< 100 cpm

EAST ENG SAFE GUARDS  
220 cpm

WEST ENG SAFE GUARDS  
220 cpm

RAD WASTE VENT  
38 cpm

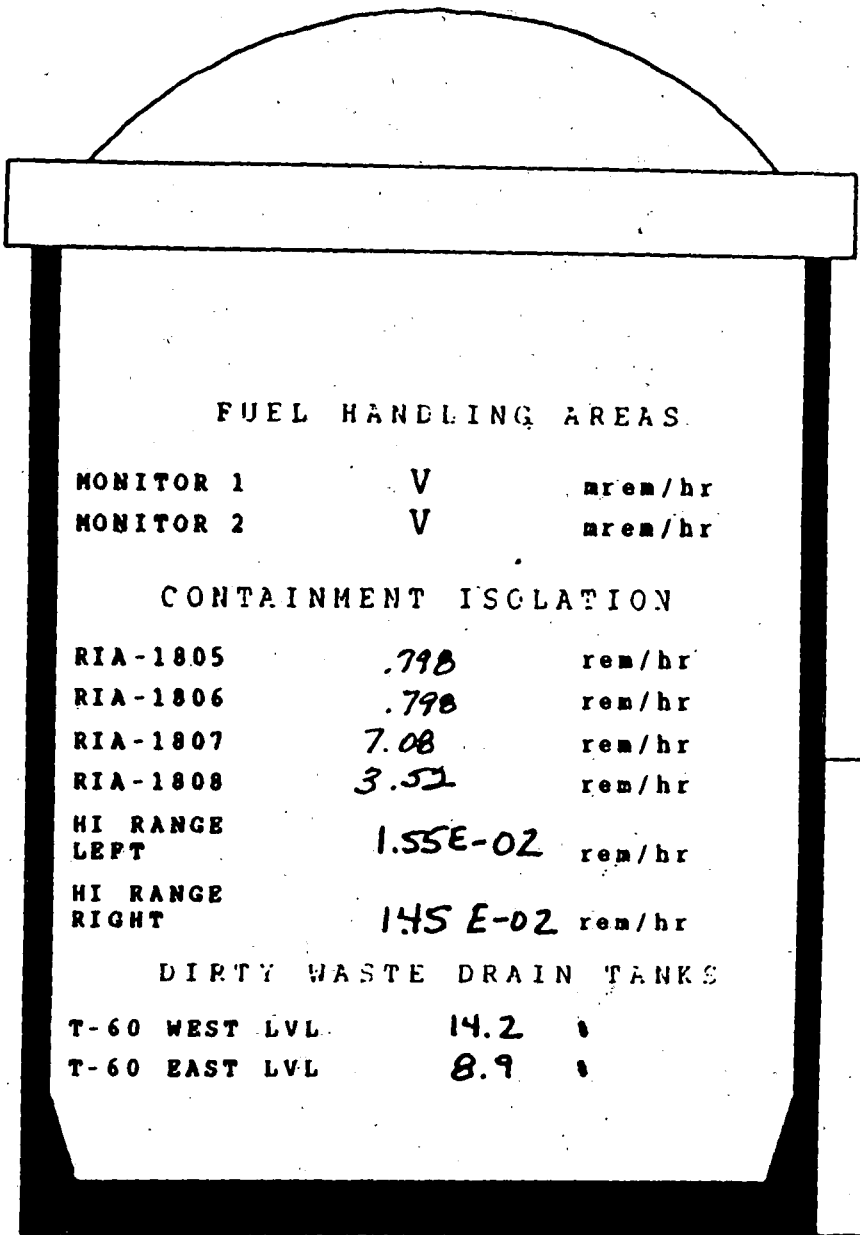


LIQUID RADIATION MONITORS

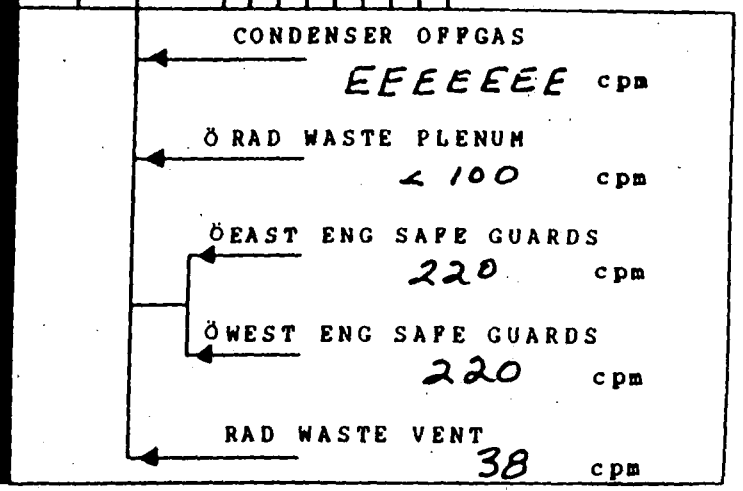
COMPONENT COOLING WATER

OSH	cpm
SERVICE WATER	
380	cpm
RAD WASTE DISCHG	
454	cpm
1 <sup>ST</sup> GEN BLOWDOWN	
OSH	cpm
FIXING BASIN	
280	cpm
RAILED FUEL	
9.0E05	cpm
MAIN STEAM A	
140	cpm
MAIN STEAM B	
9.050	cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



LO RNG NOBLE GASES	60.9	cpm
HI RNG NOBLE GASES	1.10 E-01	mrem/hr
GAS RAD INTR A	V	cpm
GAS RAD INST B	V	cpm
CONTROL ROOM RAD	.78	mrem/hr
SPENT FUEL POOL		
NORTH	70	mrem/hr
SOUTH	70	mrem/hr





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LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

05H cpm

SERVICE WATER

380 cpm

CONDENSATE WASTE DISCHG

454 cpm

GEN BLOWDOWN

05H cpm

DECONTAMINATING BASIN

280 cpm

SPENT FUEL

05H cpm

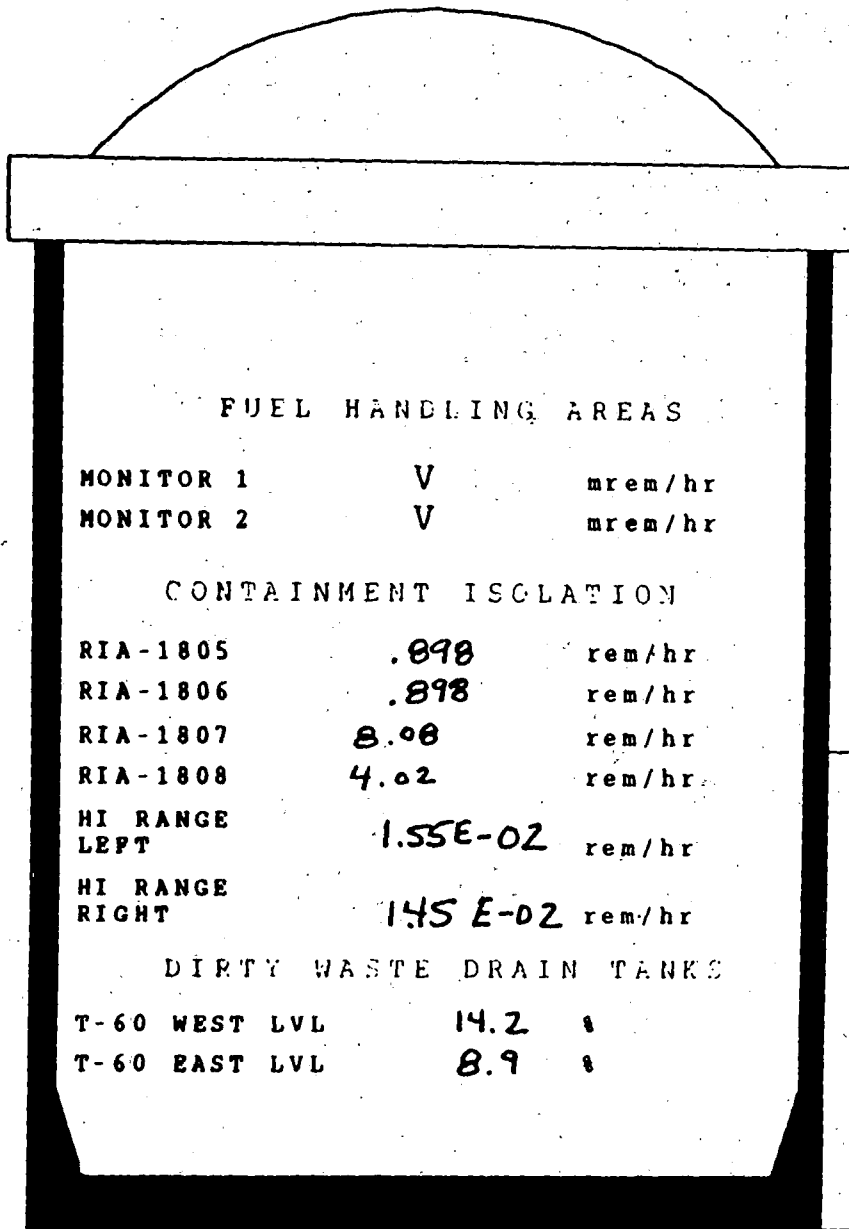
MAIN STEAM A

165 cpm

MAIN STEAM B

12000 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



STACK MONITORS

LO RNG NOBLE GASES

61.0 cpm

HI RNG NOBLE GASES

1.10E-01 mrem/hr

GAS RAD INTR A

V cpm

GAS RAD INST B

V cpm

CONTROL ROOM RAD

4.7 mrem/hr

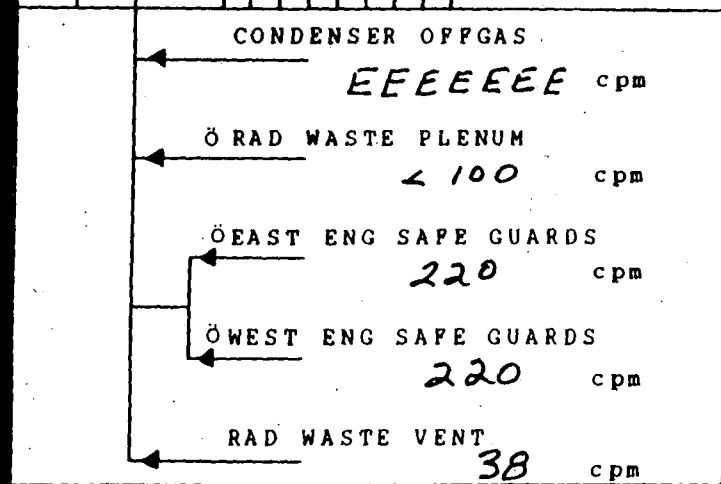
SPENT FUEL POOL

NORTH

430 mrem/hr

SOUTH

430 mrem/hr



OK

10/22/96

STACK MONITORS

LO RING NOBLE GASES  
61.0 cpm

HI RING NOBLE GASES  
1.10 E-01 mrem/hr

GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
10.3 mrem/hr

SPENT FUEL POOL  
NORTH  
930 mrem/hr

SOUTH  
930 mrem/hr

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

OSH cpm

SERVICE WATER  
380 cpm

COND WASTE DISCHG  
454 cpm

FROM GEN BLOWDOWN  
OSH cpm

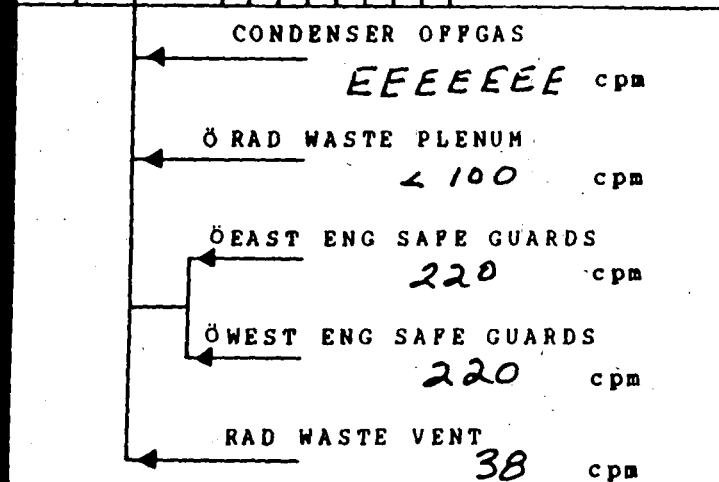
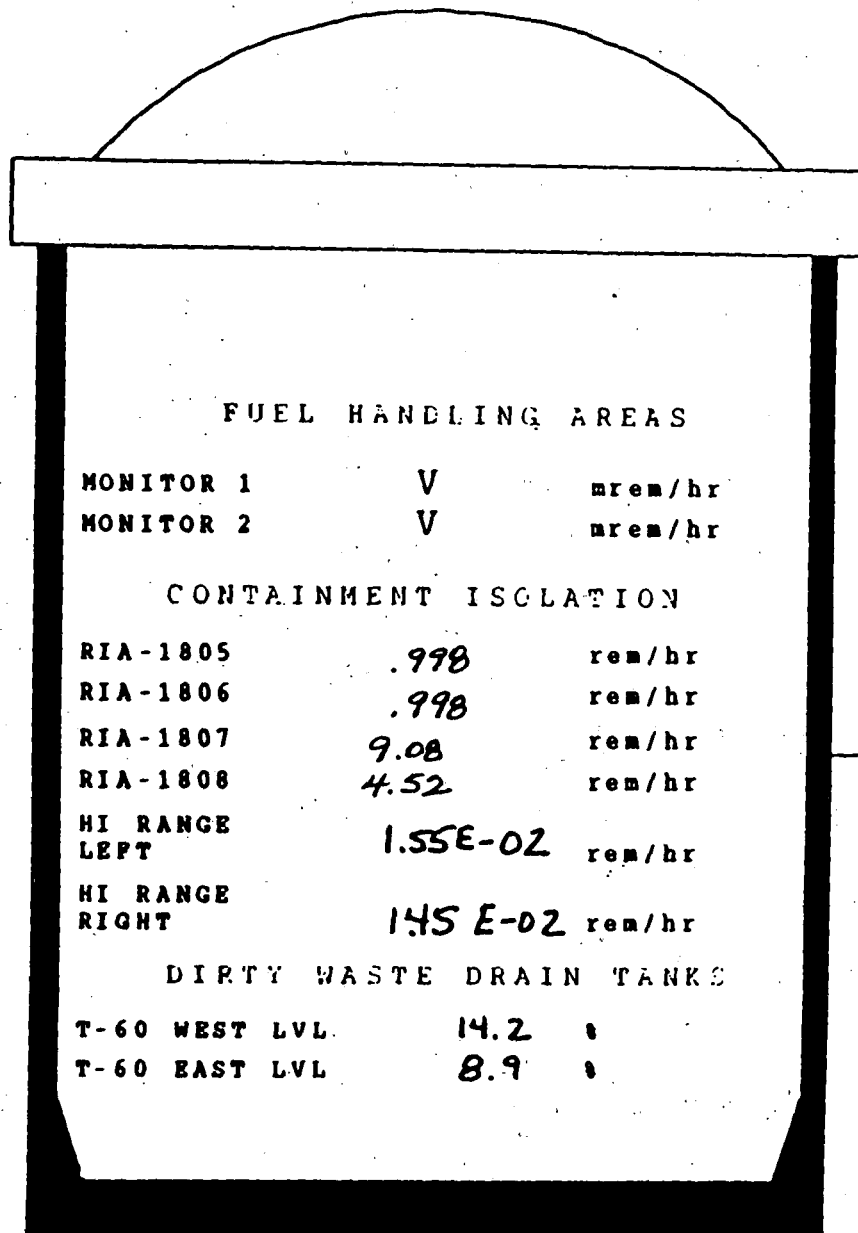
FIXING BASIN  
280 cpm

MAILED FUEL  
OSH cpm

MAIN STEAM A  
190 cpm

MAIN STEAM B  
15000 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



STACK MONITORS

LO RNG NOBLE GASES  
61.2 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
9.7 mrem/hr

SPENT FUEL POOL  
NORTH  
880 mrem/hr

SOUTH  
880 mrem/hr

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

OSH cpm

SERVICE WATER  
380 cpm

AD WASTE DISCHG  
454 cpm

TH GEN BLOWDOWN  
OSH cpm

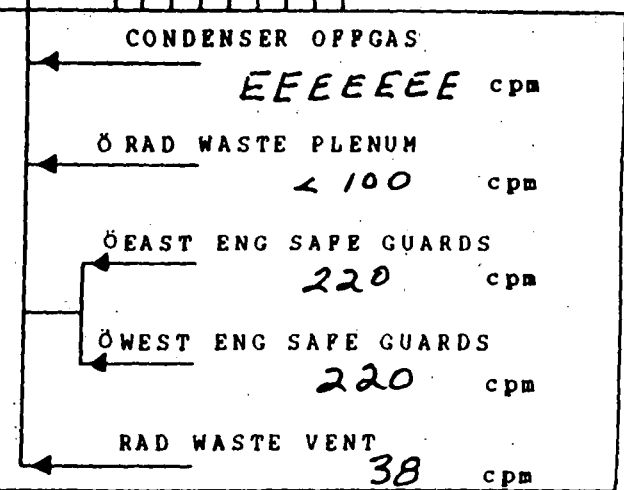
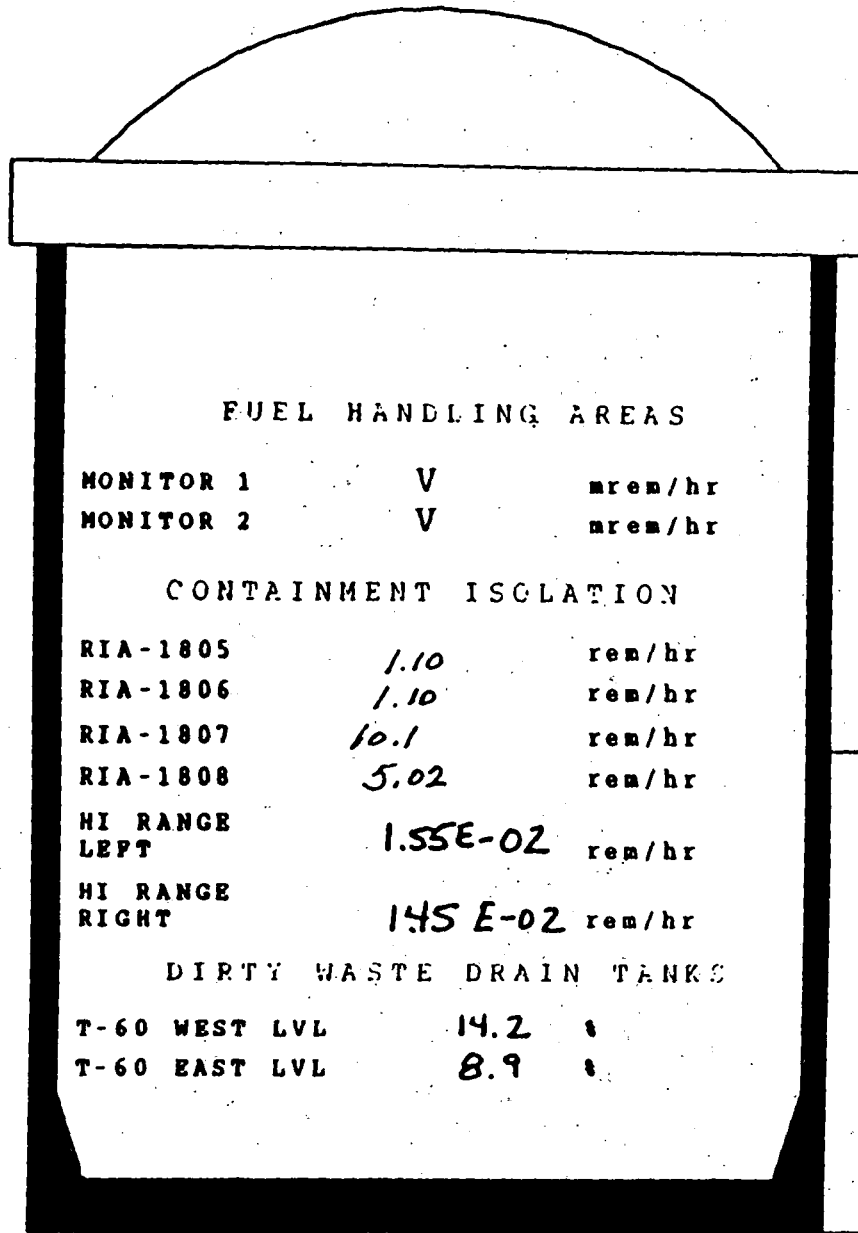
FIXING BASIN  
280 cpm

PAILED FUEL  
OSH cpm

MAIN STEAM A  
13000 cpm

MAIN STEAM B  
140 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



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120

STACK MONITORS

LO RNG NOBLE GASES  
63.1 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
4.6 mrem/hr

SPENT FUEL POOL  
NORTH  
600 mrem/hr

SOUTH  
600 mrem/hr

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER  
OSH cpm

SERVICE WATER  
380 cpm

RAD WASTE DISCHG  
454 cpm

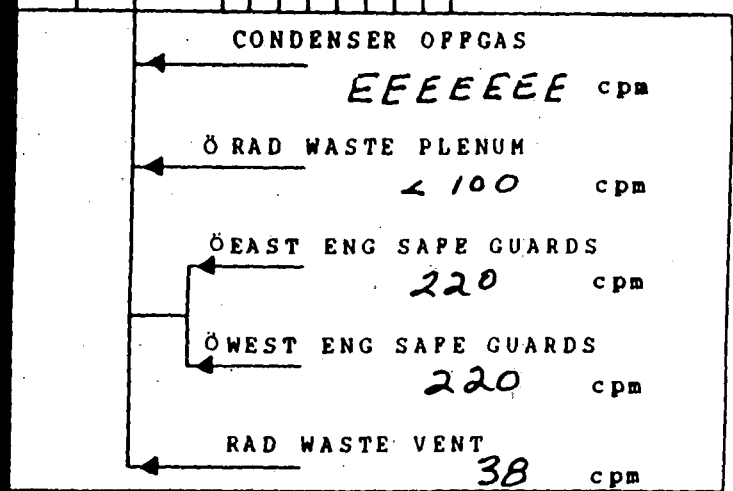
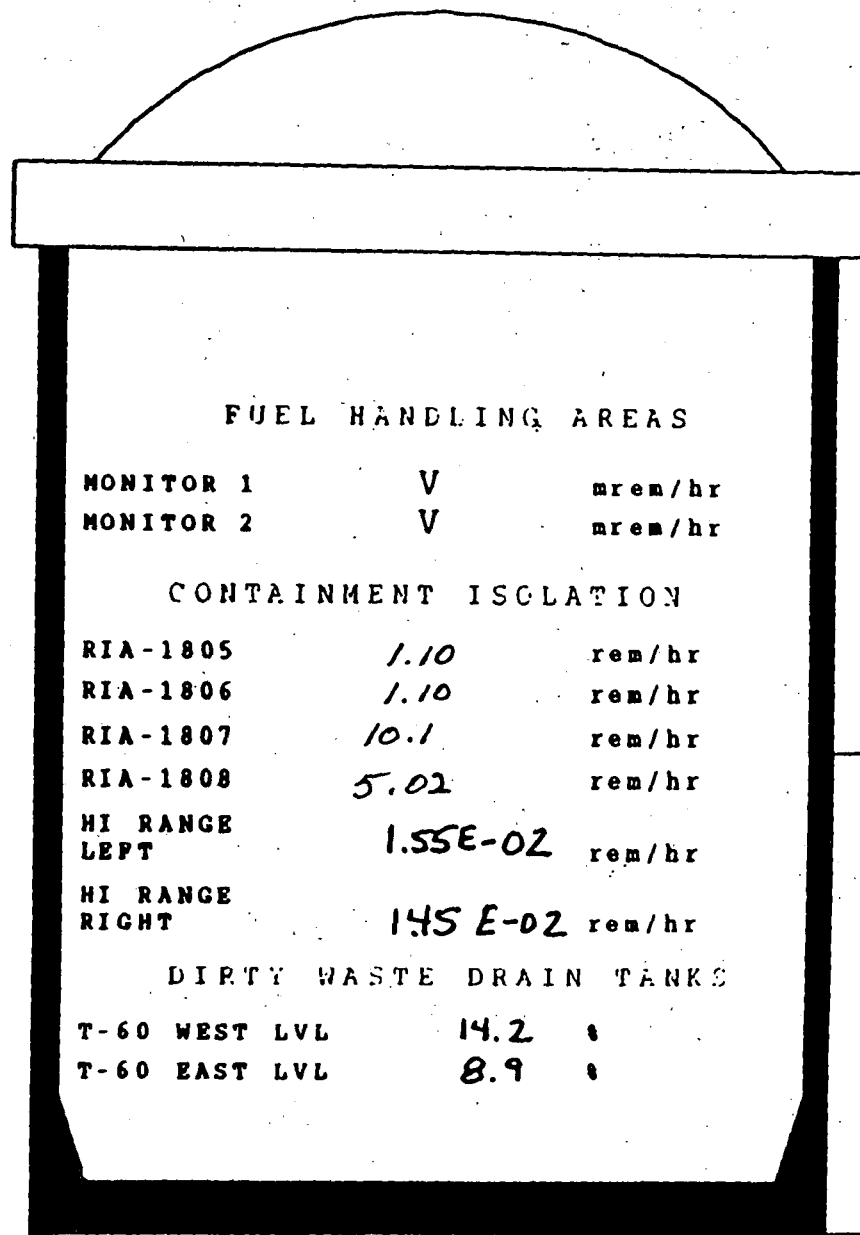
RM GEN BLOWDOWN  
OSH cpm

FIXING BASIN  
280 cpm

MAILED FUEL  
OSH cpm

MAIN STEAM A  
130 cpm

MAIN STEAM B  
12000 cpm



DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION

10/22/96

5

STACK MONITORS

LO RNG NOBLE GASES  
63.9 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

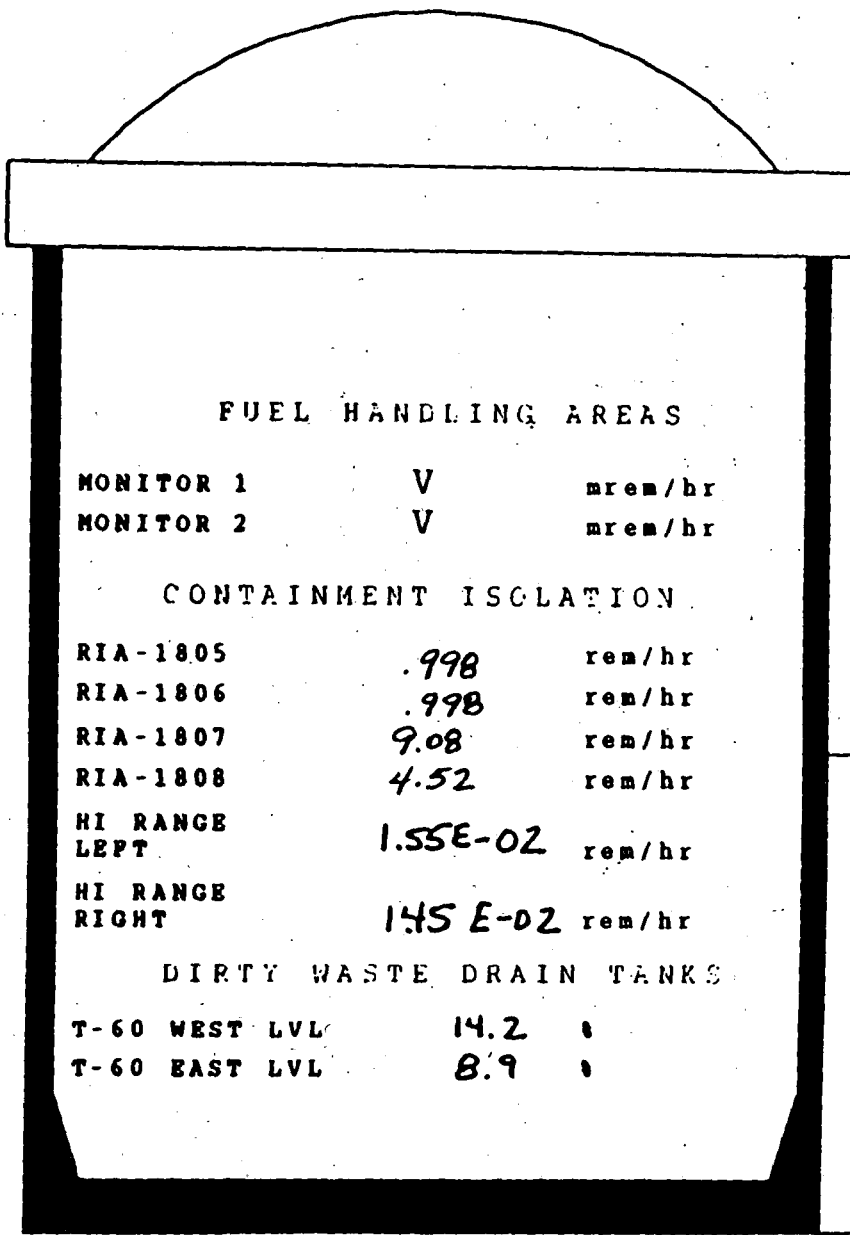
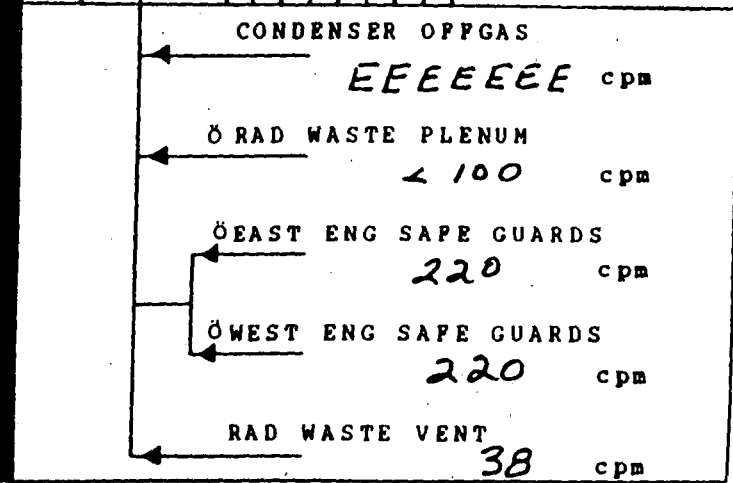
GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
5.3 mrem/hr

SPENT FUEL POOL  
NORTH  
480 mrem/hr

SOUTH  
480 mrem/hr



FUEL HANDLING AREAS

MONITOR 1 V mrem/hr

MONITOR 2 V mrem/hr

CONTAINMENT ISOLATION

RIA-1805 .998 rem/hr

RIA-1806 .998 rem/hr

RIA-1807 9.08 rem/hr

RIA-1808 4.52 rem/hr

HI RANGE LEFT 1.55E-02 rem/hr

HI RANGE RIGHT 1.45 E-02 rem/hr

DIRTY WASTE DRAIN TANKS

T-60 WEST LVL 14.2

T-60 EAST LVL 8.9

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

OSH cpm

SERVICE WATER

380 cpm

RAD WASTE DISCHG

454 cpm

TRIM GEN BLOWDOWN

OSH cpm

TRIMMING BASIN

280 cpm

TRIMMED FUEL

OSH cpm

MAIN STEAM A

130 cpm

MAIN STEAM B

11000 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION

10/22/96

STACK MONITORS

LO RNG NOBLE GASES  
63.9 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

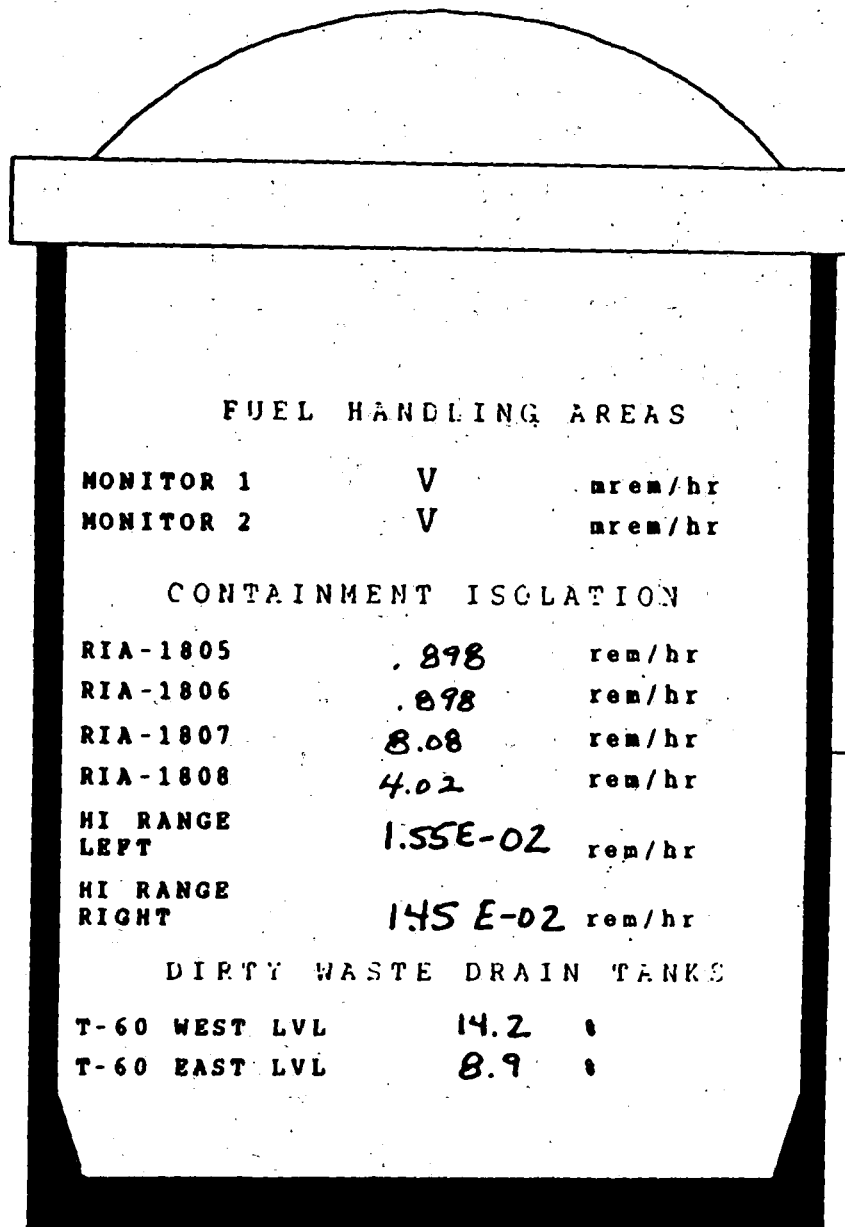
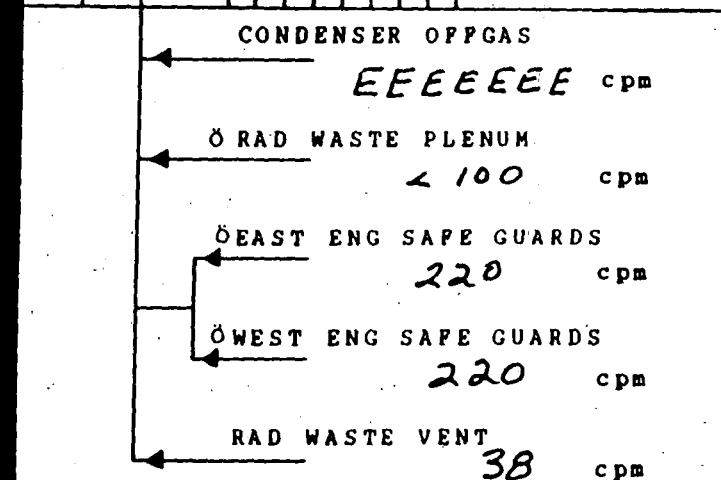
GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
4.4 mrem/hr

SPENT FUEL POOL  
NORTH  
400 mrem/hr

SOUTH  
400 mrem/hr



LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

OSH cpm

SERVICE WATER

380 cpm

RAD WASTE DISCHG

454 cpm

ATM GEN BLOWDOWN

OSH cpm

FIXING BASIN

280 cpm

RAILED FUEL

OSH cpm

MAIN STEAM A

130 cpm

MAIN STEAM B

10000 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION

OK

10/22/96

16

STACK MONITORS

LO RNG NOBLE GASES  
61.5 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

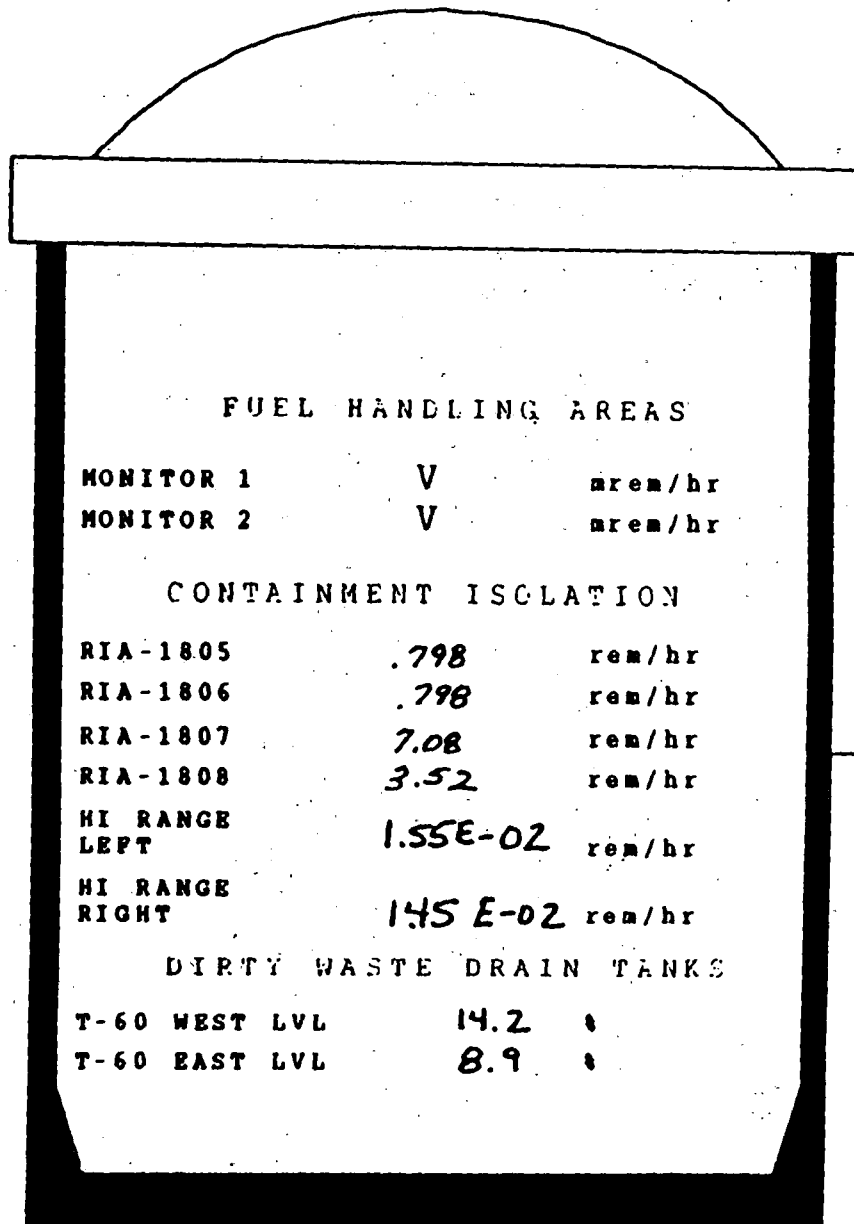
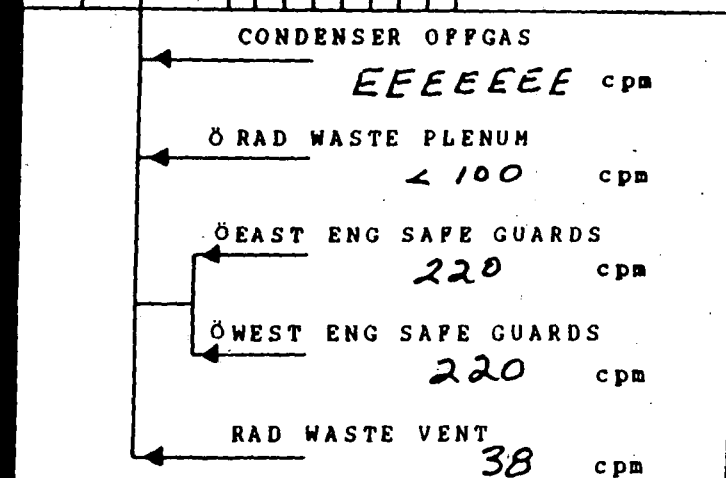
GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
3.5 mrem/hr

SPENT FUEL POOL  
NORTH  
320 mrem/hr

SOUTH  
320 mrem/hr



LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

OSH cpm

SERVICE WATER 380 cpm

RAD WASTE DISCHG 454 cpm

TRM GEN BLOWDOWN OSH cpm

TRIXING BASIN 280 cpm

TRIAILED FUEL OSH cpm

TRIAIN STEAM A 130 cpm

TRIAIN STEAM B 9000 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION

OK

STACK MONITORS

LO RNG NOBLE GASES  
62.5 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
3.1 mrem/hr

SPENT FUEL POOL  
NORTH  
275 mrem/hr

SOUTH  
275 mrem/hr

CONDENSER OFFGAS  
EEEEEEE cpm

Ø RAD WASTE PLENUM  
< 100 cpm

Ø EAST ENG SAFE GUARDS  
220 cpm

Ø WEST ENG SAFE GUARDS  
220 cpm

RAD WASTE VENT  
38 cpm

FUEL HANDLING AREAS

MONITOR 1 V mrem/hr

MONITOR 2 V mrem/hr

CONTAINMENT ISGLATION

RIA-1805 .698 rem/hr

RIA-1806 .698 rem/hr

RIA-1807 4.08 rem/hr

RIA-1808 3.02 rem/hr

HI RANGE LEFT 1.55E-02 rem/hr

HI RANGE RIGHT 1.45 E-02 rem/hr

DIRTY WASTE DRAIN TANKS

T-60 WEST LVL 14.2

T-60 EAST LVL 8.9

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

05H cpm

SERVICE WATER 380 cpm

AD WASTE DISCHG 454 cpm

TM GEN BLOWDOWN 05H cpm

MIXING BASIN 280 cpm

PAILED FUEL 05H cpm

MAIN STEAM A 130 cpm

MAIN STEAM B 8500 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



STACK MONITORS

LO RNG NOBLE GASES  
63.5 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
2.7 mrem/hr

SPENT FUEL POOL  
NORTH  
245 mrem/hr

SOUTH  
245 mrem/hr

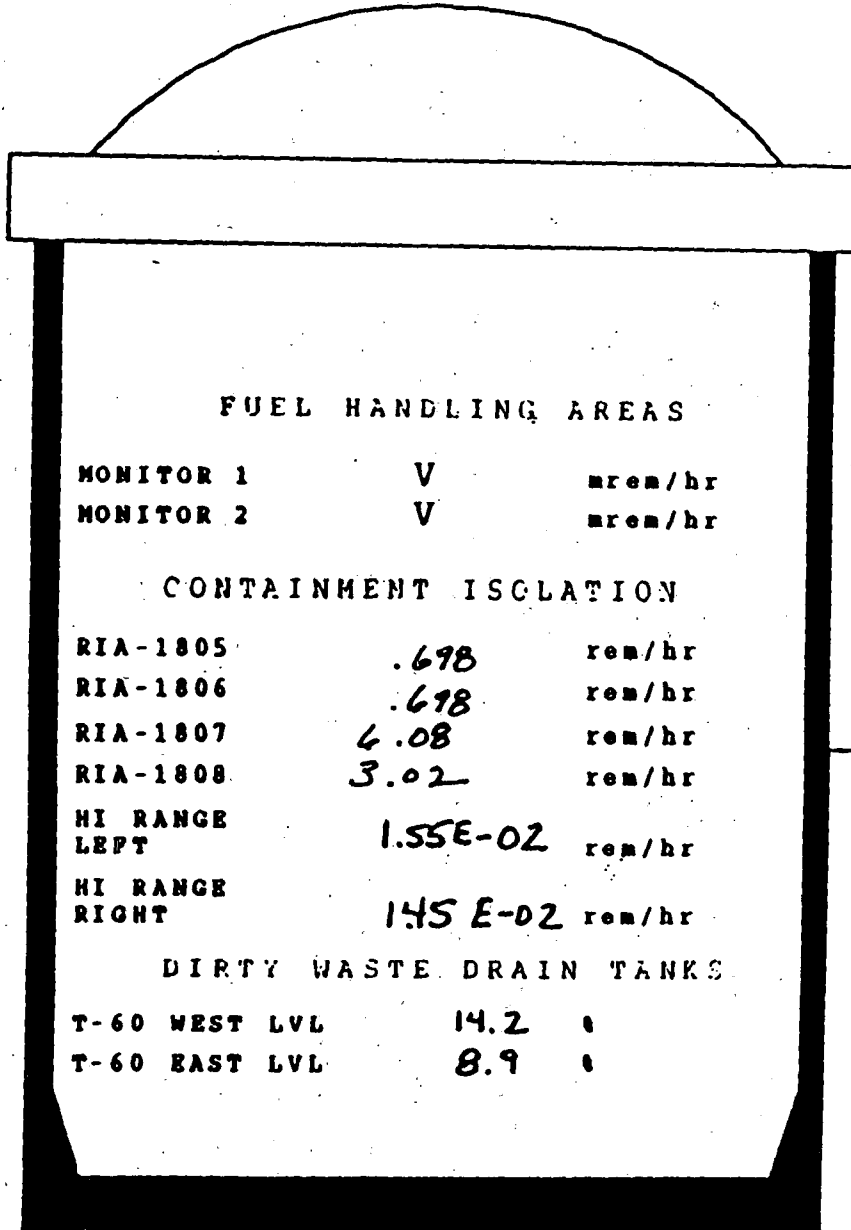
CONDENSER OFFGAS  
EEEEEE cpm

Ø RAD WASTE PLENUM  
< 100 cpm

Ø EAST ENG SAFE GUARDS  
220 cpm

Ø WEST ENG SAFE GUARDS  
220 cpm

RAD WASTE VENT  
38 cpm



FUEL HANDLING AREAS

MONITOR 1 V mrem/hr

MONITOR 2 V mrem/hr

CONTAINMENT ISGLATION

RIA-1805 .698 rem/hr

RIA-1806 .698 rem/hr

RIA-1807 4.08 rem/hr

RIA-1808 3.02 rem/hr

HI RANGE LEFT 1.55E-02 rem/hr

HI RANGE RIGHT 145 E-02 rem/hr

DIRTY WASTE DRAIN TANKS

T-60 WEST LVL 14.2 c

T-60 EAST LVL 8.9 c

LIQUID RADIATION MONITORS

REACTOR COOLING WATER

05H cpm

CONDENSATE WATER 380 cpm

WASTE DISCHG 454 cpm

GEN BLOWDOWN 05H cpm

TRAP BASIN 280 cpm

TRAPED FUEL 05H cpm

IN STEAM A 130 cpm

IN STEAM B 8000 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION

10/22/96

STACK MONITORS

LO RNG NOBLE GASES  
62.9 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
2.7 mrem/hr

SPENT FUEL POOL  
NORTH  
245 mrem/hr

SOUTH  
245 mrem/hr

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

OSH cpm

SERVICE WATER

380 cpm

CONDENSATE WASTE DISCHG

454 cpm

MAIN GEN BLOWDOWN

OSH cpm

CONDENSING BASIN

280 cpm

CONDENSED FUEL

OSH cpm

CONDENSING STEAM A

130 cpm

CONDENSING STEAM B

7500 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION

FUEL HANDLING AREAS

MONITOR 1 V mrem/hr

MONITOR 2 V mrem/hr

CONTAINMENT ISOLATION

RIA-1805 .698 rem/hr

RIA-1806 .698 rem/hr

RIA-1807 4.08 rem/hr

RIA-1808 3.02 rem/hr

HI RANGE LEFT 1.55E-02 rem/hr

HI RANGE RIGHT 1.45 E-02 rem/hr

DIRTY WASTE DRAIN TANKS

T-60 WEST LVL 14.2

T-60 EAST LVL 8.9

CONDENSER OFFGAS

EEEEEE cpm

CONDENSER RAD WASTE PLENUM

< 100 cpm

CONDENSER EAST ENG SAFE GUARDS

220 cpm

CONDENSER WEST ENG SAFE GUARDS

220 cpm

CONDENSER RAD WASTE VENT

38 cpm

OK



10/22/96

STACK MONITORS

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

OSH cpm

SERVICE WATER

380 cpm

COND WASTE DISCHG

454 cpm

MAIN GEN BLOWDOWN

OSH cpm

CONDENSING BASIN

280 cpm

CONDENSED FUEL

OSH cpm

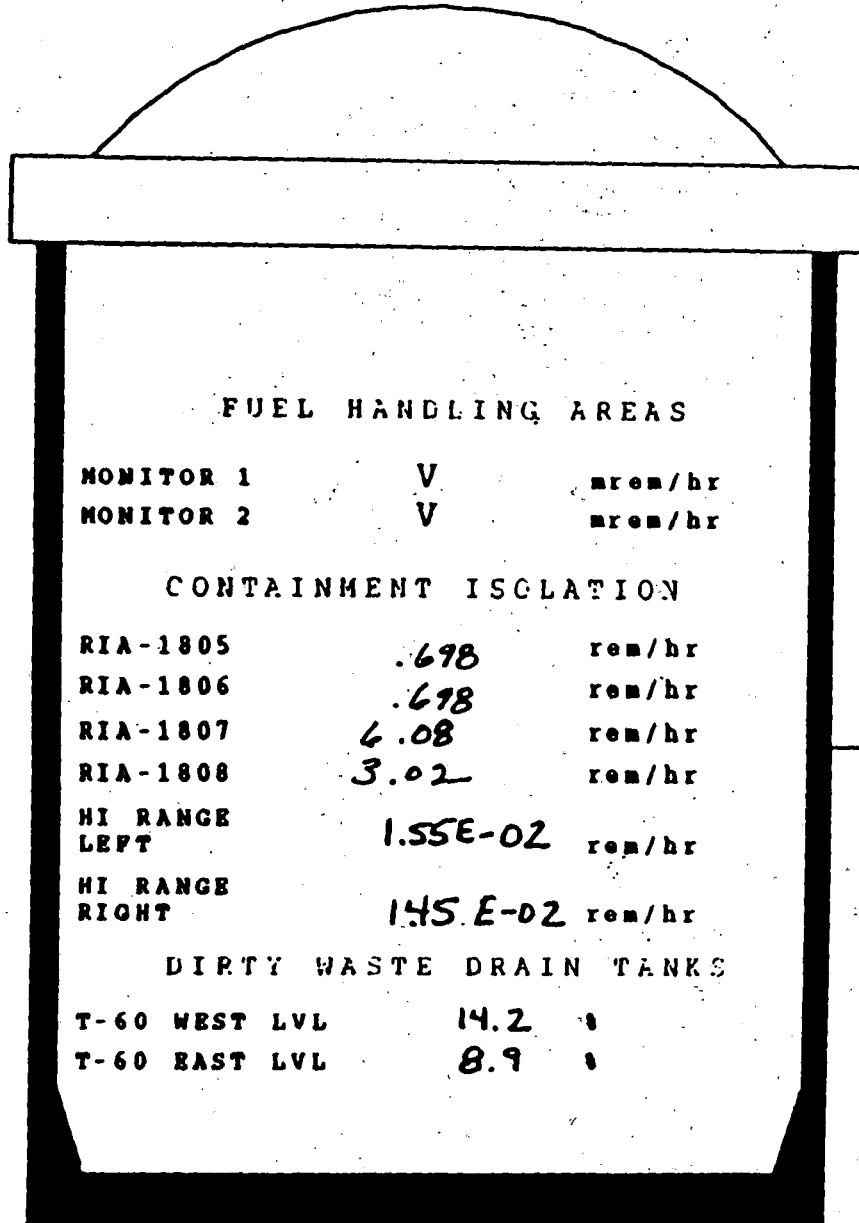
CONDENSING STEAM A

130 cpm

CONDENSING STEAM B

7000 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



LO RNG NOBLE GASES  
63.2 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

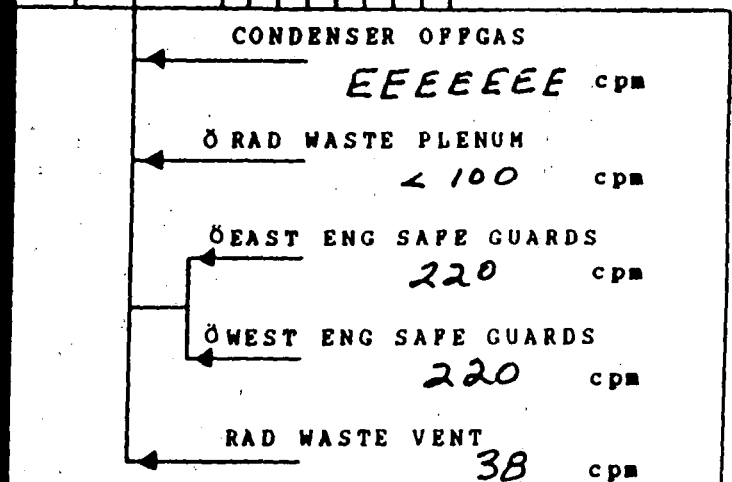
GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
2.2 mrem/hr

SPENT FUEL POOL  
NORTH  
200 mrem/hr

SOUTH  
200 mrem/hr



10/22/96

STACK MONITORS

QUID RADIATION MONITORS

COMPONENT COOLING WATER

05H cpm

SERVICE WATER

380 cpm

WASTE DISCHG

454 cpm

GEN BLOWDOWN

05H cpm

STEAM BASIN

280 cpm

HEATED FUEL

05H cpm

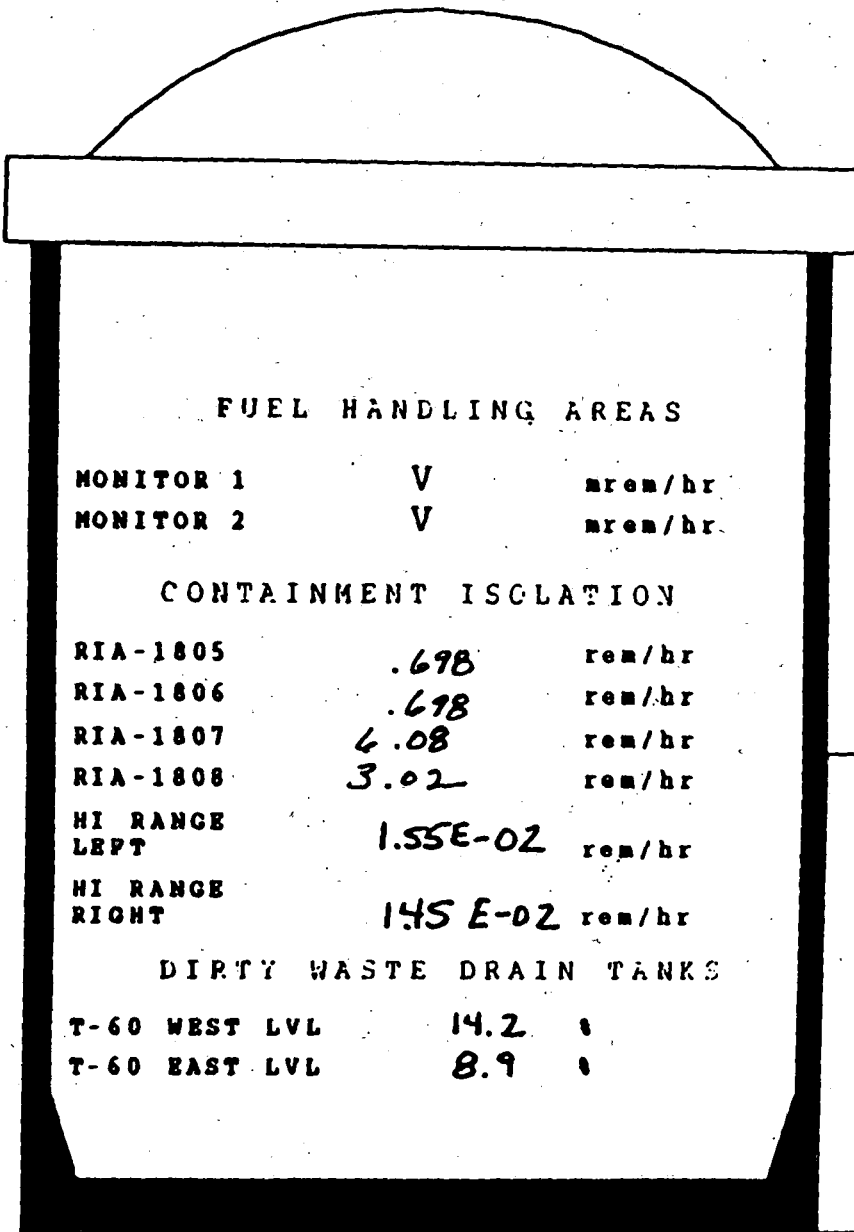
STEAM A

130 cpm

STEAM B

6500 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



LO RNG NOBLE GASES

61.0 cpm

HI RNG NOBLE GASES

1.10E-01 mrem/hr

GAS RAD INTR A

V cpm

GAS RAD INST B

V cpm

CONTROL ROOM RAD

1.8 mrem/hr

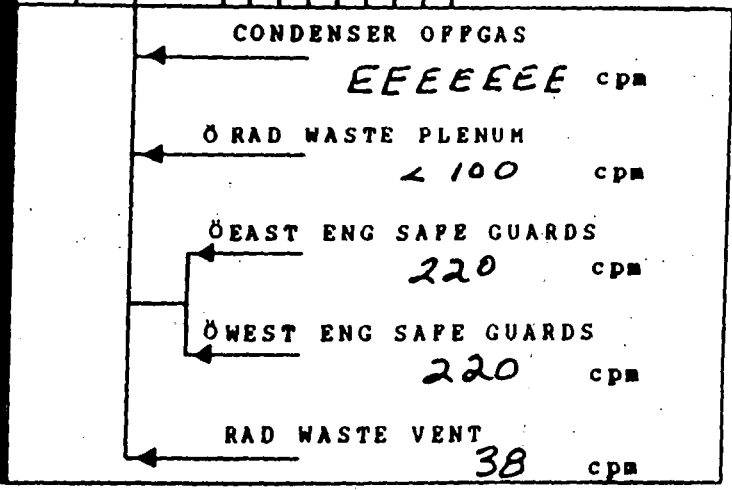
SPENT FUEL POOL

NORTH

160 mrem/hr

SOUTH

160 mrem/hr



10/22/96

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STACK MONITORS

LO RNG NOBLE GASES  
60.8 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
1.4 mrem/hr

SPENT FUEL POOL  
NORTH  
130 mrem/hr

SOUTH  
130 mrem/hr

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER  
OSH cpm

SERVICE WATER  
380 cpm

WASTE DISCHG  
454 cpm

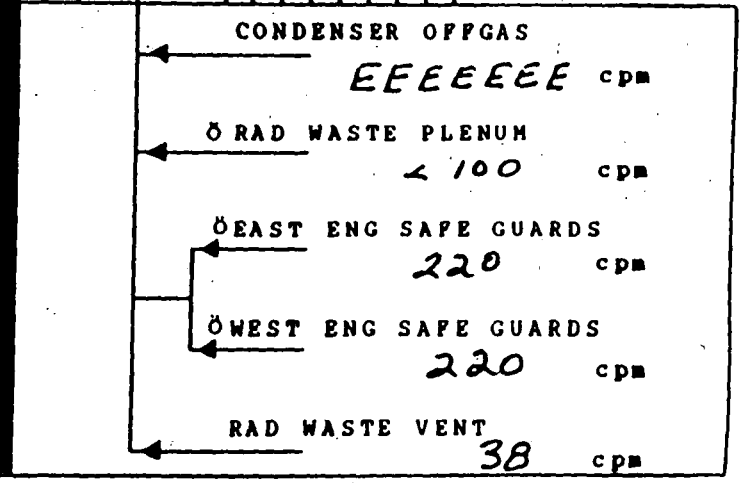
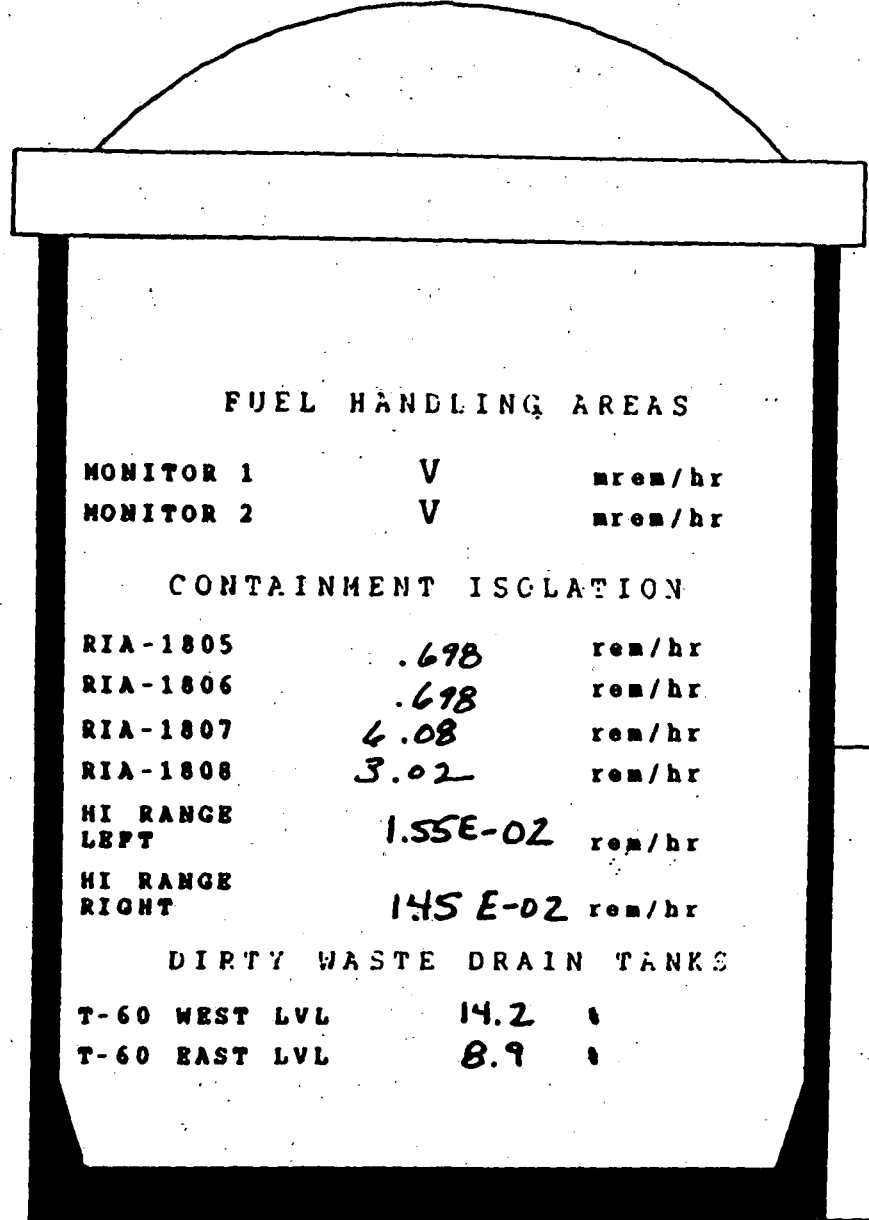
GEN BLOWDOWN  
OSH cpm

WATER BASIN  
280 cpm

DEPLETED FUEL  
OSH cpm

MAIN STEAM A  
130 cpm

MAIN STEAM B  
6000 cpm



DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION

LIQUID RADIATION MONITORS

COMPONENT COOLING WATER

05H cpm

SERVICE WATER

380 cpm

RAID WASTE DISCHG

454 cpm

TRIM GEN BLOWDOWN

05H cpm

TRIMMING BASIN

280 cpm

TRIMMED FUEL

05H cpm

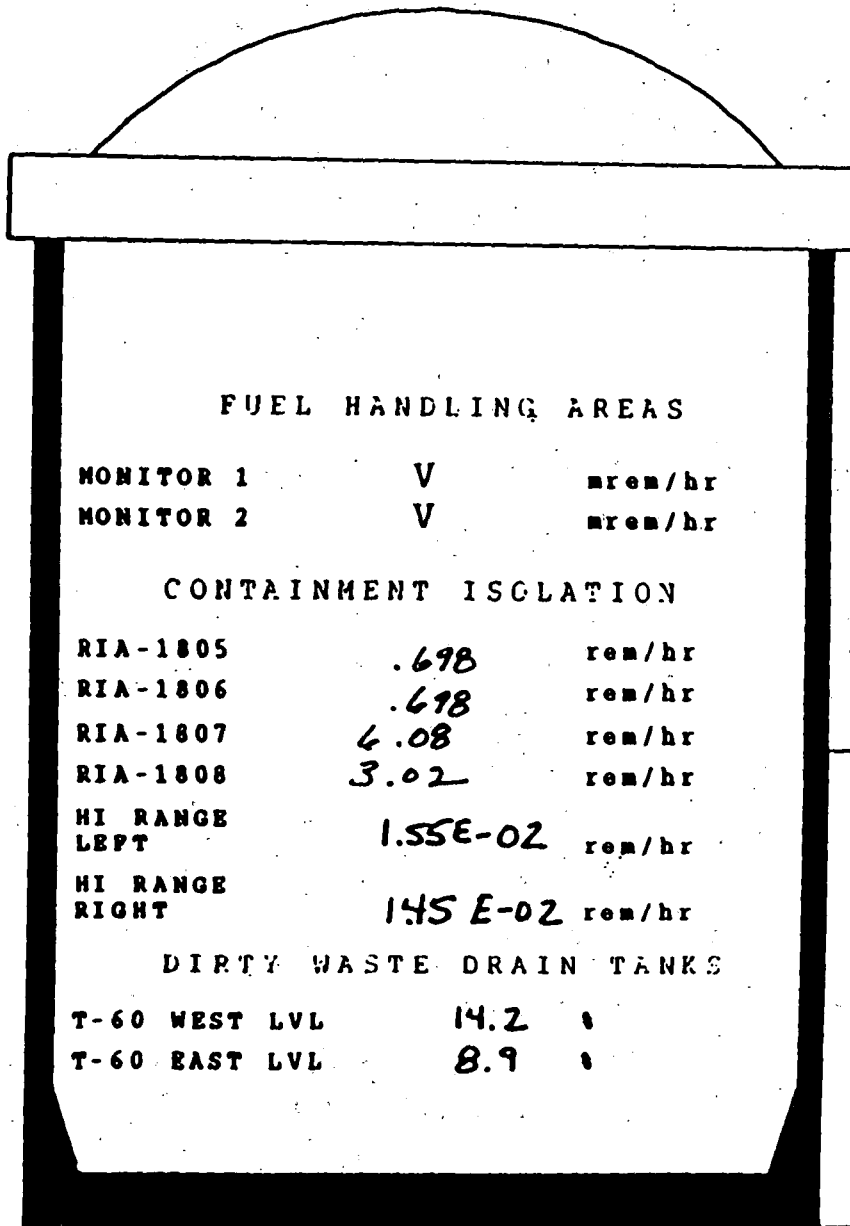
TRIMMED STEAM A

130 cpm

TRIMMED STEAM B

5500 cpm

DECADE DEPENDENT ON CONTROL ROOM SWITCH POSITION



STACK MONITORS

LO RNG NOBLE GASES  
60.4 cpm

HI RNG NOBLE GASES  
1.10 E-01 mrem/hr

GAS RAD INTR A  
V cpm

GAS RAD INST B  
V cpm

CONTROL ROOM RAD  
1.1 mrem/hr

SPENT FUEL POOL  
NORTH  
100 mrem/hr

SOUTH  
100 mrem/hr

