

LEGEND FOR TMI UNIT 2
REACTOR BUILDING ENTRY
PHOTOS, AUGUST 15, 1980

Photo 1

Photo of the entry team going about their work. In the center you can see the power track better and the extensive rusting on all of the metal. Below, on the floor, just below the bridge motor, there is a black area that we are unsure about.

Photo 2

Photo of the location of experimental packages taken in during the entry. It also shows both Marty and Sam preparing entry tasks. Marty preparing to replace HP-R-211.

Photo 3

View into the transfer canal. You can see canal walls, which are very clean. All two-tone appearances are tones after you grind stainless steel, not rusting. Shield tanks around vessel head are all dry, bottoms appear to be rusted, but there was no water noticed in them. On top of that would be the mirror insulation, which is stainless steel, and very clean. The walking platform and the handrails appear to be in good condition, but there is some rust on the platform. On the head itself, the cylinders extending from the head are cooling fans and the associated electrical leads. They appear very clean - no major rust. The head body itself is very clean. Main rusting appears to come from chainfalls that are used to actually remove the mirror insulation and also for detentioning the vessel head.

Photo 4

Panoramic view taken from the enclosed stairs looking into the opening of the D ring. The photo shows the walkway connecting the two D rings, top center. You can see the fuel handling bridge upper sections right below that. In the center of the photo are the cable chase trays. Looks like a small piece of wire hanging over the conduit on the D ring to the right hand side.

Photo 5

View of the enclosed stairwell door at the 347' elevation looking back into the enclosed stairwell. The door upon ascent was closed, and we opened it very easily. The handle is not discolored, it is taped. The only thing unusual is the DANGER NO SMOKING sign appears to have paint peeling off from humidity.

Photo 6

Continuation of the last photo shows the core flood check valve entering the D ring. The little circuit box appears either dirty or charred.

Photo 7

No legend

Photo 8

Panoramic view taken from the elevator area facing towards the equipment hatch. Green glow in the photo is reflection from the high-power beacon light. Rust appears on the core flood tank at the top of the photo. Air coolers on the left.

Photo 9

Picture of Sam Griffith taking a beta reading of the D ring wall on the west side near the open stairwell. Instrument cabling from steam generator instrumentation for testing that we put in there in the upper right hand corner and it appears to be charred or something where it is coming out of the wall. It may be just a fire resistant or something around the cable that is melted that makes the whole area look black.

Photo 10

View of the core flood piping and the instrument panels. The right panel appears to have the paint on the cover plate peeling off.

Photo 11

Close-up view of the hand wheel controls for the personnel air lock in the equipment hatch. The purpose of the picture was to show that the solinoid locking pin is presently stuck in the lock position.

Photo 12

Picture of Behrle teledetecting into the open stairwell. There is some kind of cabling coming down the D ring wall to the left. It is uncertain at this time what it is.

Photo 13, 14

Identical photos. View looking down into the open stairwell of the water in the basement. Photo 14 more clearly shows the water level, and appears to be 1-2 inches above the level of the lower landing in the picture. The water has a murky color and appears to be debris/scum floating in the water in the background.

Photo 15

Close up of the last photo showing the miscellaneous piping on the corner of the D ring. The only thing noticeable in the picture is the gauges in the picture appear to have boron or crystals left on their black facing. Also the copper ground wire running on the right hand side and down to the extreme right appears to be corroded. It is colored green. Also shown in the seal return flow instruments in the bottom right hand side of the picture. They look as though they are in very good shape.

Photo 16

Close-up of the opening just in front of the stairwell leading downstairs. In the left hand corner you can see a Miller welding box very rusted. The scrap that was taken was of the debris pictured in front of the open stairwell. In this the red colored phone appears to be in tact. There doesn't seem to be any obvious carbon coating on the cable of the red phone, which we noticed earlier in other photos by the elevator. Some type of gauge off the beam in the center off to the right is unidentifiable.

Photo 17

Photo of 305' hatch cover in front of the air coolers. In the top left hand corner you see the swipe kit on the floor; the rust in the top center will be the rust that Marty scraped up for the sample. Notice the floor hatch itself appears to have been dislodged, possibly from the hydrogen explosion or something that caused them to move about. They are normally kept fairly close together. It appears that the front second one is actually lifted up and seated down on the other one right here.

Photo 18

Close-up view of the closed stairwell door at 305' elevation taken to show the angle of distortion at the bottom of the door. Notice the concrete pipe support at 305' elevation that caused the door to buckle.

Photo 19

Photo of the entry team ascending the closed stairway. The block wall appears clean and in tact, but this time the lights were on in the stairwell as we ascended them and it appears that this overhead fluorescent light doesn't show the same amber colored lens that we saw before. The reasoning behind this is unknown.

Photo 20

Taken to show the amount of rust on the piping associated with the air coolers. None of us recall seeing the water in front of the pipes, but we do remember the water behind them.

Photo 21

Sequence of what was going on (by Cooper-Griffith) on the other side of the reactor building. A photo of HPR 211. Marty is removing the radiation monitor from the cable. The mounting bracket and the detector itself have black spots on them. The detector was removed fairly easily from the mounting bracket.

Photo 22

Photo of instrumentation due east going north around the D ring wall. You can see a seal return instrument. There was nothing wrong with the gauges. There is probably some type of rusting on the deal face itself, but the glare appears to make it look worse.

Photo 23

Piping beside the B core flood tank. These are the seal return lines, and the two instruments on the left hand center side are the flow instrumentation for the seal return. Notice the rust coming down from the D ring wall from the piping above. It appears to be quite damp in that section.

Photo 24

Another panoramic view looking from the enclosed stairwell out over the 347' removable grading. Left hand side is the internal indexing fixture. The center of the photo shows the internals handling pendants. They appear very rusted. They are in their storage stand. Behind that is the reactor coolant pump stand. On top of the pump stand is the handling fixture used to lift the reactor vessel head and the internals. Notice that from the handling fixture to the right hand side of the pump stand is the extension pendant, and they appear very rusty. Behind that to the right is a picture of the reactor vessel head storage stand. The shiny piping in front of that would be used to supply demin. water to clean the bottom of the reactor vessel head before working on the O rings. It also shows some sort of cabling running along the grading starting in the center of the photo, extending off the right hand side. It appears to be copper wire, possibly shaded green. The other appears to be wrapping from the wire, which is broken off for some reason.

Photo 25

Area view of the west hand side of the D ring just past the open stairwell. There appears to be some rust debris patching on the floors in some areas. You can also see the page speaker on the wall. To the top right hand corner you can barely see emergency lighting, still amber colored.

Photo 26

Picture of the incore instrumentation electrical connections. In the background you see the steel structure on the fuel handling bridge that was used for a small trolley type crane, for miscellaneous jobs in the transfer canal.

Photo 27

Picture of storage stands for the reactor vessel studs. The two studs pictured in the stand are known as guide studs, used to align the head while removing it. After the initial fueling effort, the studs were wrapped in ply, they were slightly contaminated. You can see at the bottom of the storage stand, the molten plastic from the plastic bag they were in. Also in the center between the two studs appears to be the remains of an old HP plastic rope, using magenta and yellow, which is no longer a rope.

Photo 28

No legend.

Photo 29

You can see the grill plate, and the top of the CRDM. It looks dry and clean: there is no debris on it, it looks normal.

Photo 30

Photo of Mary preparing to take area swipe. The vent duct appears to be in very good shape except for the lower section, where water has been allowed to stand and start rusting.

Photo 31

Close-up of the storage stand for the mirror insulation. Standard carbon steel that has been painted and it is rusting.

Photo 32

Close-up of the internals handling extension seen earlier. Note the orangish rust fairly uniform on it. To the left is a closeup of the storage stands for the mirror insulation. Note that it appears that the handling extension is sitting on wood that is not charred.

Photo 33

Picture close-up of the deformed Bell telephone. Notice it is not completely molden, however, it is deformed. The numbers are legible, the cabling from the phone to the receiver is pretty well melted, and all the associated cabling in the background is melted. Highly significant is behind the telephone, strapped to those metal chase, is a piece of plywood. This peice of uncoated plywood was not painted black; however, and it is now darkened like a piece of burnt toast.

Photo 34

A picture just to the south end of the enclosed stairway. You can see the block wall just to the left. In front of that is a tool box used during the refueling operation. On the right hand side you can see three 55 gallon drums, one which appears to be crushed in from the outside. The one on the far right appears to have some indentation, the one in the center appears to be fairly normal. They all are heavily rusted. The sling is in the center of the photo and is yellow in color (which is normal).

Photo 35

A picture of the RB liner and 347' floor (due south). Notice in the center of the picture the small desk with the phone on it, miscellaneous wires leading to the phones, an internal handling extension that is very rusted. The center of the picture is mirror insulation, storage stands, and to the corner of the right you see the internals indexing fixture.

Photo 36

Picture of the instrumentation panels on the east D ring wall, at 305' elevation. These are the YM vibration sensors, the four boxes in the right hand side of the picture. The glow is the reflection from the beacon light (assumption).

Photo 37

Picture of the reactor coolant pump stand. S. Griffith taking beta surveys of the bottom of the stand. You can see (on the left hand side) the seal plate is in two pieces. They form a circle that is used in the transfer canal to seal the annulus between the canal and the reactor vessel during refueling operations. Just to the left of the pump storage stand is the reactor coolant motor stand. There appears to be pieces of metal shims on the concrete platform for the reactor coolant storage stand, both in the center and off to the right hand corner of the photo.

Photo 38

Picture of Sam taking beta surveys in the area just to the south of the enclosed stairway. You can see the very corner of the EXIT sign at the extreme upper left, which would be mounted on the stairway wall. Behind Sam is a picture of the ventilation ducts. Notice that they appear to be very clean except for areas where they level out and allow water to collect, and they are rusting there. In the center of the photo of the background you can see the specimen capsule storage stand. To the right, it appears to be polywrapped blocks for sitting large fixtures up on the 347' deck.

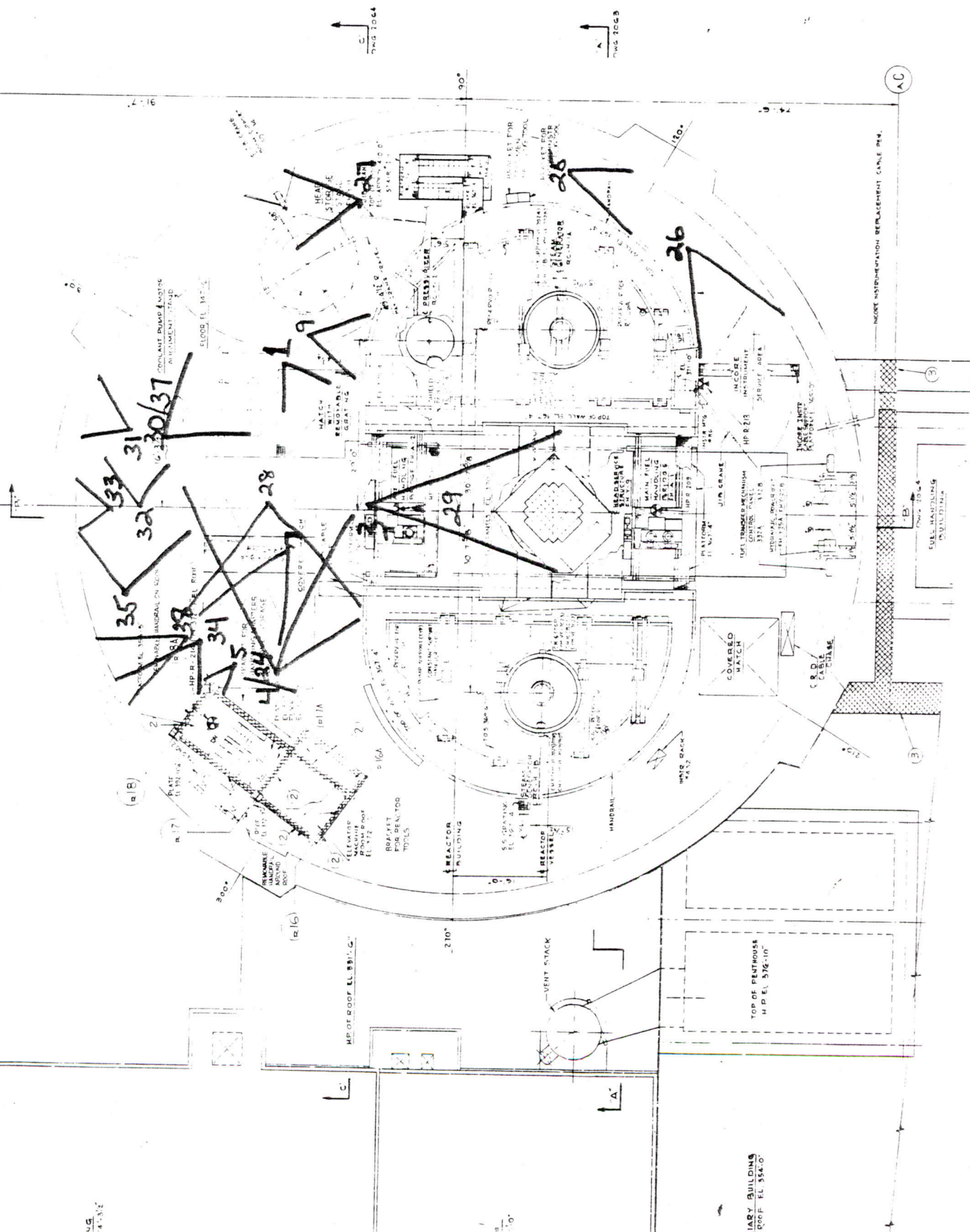
TURBINE BUILDING

REACTOR BUILDING

NOTES

1. CHS THRU FLOOR IS PER SENT VIBRATION MONITOR SENSORS

347' ELEVATION

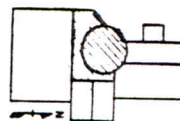


LEGEND



HOURLY FIRE RATING

WORK THIS DRAWING WITH DWGS 2068, 2069, 2070 & 2071

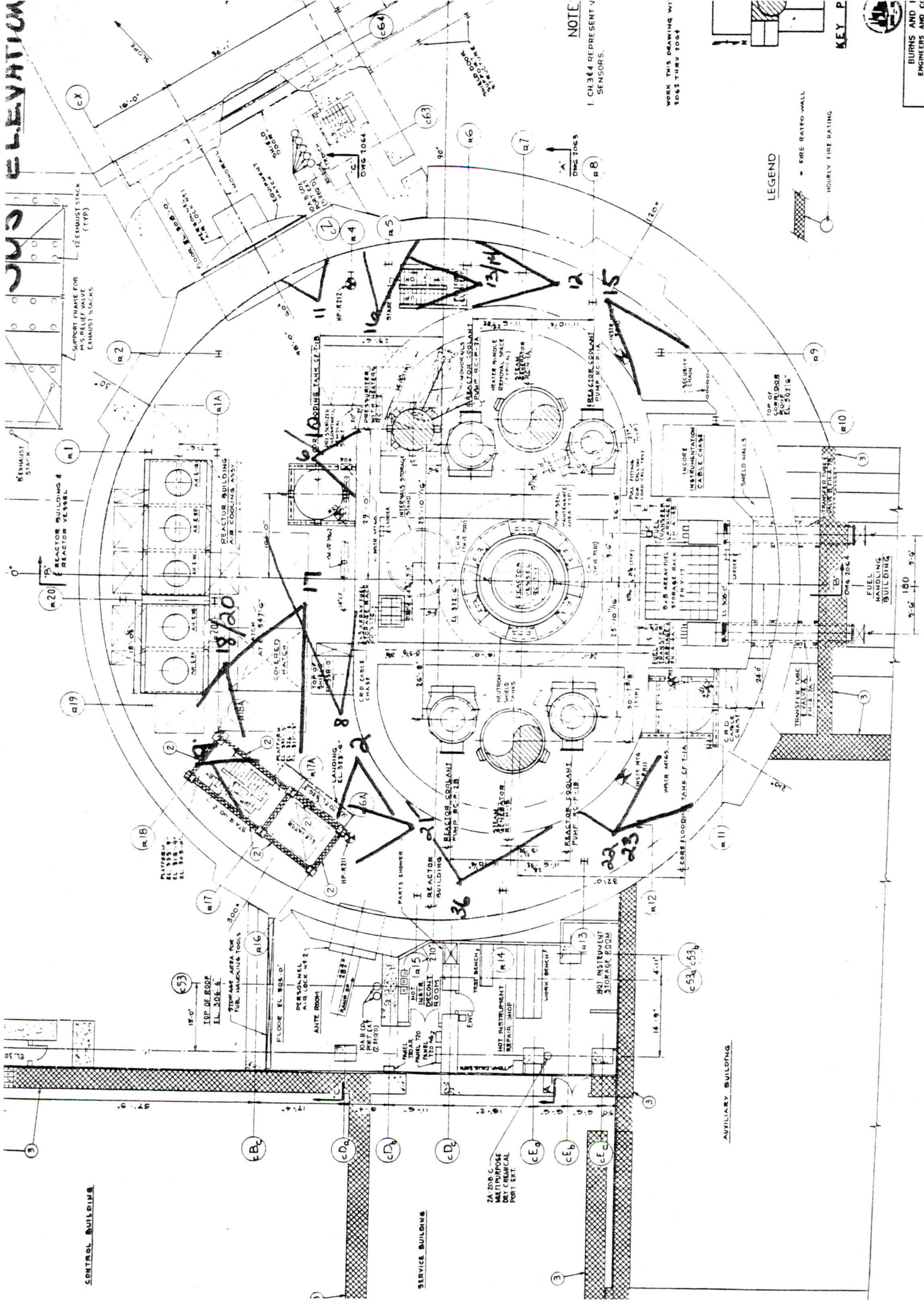


KEY PLAN



DATE: 10/10/00

CONTROL BUILDING



SERVICE BUILDING

AUXILIARY BUILDING

NOTE

1. CH.3&4 REPRESENT V SENSORS.

WORK THIS DRAWING WITH
1062 THRU 1064

KEY P



BURNS AND MCDONNELL ENGINEERS AND ARCHITECTS ORADELL, N. J. HEMPSTEAD, N. Y.	GENERAL ARRANGEMENTS REACTOR & CONTROL BUILDING FLOOR PLAN
APPROVED BY CLIENT	NOT REQUIRED



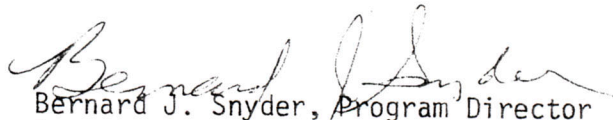
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MEMORANDUM FOR: Distribution

FROM: Bernard J. Snyder, Program Director
TMI Program Office
Office of Nuclear Reactor Regulation

SUBJECT: TMI UNIT 2 REACTOR BUILDING ENTRY PHOTOS

For your information attached are photographs taken inside containment at TMI Unit 2. A legend prepared by Metropolitan Edison is also provided.


Bernard J. Snyder, Program Director
TMI Program Office
Office of Nuclear Reactor Regulation

- Encls:
1. Photos
2. Legend

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photos.*

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