Franke, Mark

From: Franke, Mark
Sent: Tuesday, October 27, 2009 9:08 AM
To: Lake, Louis
Subject: FW: Crystal River 3 Containment Delamination Update
Attachments: Crystal River Licensee Update .PDF

From: Franke, Mark
Sent: Tuesday, October 27, 2009 9:05 AM
To: McCree, Victor
Cc: Kennedy, Kriss; Christensen, Harold
Subject: RE: Crystal River 3 Containment Delamination Update

Thanks Vic.
I attached material that Progress Energy gave to us on October 22.

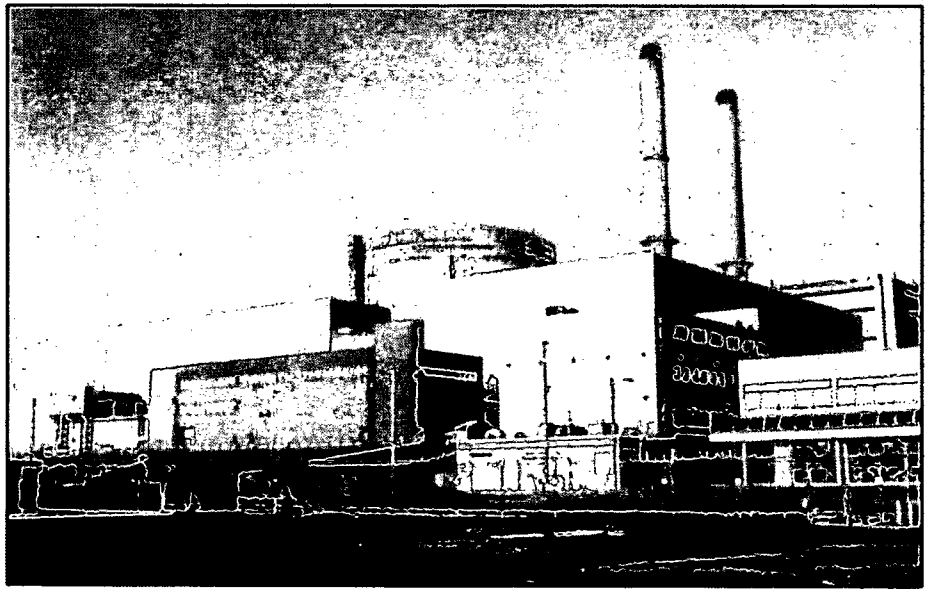
From: McCree, Victor
Sent: Tuesday, October 27, 2009 8:27 AM
To: Franke, Mark
Cc: Kennedy, Kriss; Christensen, Harold
Subject: Crystal River 3 Containment Delamination Update

Mark,

Thanks for the timely update on the subject activities -- it was exactly what I needed to respond to an impromptu request from the DEDR.

Vic

Crystal River Unit #3
Containment Delamination Investigation



NGG
Think Fleet.

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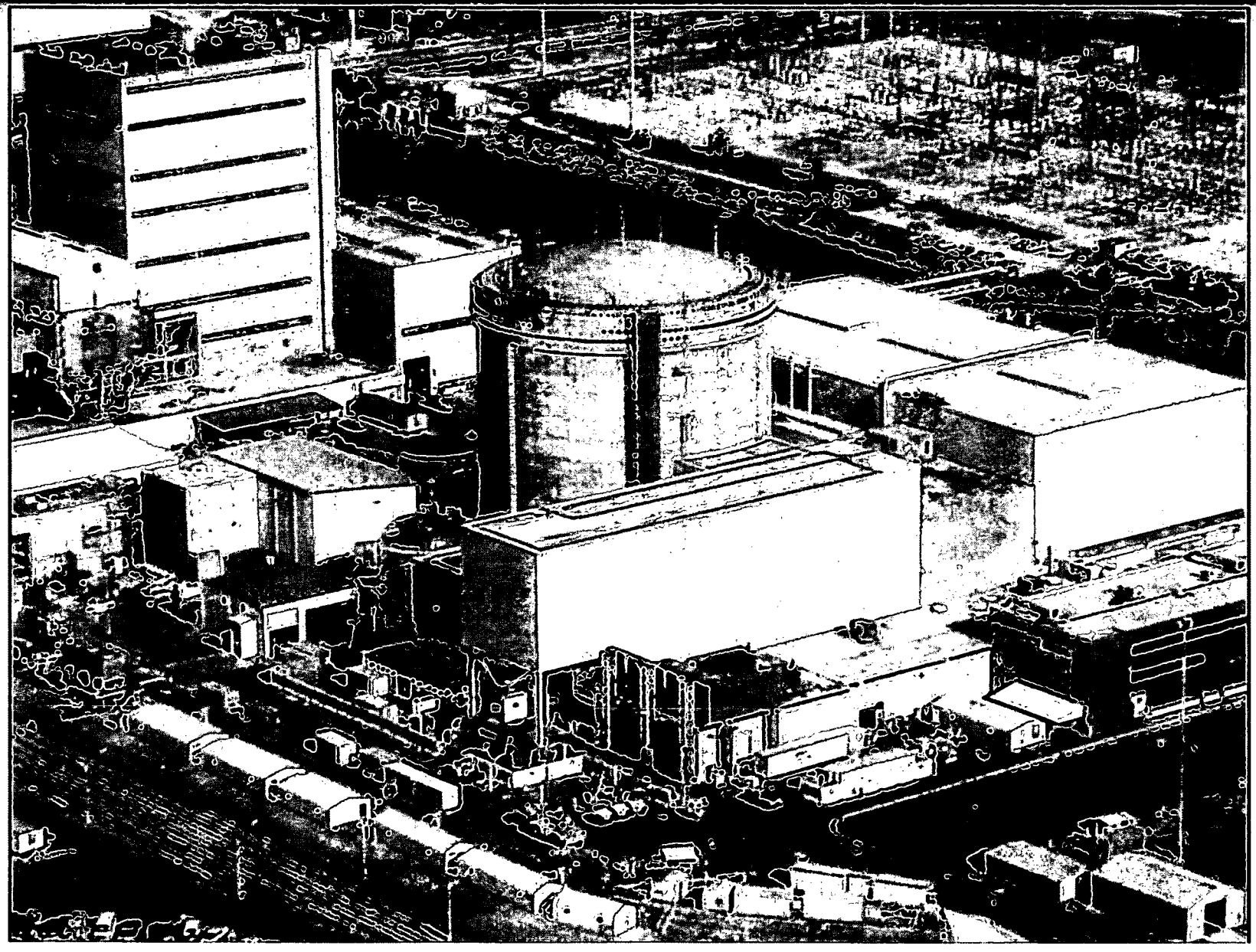
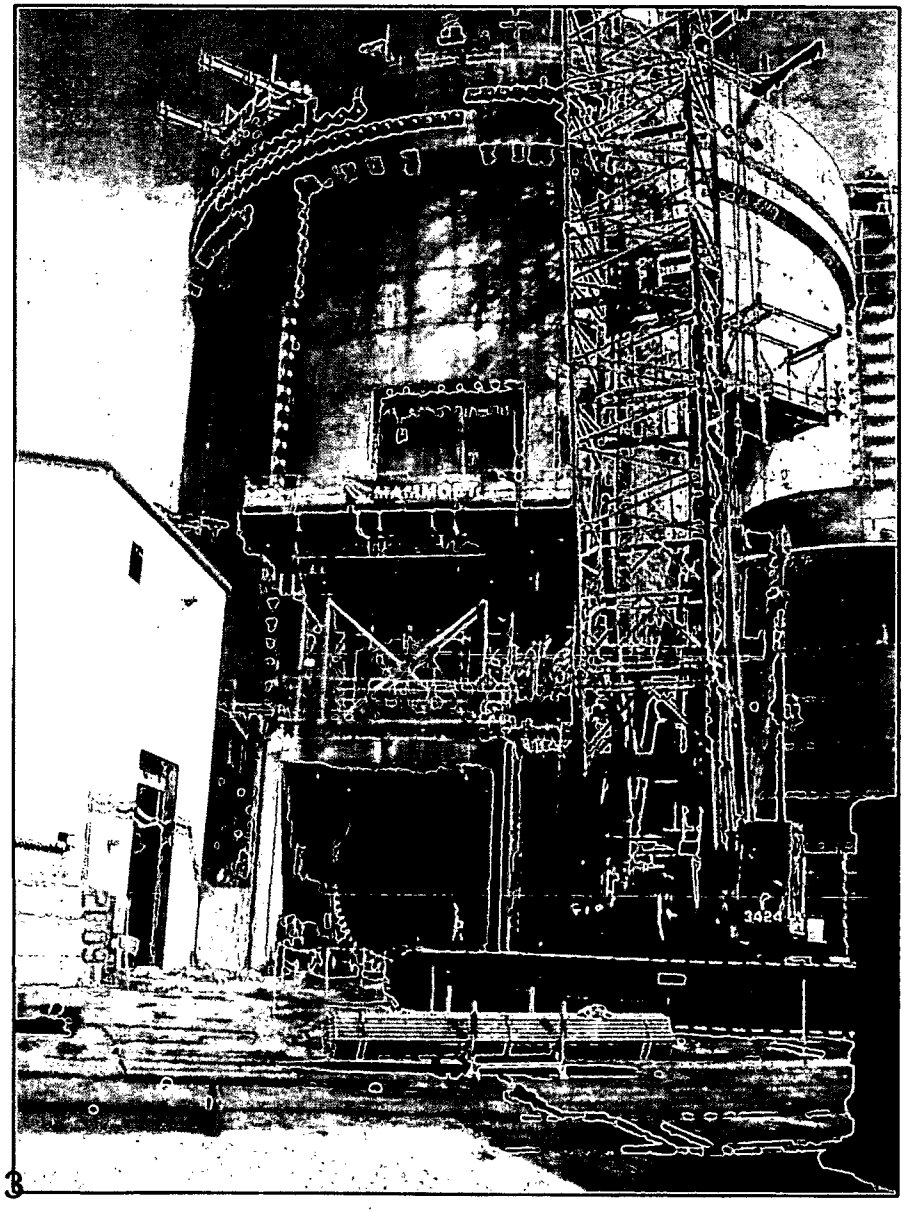
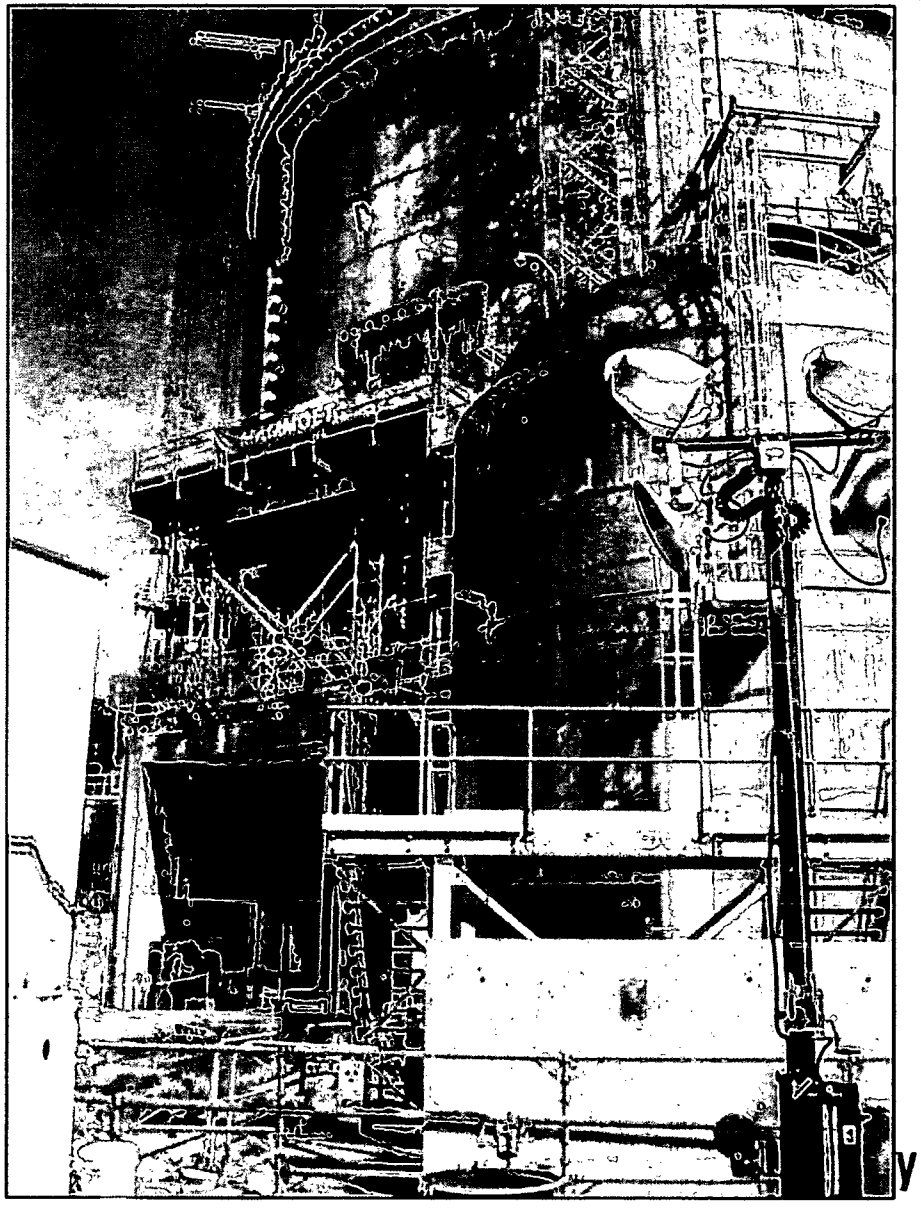
Crystal River #3 Aerial View

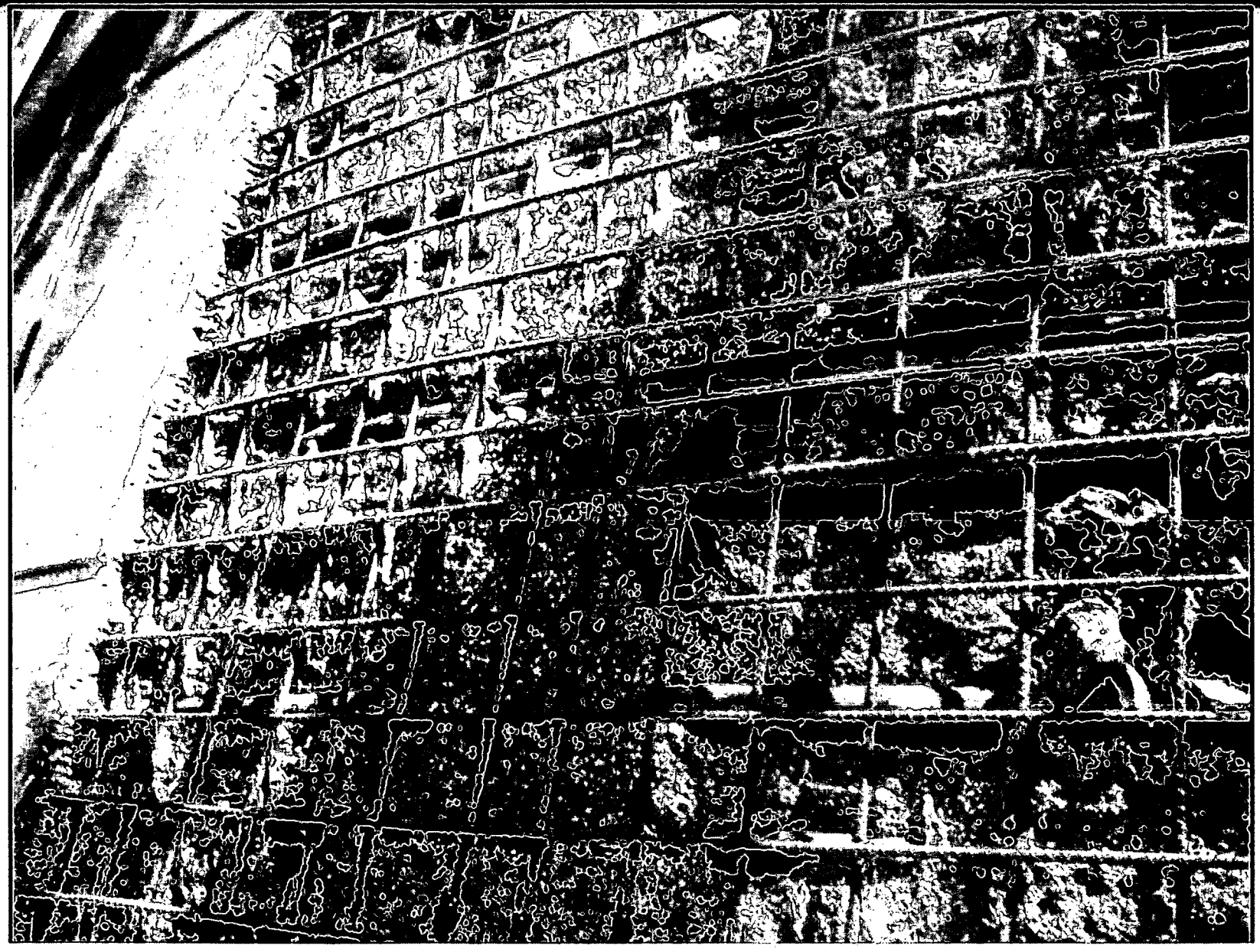


Construction Opening (between Buttresses 3 and 4)

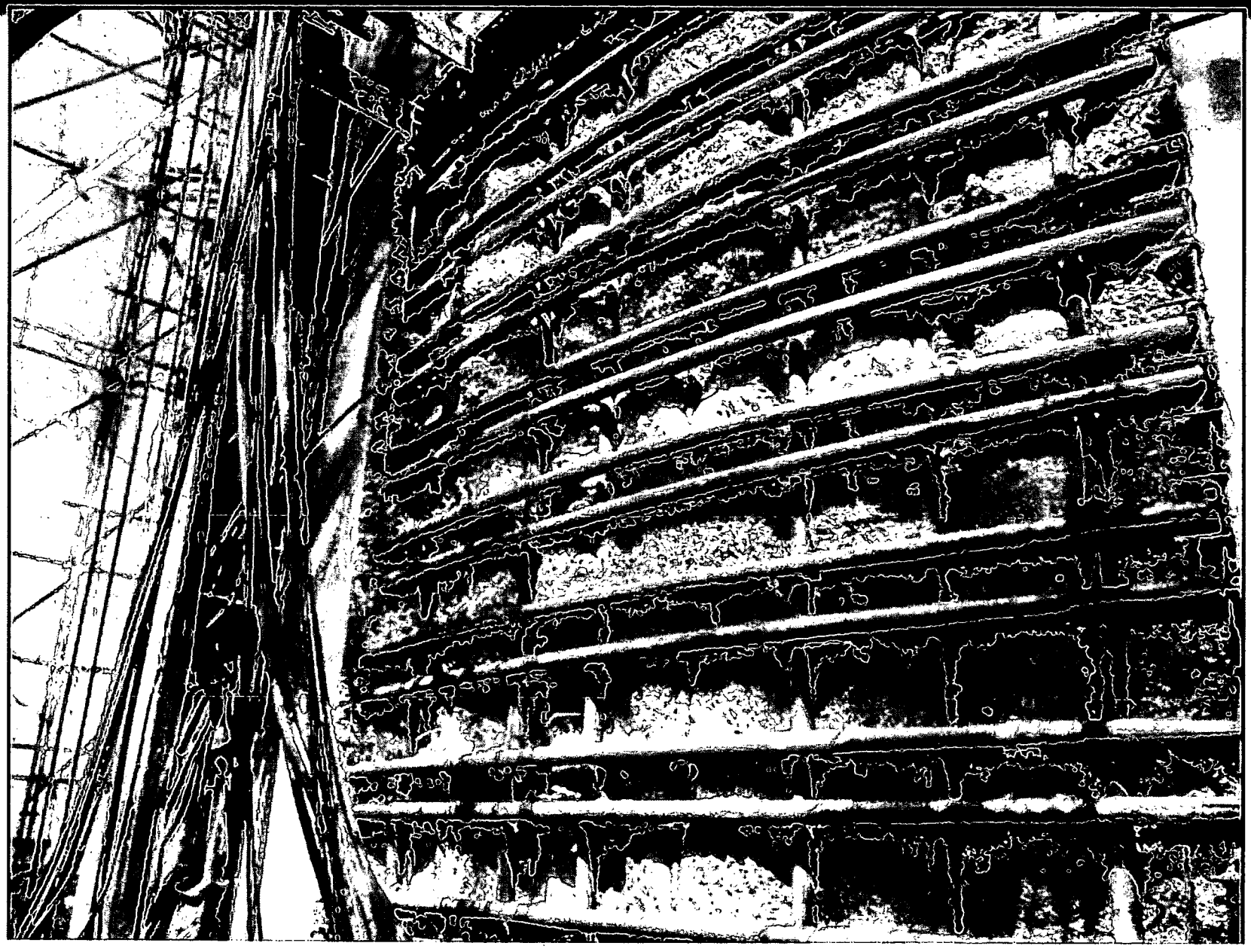




Construction Opening Removal Sequence



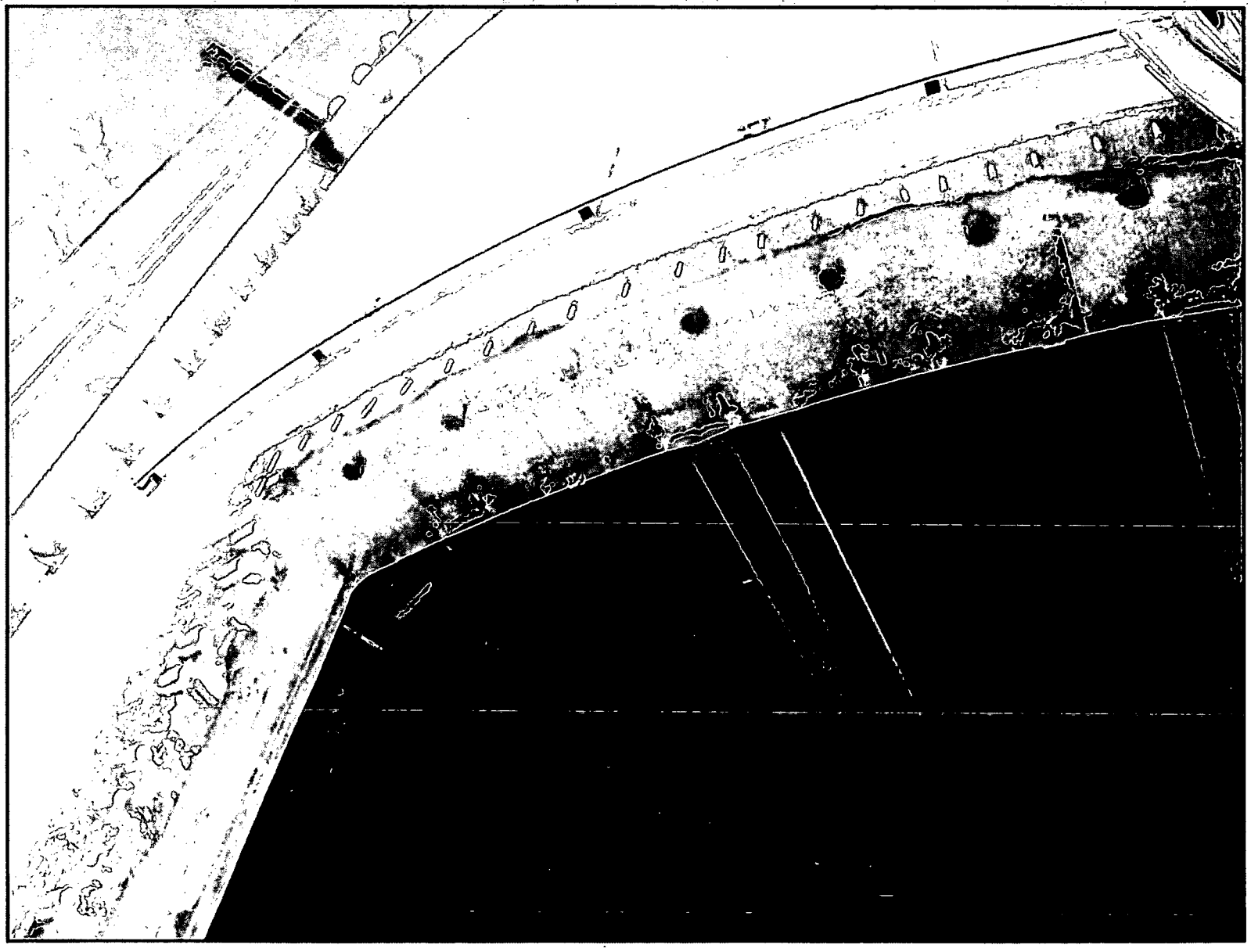
Construction Opening Removal Sequence (cont)



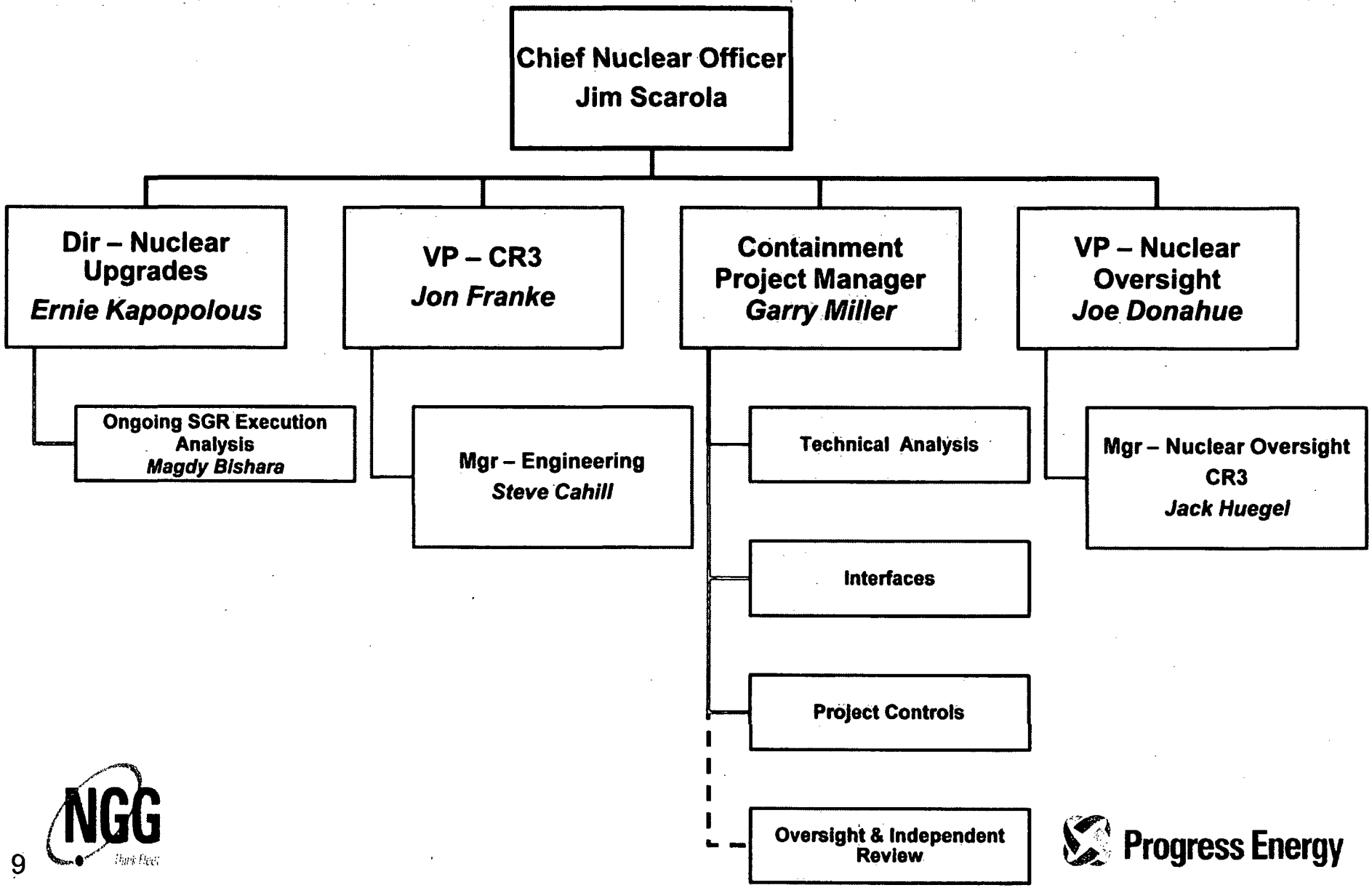
Construction Opening Removal Sequence (cont)

Construction Opening Removal Sequence (cont)

Construction Opening Removal Sequence (cont)



Organization – Reporting View



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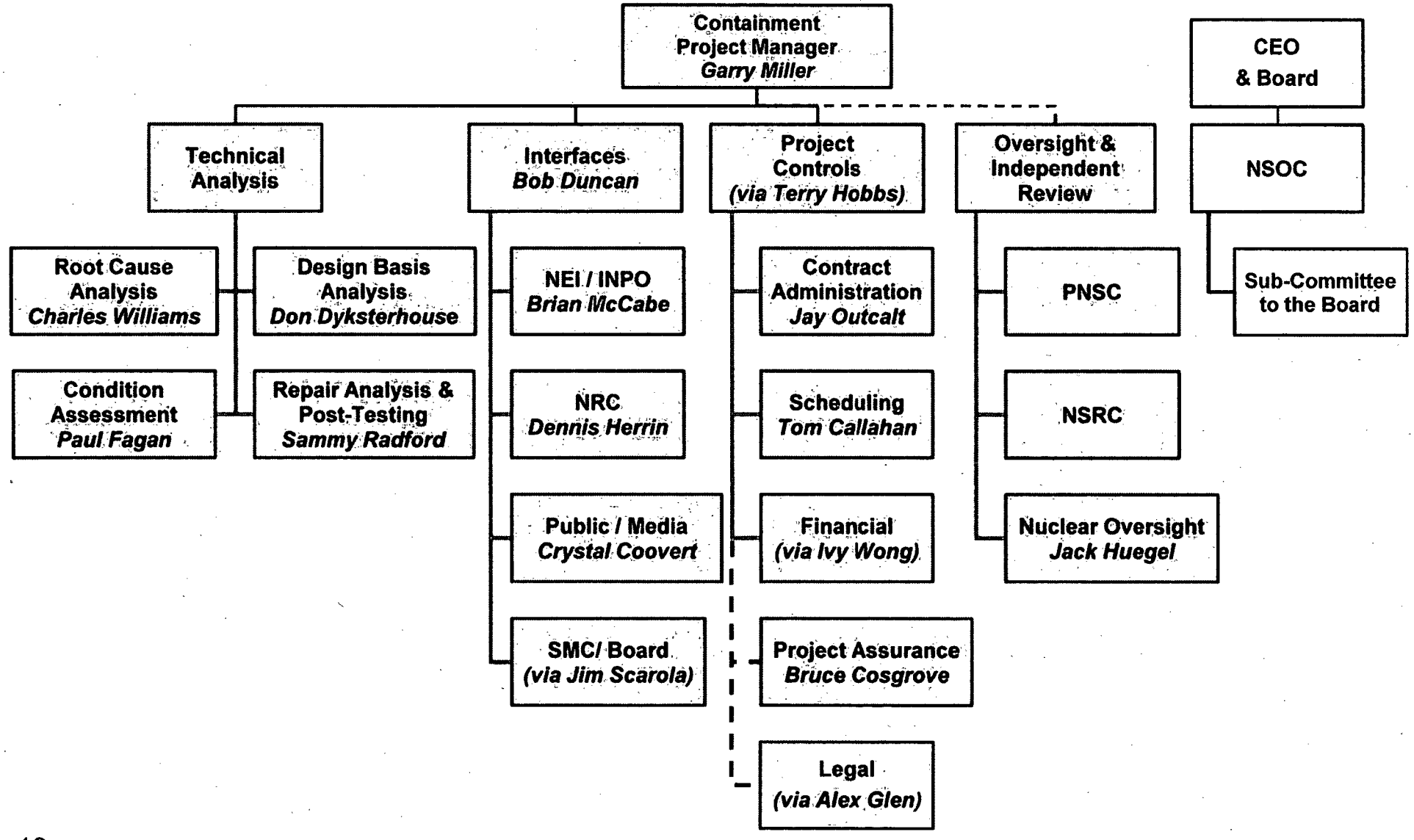
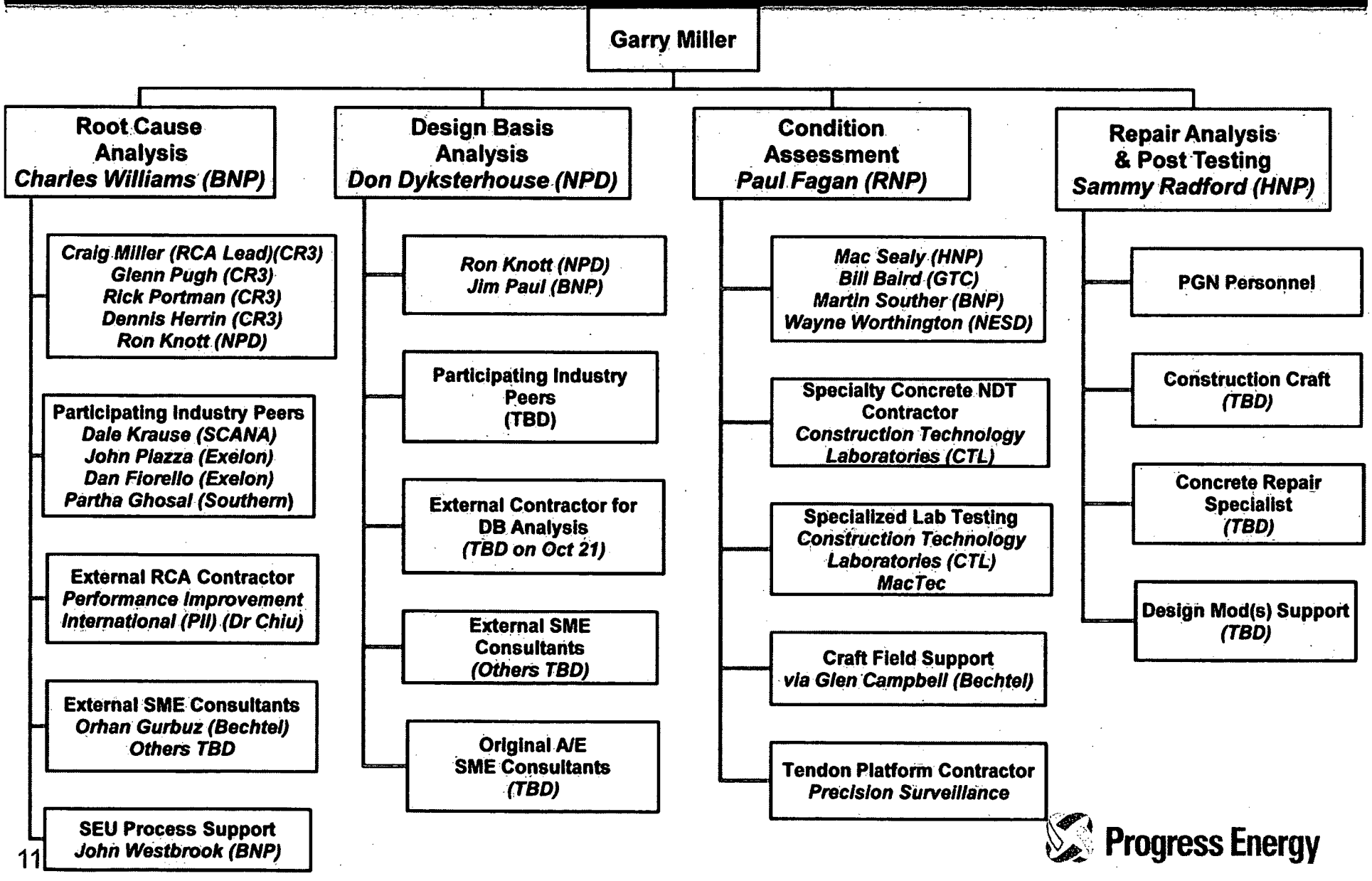
Organization – Functional View



Organization – Technical Structure Details



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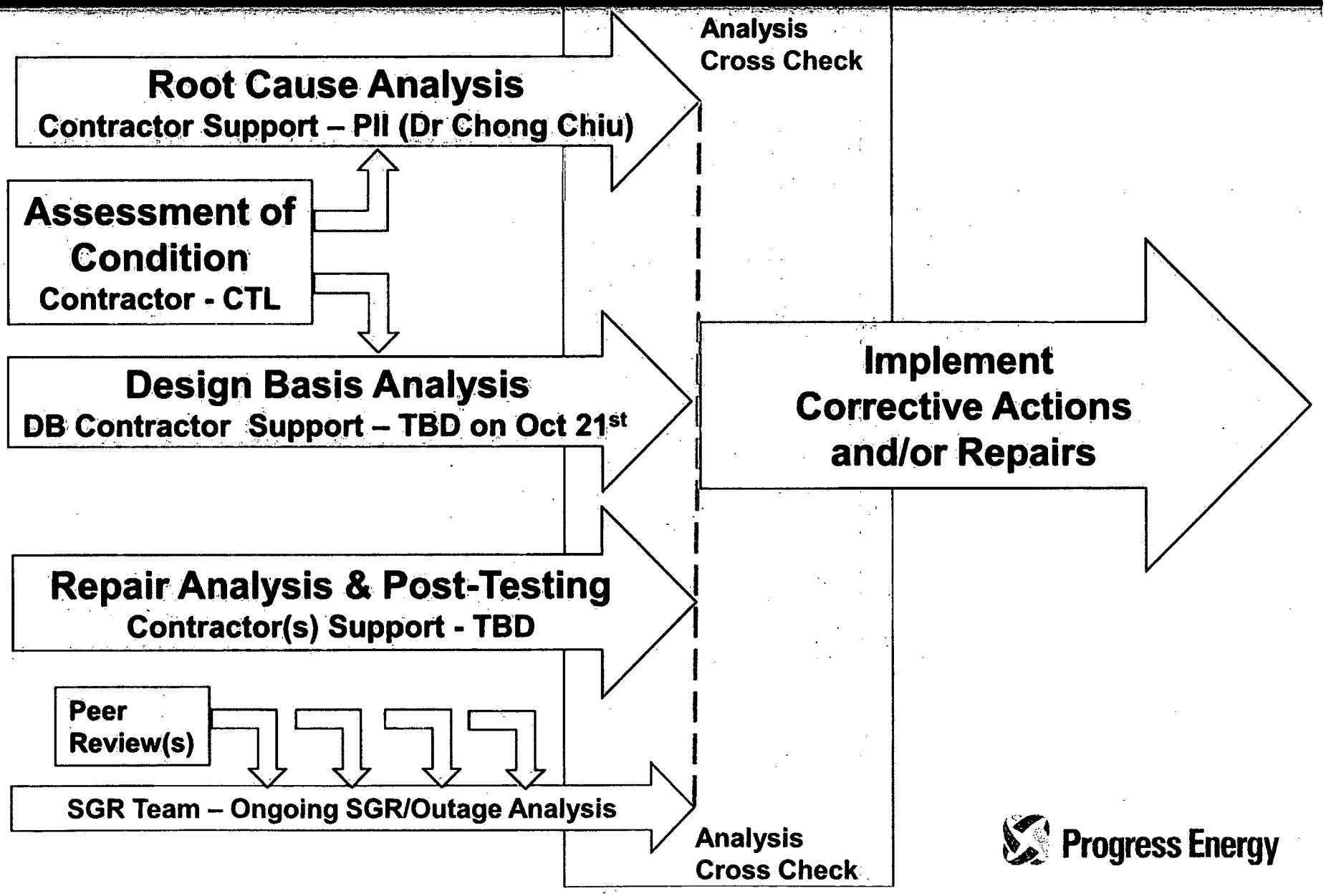
Project Work Flow Summary



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Technical Approach Details

- **Root Cause Analysis Team (draft RCA ~ mid-Nov)**
  - Performance Improvement International (PII) (Dr Chong Chiu)
  - Includes specialized RCA analysis to facilitate support/refute
  - Historical data gathering supported by PGN personnel
  - Ongoing Field data from Condition Assessment Team
  - Expedite identification of most likely causes (target ~ 1 week)

- **Condition Assessment Team (~ 2 weeks)**
  - Construction Technology Laboratories (CTL) for Non-Destructive Testing
    - Impact Echo and Impulse Response techniques
  - Backed up by core bore samples & boroscopic inspection
  - CTL & MacTec for Petrographic Analysis
  - Containment external visual inspection (IWL process)
  - Activities governed by Test Procedure(s)

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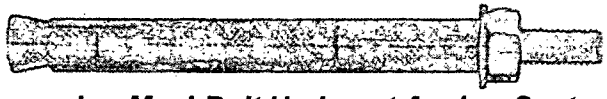
Technical Approach Details (cont)

- **Design Basis Analysis Team (~ 3 to 4 weeks)**
  - Contractor Support for DBA Modeling - RFP Responses Received Oct 20, Decision on Oct 21
  - Support Past-Operability Analysis
  - Analysis Supporting Acceptability of Proposed Repair Options



Example - ***Maxi-Bolt Undercut Anchor System***

- **Repair Team (repair duration TBD)**
  - Investigating Repair Alternatives for Delaminated Areas
    - Evaluating Bar Anchorage Options and Grout/Epoxy Options
    - Evaluating Constructability & Duration
  - May Affect Construction Opening Restoration
    - May Require Design Change(s) to existing EC
    - RCA and DBA Completion Tentatively Restrains Restoration Timing

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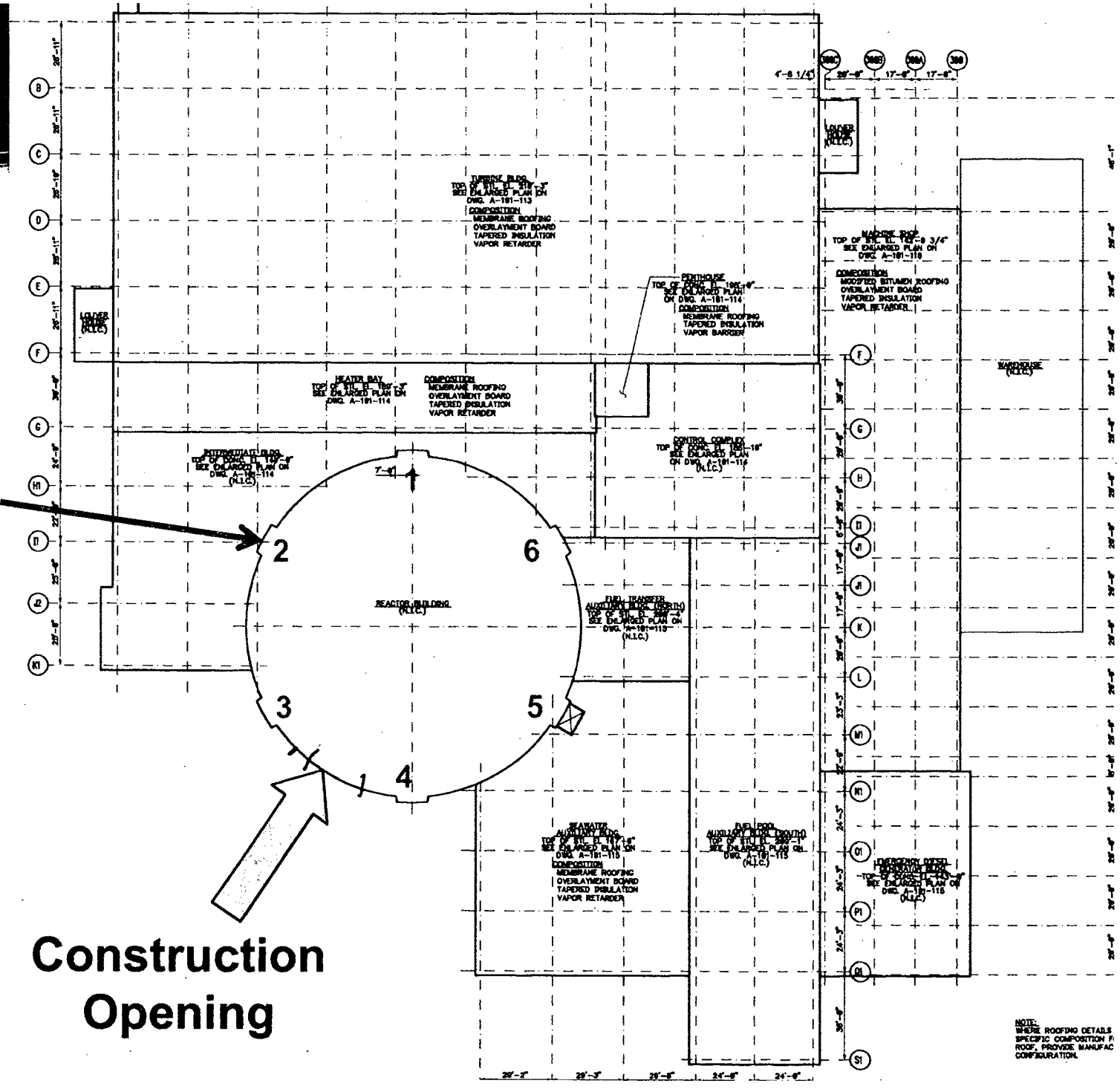
Plan View

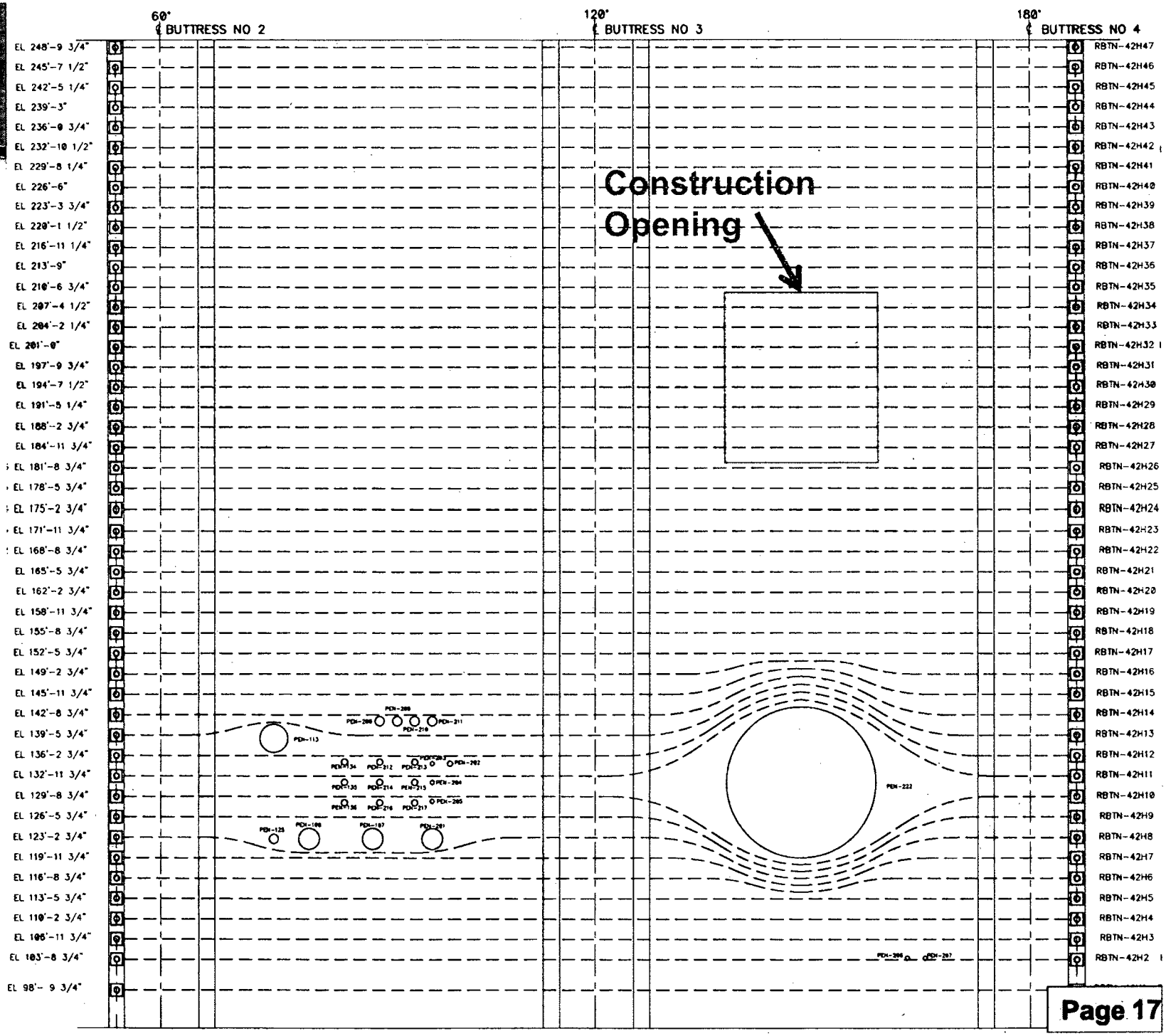


Source Drawing:
101-112 SH000

Back-Up
Graphic Slides

Horizontal Tendons
Buttress 2 - 4

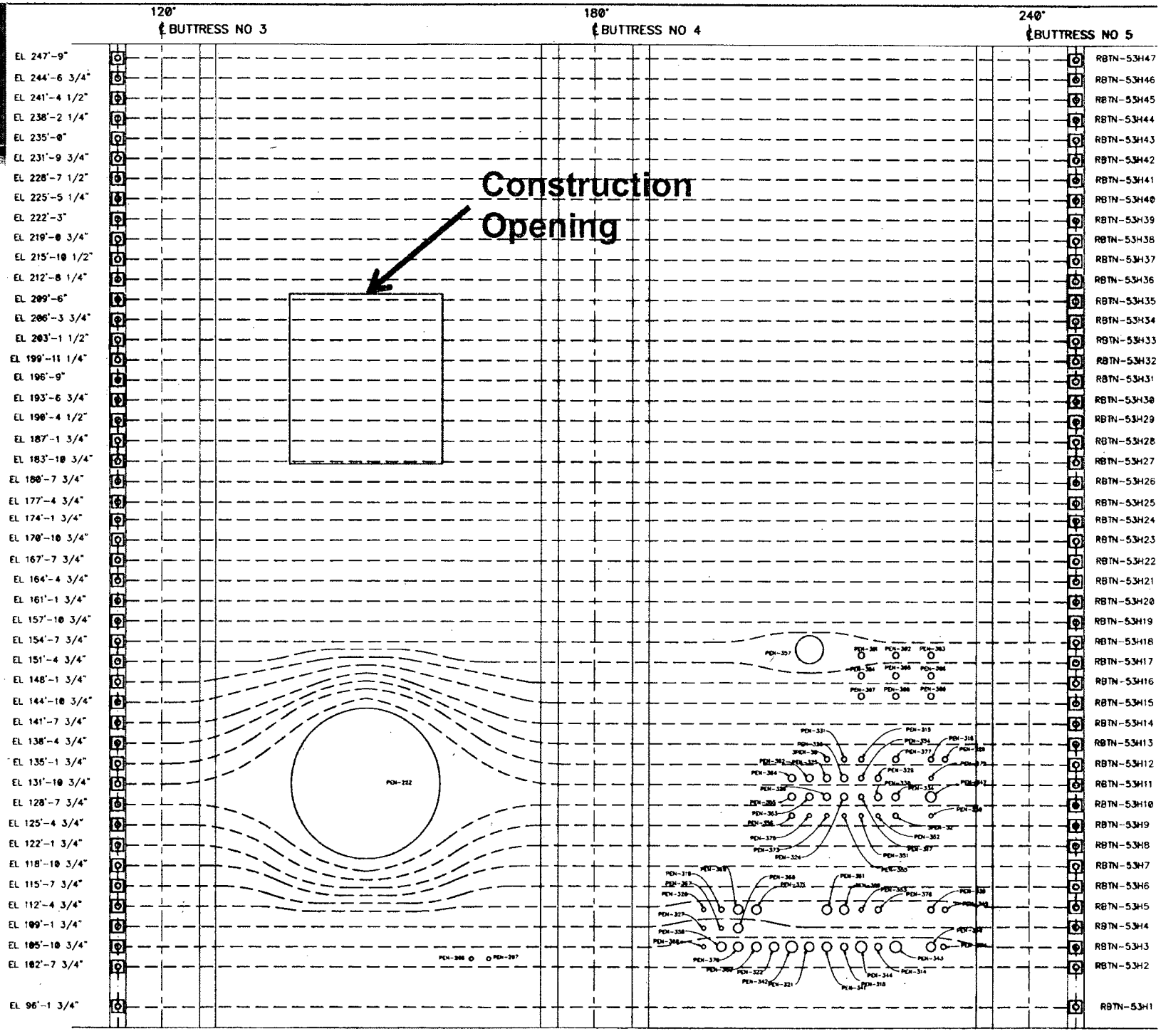
Tendons Removed



Source Drawing: 0425-006 SH001 - SH 000

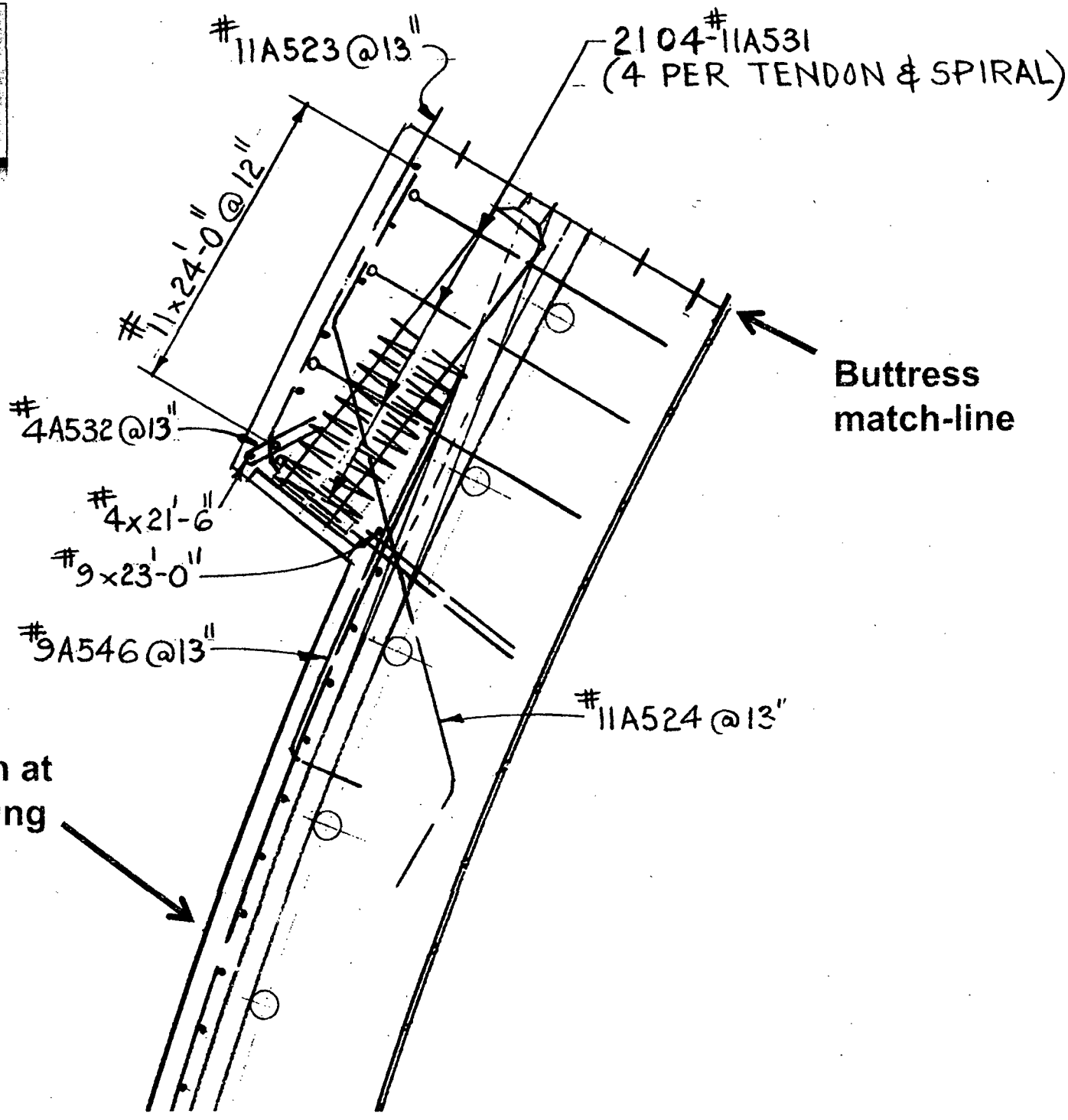
Horizontal Tendons
Buttress 3 - 5

Tendons Removed



Source Drawing: 0425-007 SH001 - SH 000

Buttress Cutaway

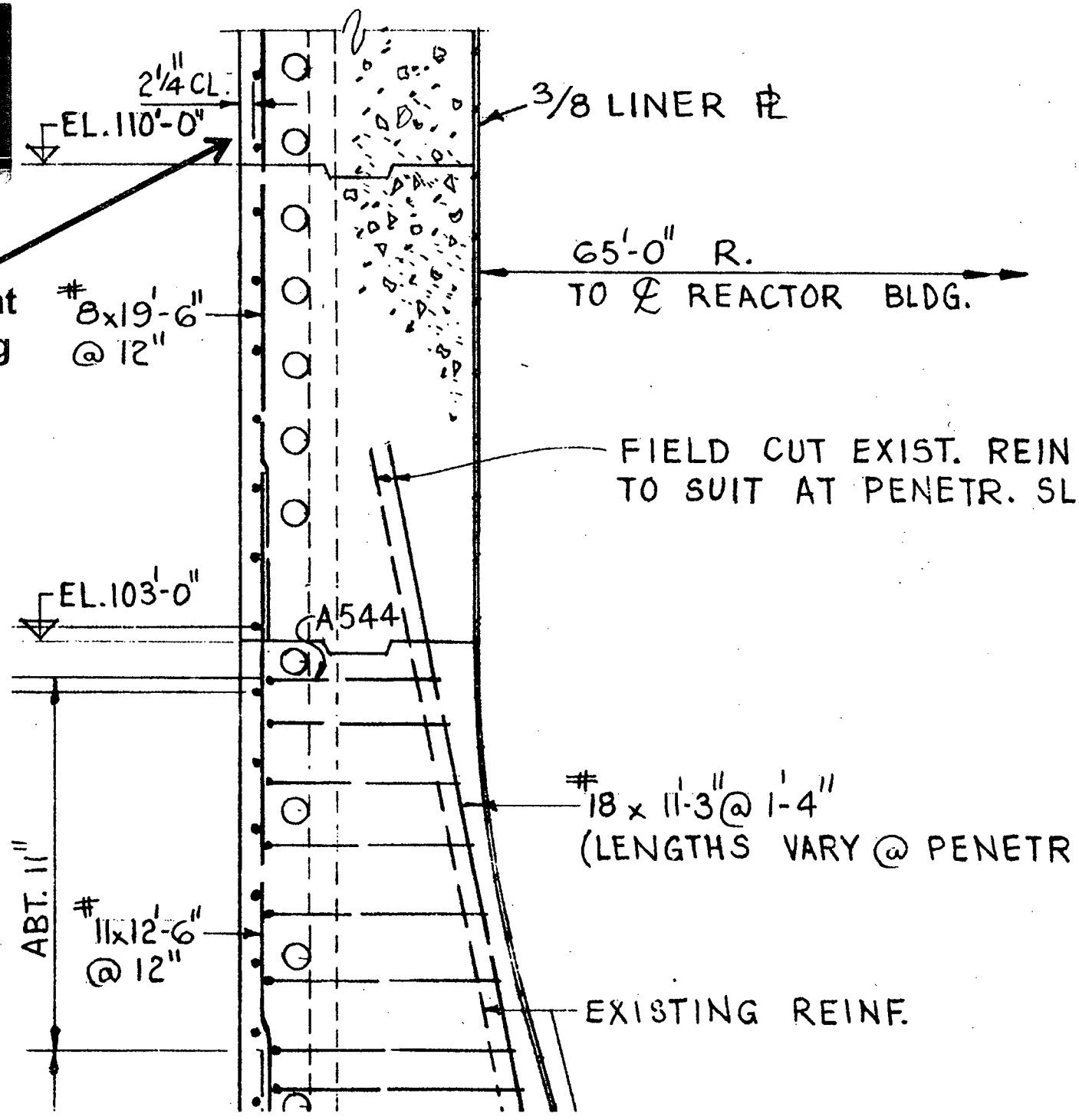


Typical Wall Section at Construction Opening (Plan View)

Source Drawing:
425-033 SH000

Wall Section Cutaway

Typical Wall Section at Construction Opening



Source Drawing:
425-033 SH000

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