

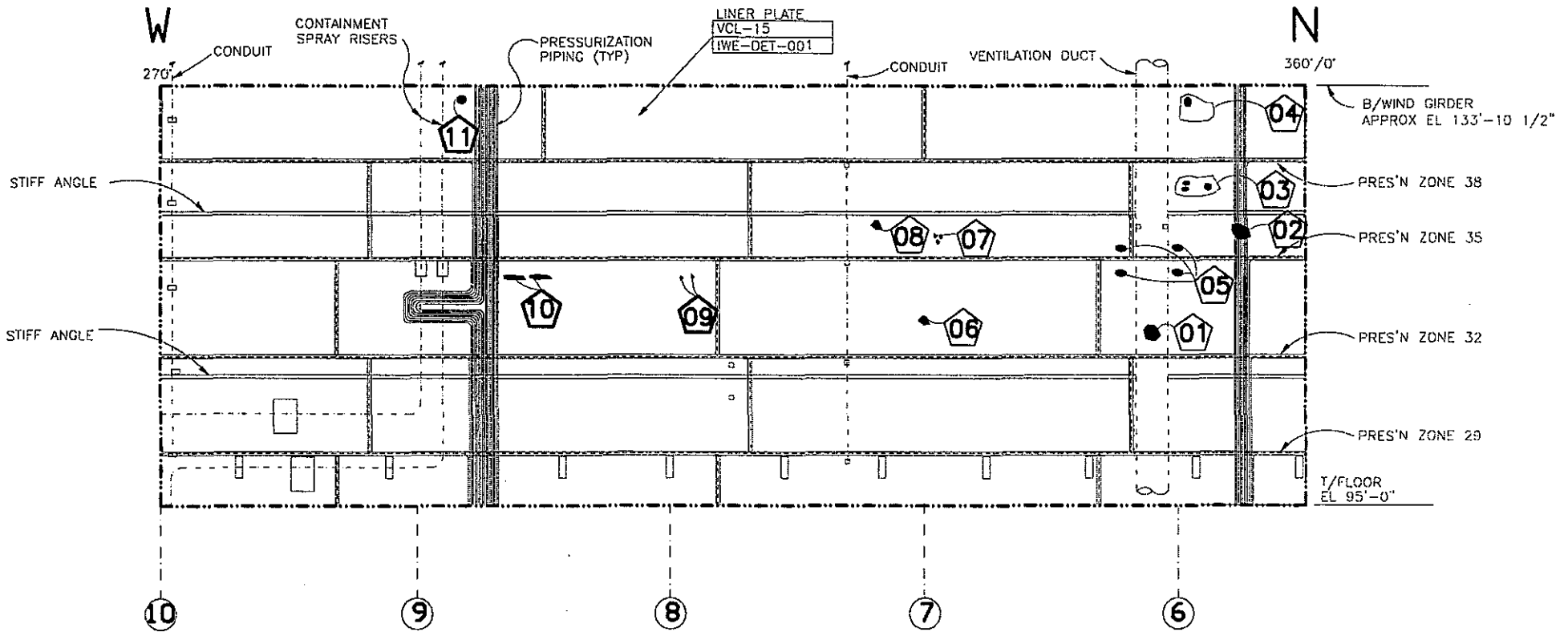


ATTACHMENT D (cont.)  
Responsible Engineer's Review

Component or Zone Number: IWE-095-002

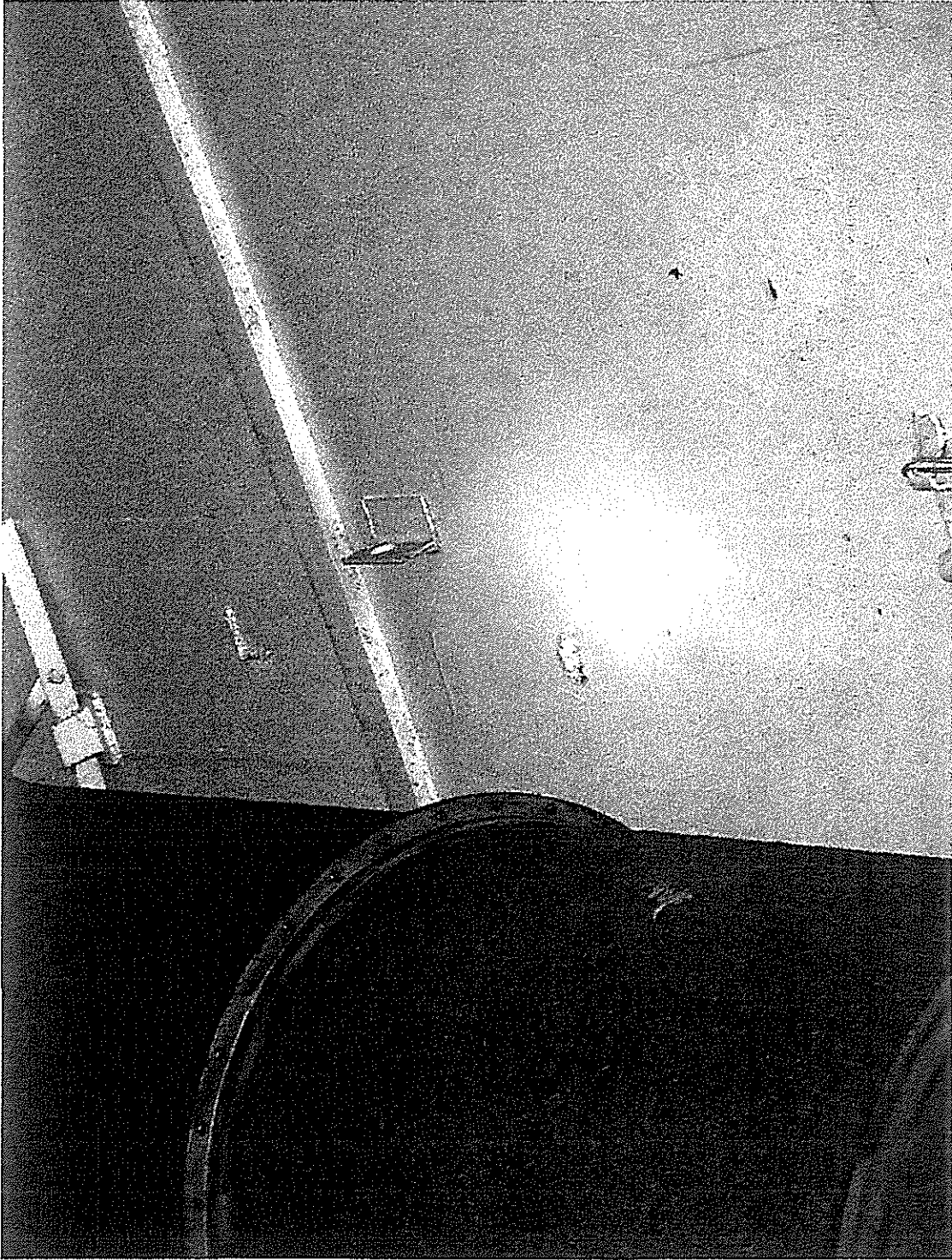
Item No.	Discussion	Acceptable	Additional Eval. Req'd.
01 - 04 06 - 11	The reported conditions reflect deterioration of the coating, primarily delamination/loss of bond between the primer and topcoat. Since the primer is intact there is no reason to suspect any degradation of the liner. Minor surface corrosion is noted in a couple of locations, but does not reflect any significant material loss and is not an aggressive condition. These conditions are not significant relative to Containment structural integrity. Examination at the next regular inspection period is sufficient to monitor them.	✓	
05	The welds appear to be remnants from previous attachments, most likely scaffolding brackets used during construction. The weld surface is irregular and thus the coating will not bond well. The corrosion is minor and does not reflect any significant loss of liner material. Examination at the next regular inspection period is sufficient to monitor this condition.	✓	

RESPONSIBLE ENGINEER: *B.A. Suter* DATE *7/13/00*



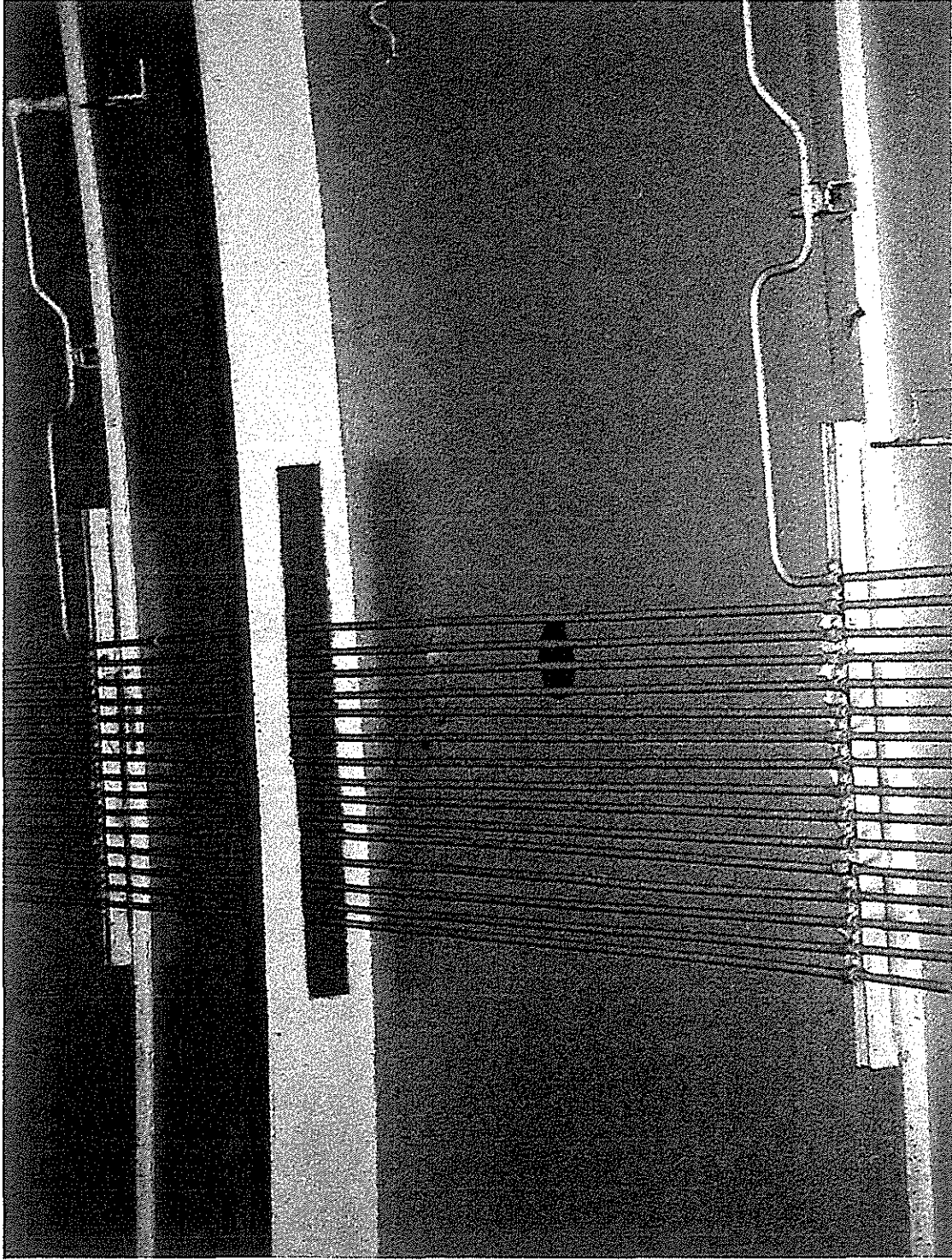
**LINER INSPECTION ZONE IWE-095-002**  
(INTERIOR DEVELOPED VIEW, LOOKING INSIDE OUT)

**XX** -DENOTES ITEM NUMBER ON OBSERVATION FORM.



IWE-095-002

00031701.jpg



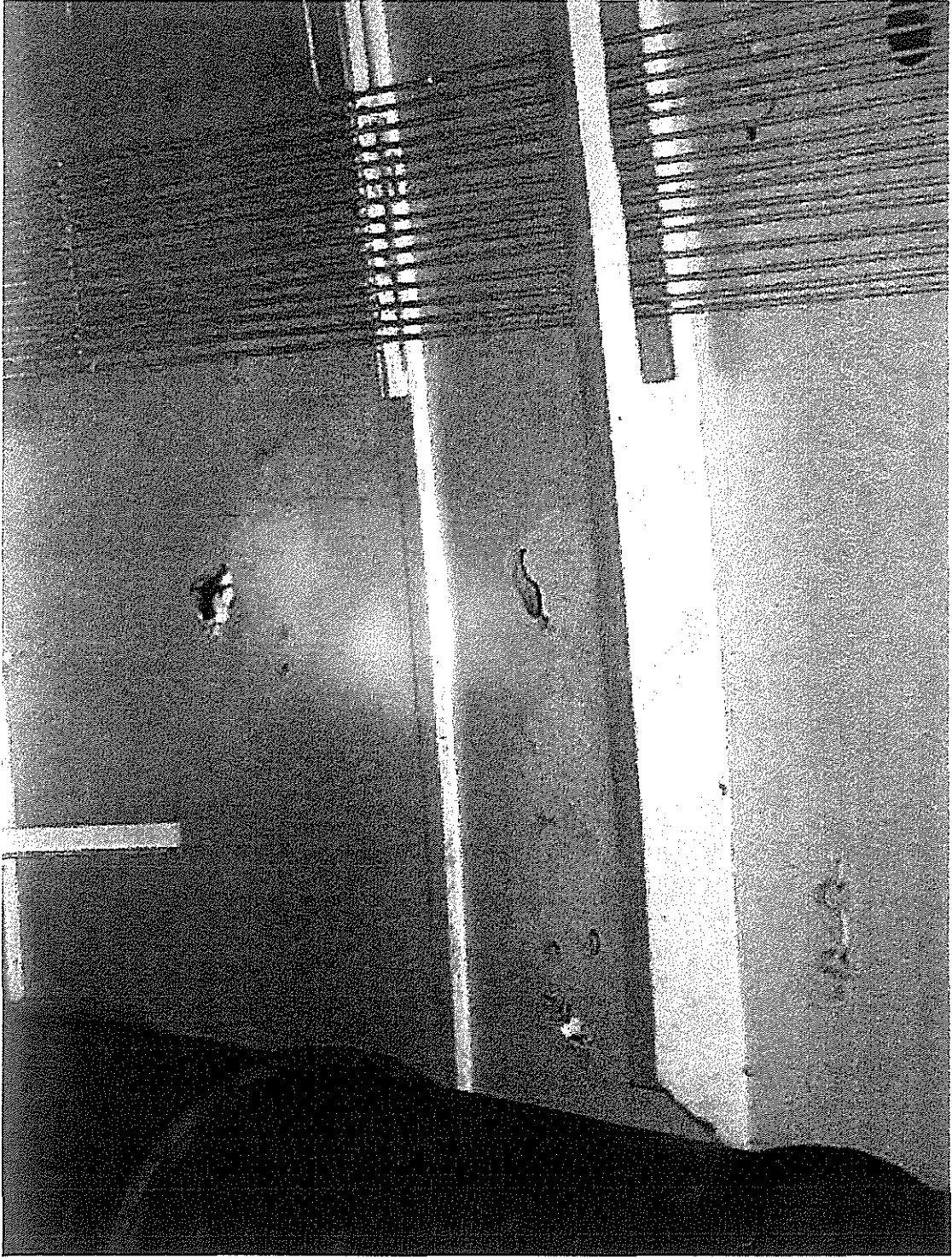
00031702.jpg

IWE-095-002



IWE-095-002

00031703.jpg



00031704.jpg

IWE-095-002

## ATTACHMENT D General Visual Examination Checklist

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining		
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
<b>IWE-095-003</b>																	
VCL-16		X		X		X		X	X			X	X			X	<i>[Signature]</i> 3/10/2000

EXAMINATION PERFORMED BY: *Donald A. Brown* DATE 3/10/2000

ATTACHMENT D (cont.)  
Observations

Component or Zone Number: IWE-095-003

Item No.	Description	Photo
01	Two (2) 2"x 4" areas show top coat delamination, checking and peeling. Primer intact. Checking to ASTM D660, Mosaic, Grade 8.	None
02	One (1) 3"x 3" area shows coated grinding depression in liner plate from scaffold clip removal. Coating intact.	None

EXAMINATION PERFORMED BY: Donald A. [Signature] DATE 3/10/2000

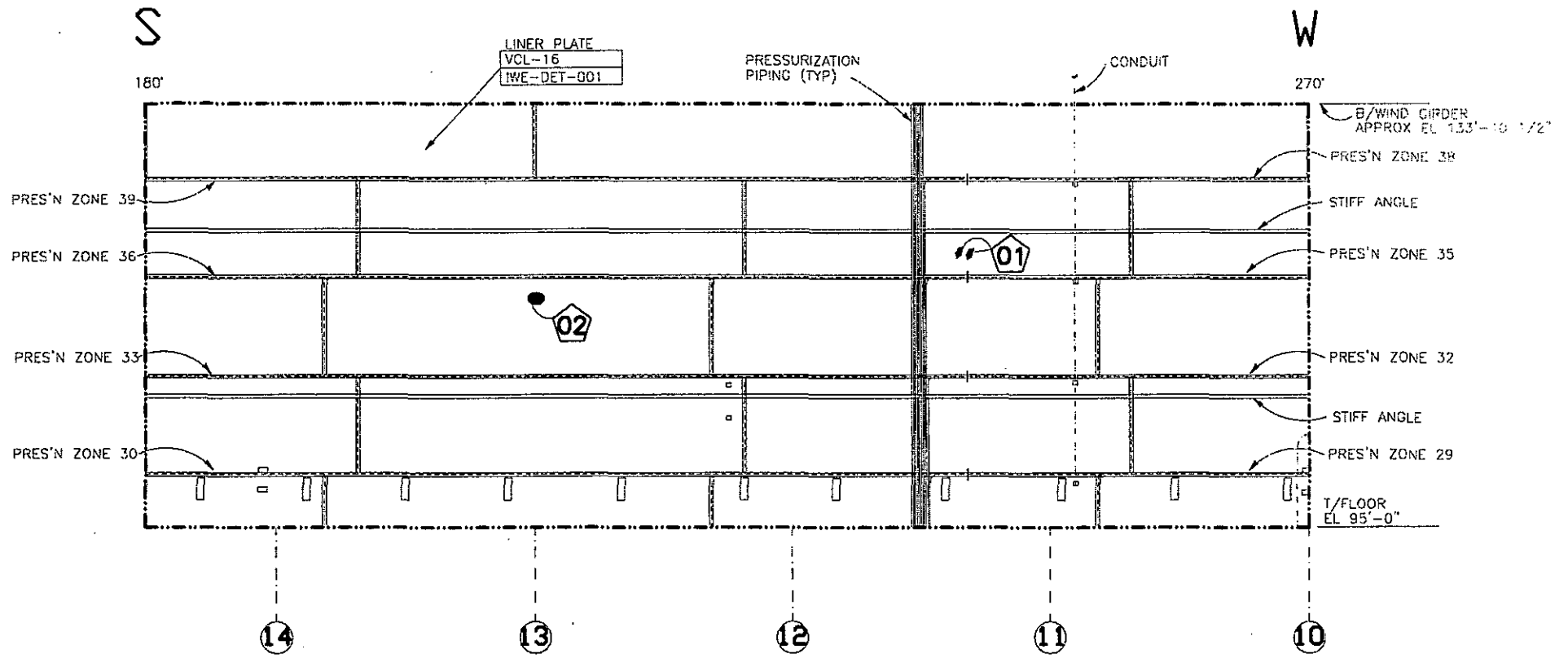


ATTACHMENT D (cont.)  
Responsible Engineer's Review

Component or Zone Number: IWE-095-003

Item No.	Discussion	Acceptable	Additional Eval. Req'd.
01	The reported condition reflects deterioration of the coating (loss of bond between the primer and topcoat). Since the primer is intact there is no reason to suspect any degradation of the liner. This condition is not significant relative to Containment structural integrity. Examination at the next regular inspection period is sufficient to monitor this condition.	✓	
02	Based on the fact that they are coated and the coating is intact, the subject depressions do not reflect ongoing degradation of the liner. They apparently remain from original construction.	✓	

RESPONSIBLE ENGINEER: *PA Slen* DATE 7/3/00



**LINER INSPECTION ZONE IWE-095-003**  
 (INTERIOR DEVELOPED VIEW, LOOKING INSIDE OUT)

**XX** -DENOTES ITEM NUMBER ON OBSERVATION FORM.

General  
Engineering  
Guideline

## ATTACHMENT D General Visual Examination Checklist

IP2-GEG-3113  
Rev. 1  
Rev. Date: 03-10-2000

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date	
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining			
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No		
IWE-095-004																		
VCL-17		X		X		X		X		X		X		X	X			<i>[Signature]</i> 3/10/2000

EXAMINATION PERFORMED BY: *Donald K. Brown* DATE 3/10/2000

ATTACHMENT D (cont.)  
Observations

Component or Zone Number: IWE-095-004

Item No.	Description	Photo
01	Coated 3" circumferential attachment shows minor rusting at the lower area. Rusting is classified ASTM D610, Grade 5, (3% of surface rusted). Primer intact.	None

EXAMINATION PERFORMED BY: Donald S. Don DATE 3/10/2000

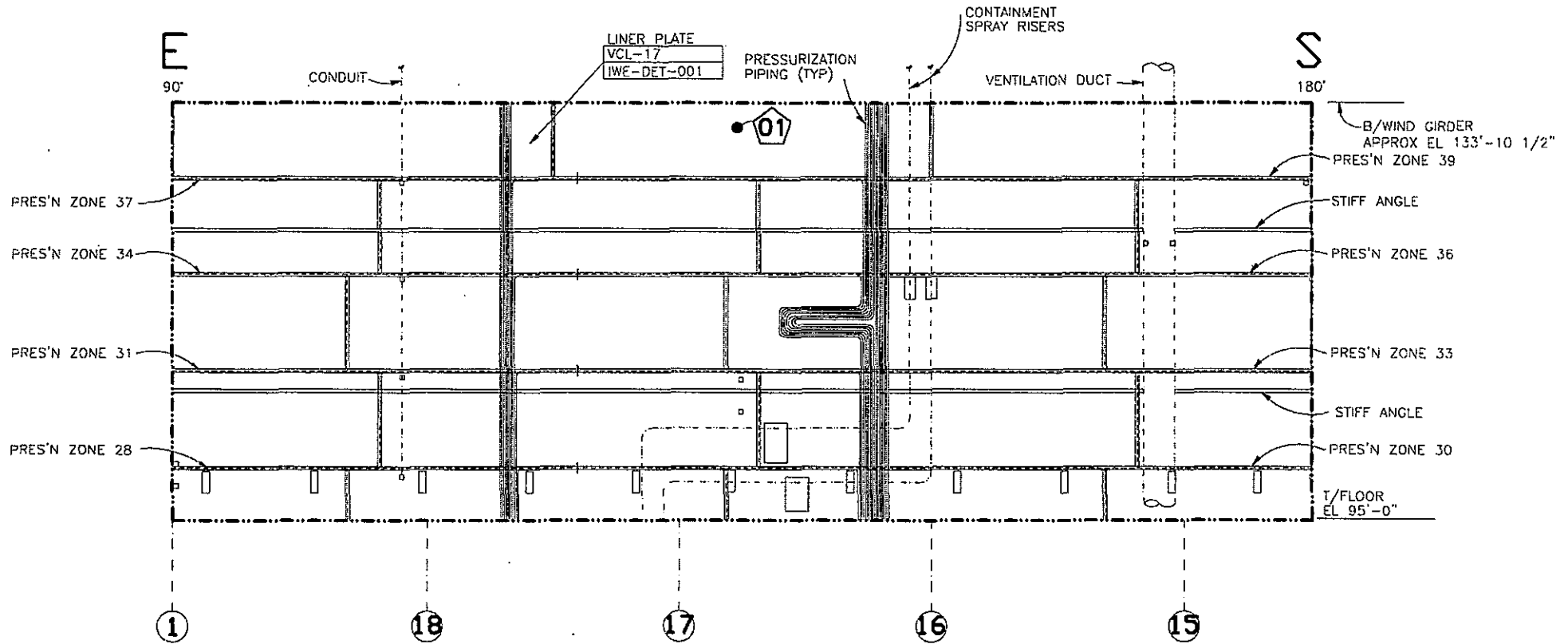


ATTACHMENT D (cont.)  
Responsible Engineer's Review

Component or Zone Number: IWE-095-004

Item No.	Discussion	Acceptable	Additional Eval. Req'd.
01	Rusting of the attachment has not degraded the liner. The primer was observed to be intact and thus the liner is protected. Examination at the next regular inspection period is sufficient to monitor this condition.	✓	

RESPONSIBLE ENGINEER: *B. Baker* DATE *6/11/02*



**LINER INSPECTION ZONE IWE-095-004**  
 (INTERIOR DEVELOPED VIEW, LOOKING INSIDE OUT)

**XX** -DENOTES ITEM NUMBER ON OBSERVATION FORM.

General  
Engineering  
Guideline

## ATTACHMENT D General Visual Examination Checklist

IP2-GEG-3113  
Rev. 1  
Rev. Date: 03-10-2000

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date	
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining			
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No		
IWE-134-001																		
VCL-18		X		X		X		X		X		X	X				X	<i>[Signature]</i> 3/10/2000

EXAMINATION PERFORMED BY: *[Signature]* DATE 3/10/2000

ATTACHMENT D (cont.)  
Observations

Component or Zone Number: IWE-134-001

Item No.	Description	Photo
01	Five small areas approximately 1"x1" each showing delamination and peeling.in topcoat. Primer intact.	None
02	One (1) area approximately 3"x6" show delamination and peeling in topcoat. Primer intact.	None

EXAMINATION PERFORMED BY: Donald S. Brown DATE 3/10/2000

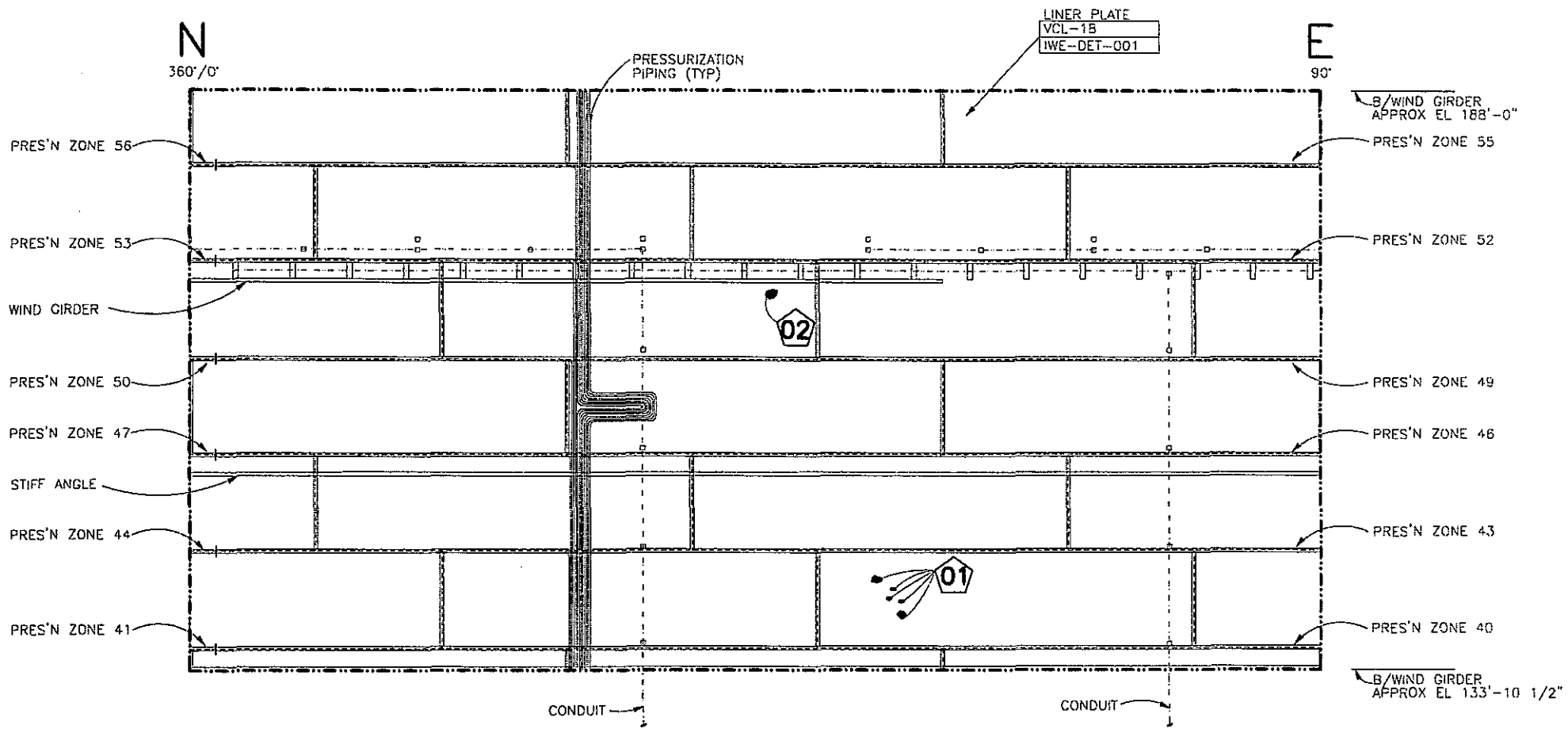


ATTACHMENT D (cont.)  
Responsible Engineer's Review


Component or Zone Number: IWE-134-001

Item No.	Discussion	Acceptable	Additional Eval. Req'd.
01, 02	The reported conditions reflect deterioration of the coating (loss of bond between the primer and topcoat). Since the primer is intact there is no reason to suspect any degradation of the liner. This condition is not significant relative to Containment structural integrity. Examination at the next regular inspection period is sufficient to monitor these conditions.	✓	

RESPONSIBLE ENGINEER: *[Signature]* DATE 2/13/00



**LINER INSPECTION ZONE IWE-134-001**  
 (INTERIOR DEVELOPED VIEW, LOOKING INSIDE OUT)

 -DENOTES ITEM NUMBER ON OBSERVATION FORM.

## ATTACHMENT D General Visual Examination Checklist

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining		
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
<b>IWE-134-002</b>																	
VCL-19		X		X		X		X	X			X	X			X	<i>[Signature]</i> 3/10/2000

EXAMINATION PERFORMED BY: *Paul A. Dow* DATE 3/10/2000

ATTACHMENT D (cont.)  
Observations

Component or Zone Number: IWE-134-002

Item No.	Description	Photo
01	Two (2) 1"x 4" areas shows top coat delamination and peeling in previously repaired area. Primer intact.	None
02	One (1) area shows top coat delamination checking with minor rusting in center. Rusting is classified ASTM D610, Grade 1, (3% of surface rusted). Checking to ASTM D660, Mosaic, Grade 8. Primer intact.	None
03	Two (2) areas 6"x12" and 12"x18" shows top coat delamination, checking and peeling. Primer intact. Checking to ASTM D660, Mosaic, Grade 8.	None
04	One (1) 4"x 4" area shows top coat delamination and checking. Primer intact. Checking to ASTM D660, Mosaic, Grade 8.	None

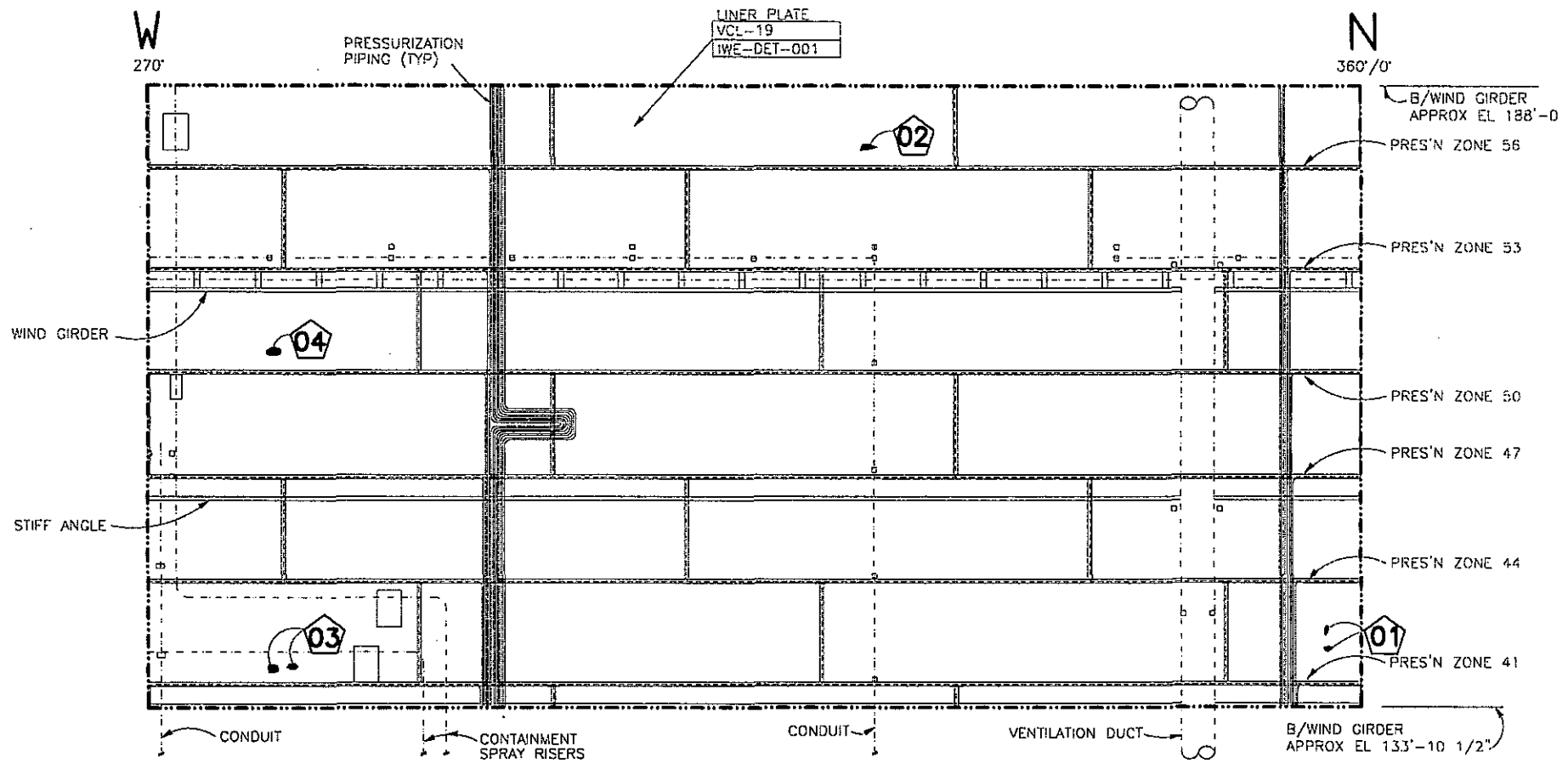
EXAMINATION PERFORMED BY: Donald S. Down DATE 3/10/2000

ATTACHMENT D (cont.)  
Responsible Engineer's Review

Component or Zone Number: IWE-134-002

Item No.	Discussion	Acceptable	Additional Eval. Req'd.
01, 03, 04	The reported conditions reflect deterioration of the coating (loss of bond between the primer and topcoat). Since the primer is intact there is no reason to suspect any degradation of the liner. This condition is not significant relative to Containment structural integrity. Examination at the next regular inspection period is sufficient to monitor these conditions.	✓	
02	The reported condition reflects deterioration of the coating (delamination/loss of bond between the primer and topcoat). Minor surface corrosion is noted, but does not reflect any significant material loss and is not an aggressive condition. This condition is not significant relative to Containment structural integrity. Examination at the next regular inspection period is sufficient to monitor this condition.	✓	

RESPONSIBLE ENGINEER: *B. A. [Signature]* DATE *7/12/00*



**LINER INSPECTION ZONE IWE-134-002**  
 (INTERIOR DEVELOPED VIEW, LOOKING INSIDE OUT)

**XX** -DENOTES ITEM NUMBER ON OBSERVATION FORM.

General  
Engineering  
Guideline

ATTACHMENT D  
General Visual Examination Checklist

IP2-GEG-3113  
Rev. 1  
Rev. Date: 03-10-2000

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date	
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining			
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No		
IWE-134-003																		
VCL-20		X		X		X		X	X			X		X	X			<i>[Signature]</i> 3/10/2000

EXAMINATION PERFORMED BY: *Donald A. Rose* DATE 3/10/2000

ATTACHMENT D (cont.)  
Observations

Component or Zone Number: IWE-134-003

Item No.	Description	Photo
01	Two (2) 2"x 3" areas show top coat delamination and checking. Primer intact. Checking to ASTM D660, Mosaic, Grade 8.	None
02	One (1) 1"x 1" area show top coat delamination checking with rusting and signs of primer coating diminishing. Rusting is classified as ASTM D610, Grade 4, 10% of surface rusted. Checking to ASTM D660, Mosaic, Grade 8. Primer intact.	None

EXAMINATION PERFORMED BY: *Donald S. Brown* DATE *3/10/2000*



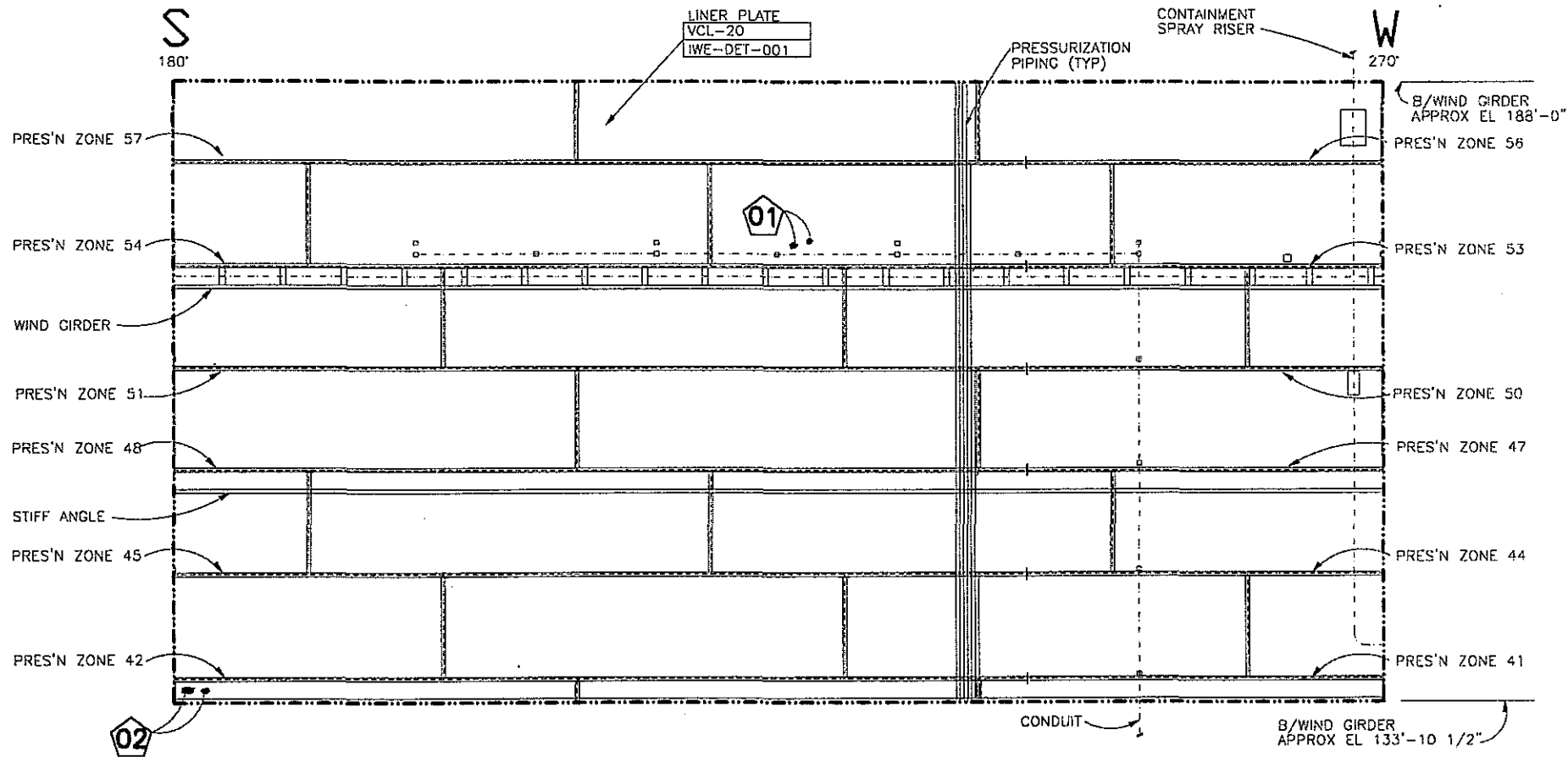


ATTACHMENT D (cont.)  
Responsible Engineer's Review

Component or Zone Number: IWE-134-003

Item No.	Discussion	Acceptable	Additional Eval. Req'd.
01	The reported condition reflects deterioration of the coating (loss of bond between the primer and topcoat). Since the primer is intact there is no reason to suspect any degradation of the liner. This condition is not significant relative to Containment structural integrity. Examination at the next regular inspection period is sufficient to monitor these conditions.	✓	
02	The reported condition reflects deterioration of the coating (delamination/loss of bond between the primer and topcoat). Minor surface corrosion is noted, but does not reflect any significant material loss and is not an aggressive condition. This condition is not significant relative to Containment structural integrity. Examination at the next regular inspection period is sufficient to monitor this condition.	✓	

RESPONSIBLE ENGINEER: *[Signature]* DATE 7/13/00



**LINER INSPECTION ZONE IWE-134-003**  
 (INTERIOR DEVELOPED VIEW, LOOKING INSIDE OUT)

**XX** -DENOTES ITEM NUMBER ON OBSERVATION FORM.

General  
Engineering  
Guideline

ATTACHMENT D  
General Visual Examination Checklist

IP2-GEG-3113  
Rev. 1  
Rev. Date: 03-10-2000

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date	
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining			
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No		
IWE-134-004																		
VCL-21		X		X		X		X	X			X	X				X	<i>[Signature]</i> 3/10/2000

EXAMINATION PERFORMED BY: *Donald S. Brown* DATE 3/10/2000

Component or Zone Number: IWE-134-004

Item No.	Description	Photo
01	One (1) 5"x 5" area showing top coating peeling and delamination and checking. Primer intact. Checking to ASTM D660, Mosaic, Grade 8.	None
02	One (1) 2" x 2" area showing lubricant product residue. Top coat intact.	00030914.jpg
03	Two (2) coated areas from prior scaffold welding show signs of rusting to ASTM D610, Grade 5, 3% of surface area. Primer intact.	None
04	Four (4) 2"x 2" areas showing top coating peeling and delamination and checking. Primer intact. Checking to ASTM D660, Mosaic, Grade 8.	None
05	One (1) 3"x 3" area showing top coating delamination and checking. Primer intact. Checking to ASTM D660, Mosaic, Grade 8.	None

EXAMINATION PERFORMED BY:

*Ronald S. Don*

DATE

*3/10/2000*

ATTACHMENT D (cont.)  
Observations

Component or Zone Number: IWE-134-004

Item No.	Description	Photo
06	One (1) 2"x 2" area showing top coating peeling and delamination and checking. Primer intact. Checking to ASTM D660, Mosaic, Grade 8.	None
07	One (1) 5"x 5" areas showing top coating peeling and checking. Primer intact. Checking to ASTM D660, Mosaic, Grade 8.	00030915.jpg
08	Five (5) 1"x 1" areas showing top coating delamination checking. Primer intact. Checking to ASTM D660, Mosaic, Grade 8.	None

EXAMINATION PERFORMED BY:

*Donald S. D...*

DATE

*3/10/2000*

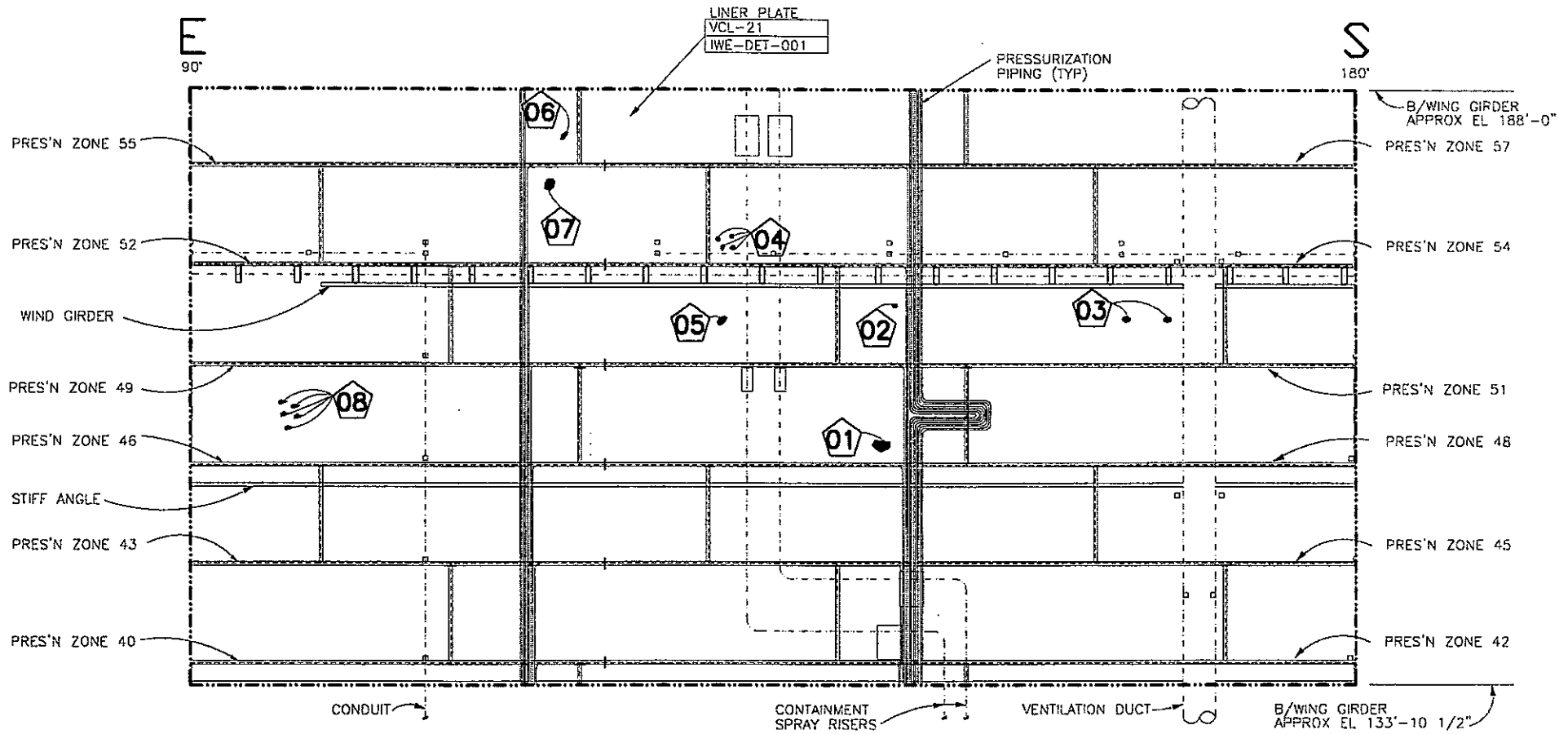


ATTACHMENT D (cont.)  
Responsible Engineer's Review

Component or Zone Number: IWE-134-004

Item No.	Discussion	Acceptable	Additional Eval. Req'd.
01, 04 - 08	The reported conditions reflect deterioration of the coating (loss of bond between the primer and topcoat). Since the primer is intact there is no reason to suspect any degradation of the liner. This condition is not significant relative to Containment structural integrity. Examination at the next regular inspection period is sufficient to monitor these conditions.	✓	
02	The reported condition is debris on the surface of the liner and does not reflect degradation.	✓	
03	The welds appear to be remnants from previous attachments, most likely scaffolding brackets used during construction. The weld surface is irregular and thus the coating will not bond well. The corrosion is minor and does not reflect any significant loss of liner material. Examination at the next regular inspection period is sufficient to monitor this condition.	✓	

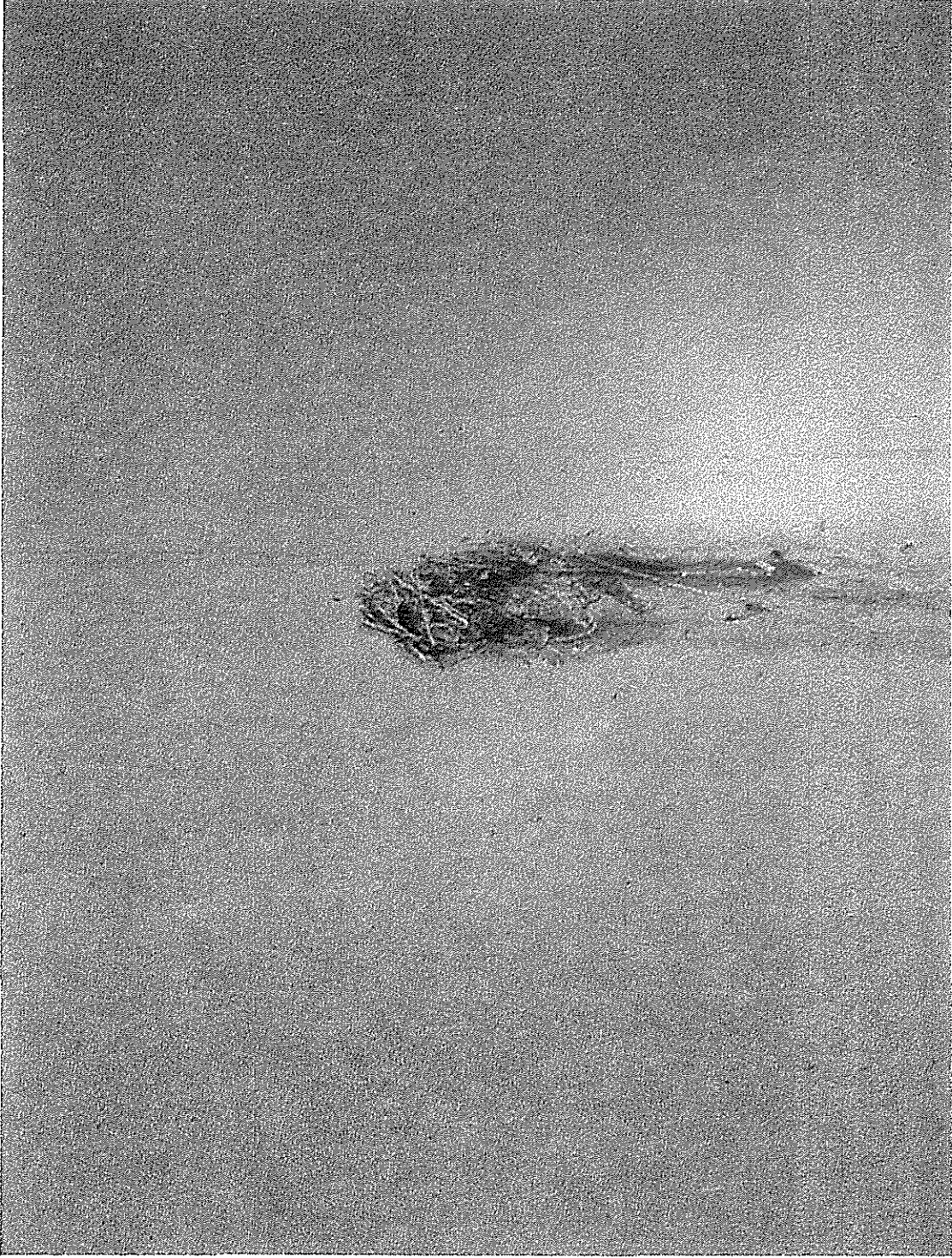
RESPONSIBLE ENGINEER: *DA S* DATE *7/13/00*



**XX** -DENOTES ITEM NUMBER ON OBSERVATION FORM.

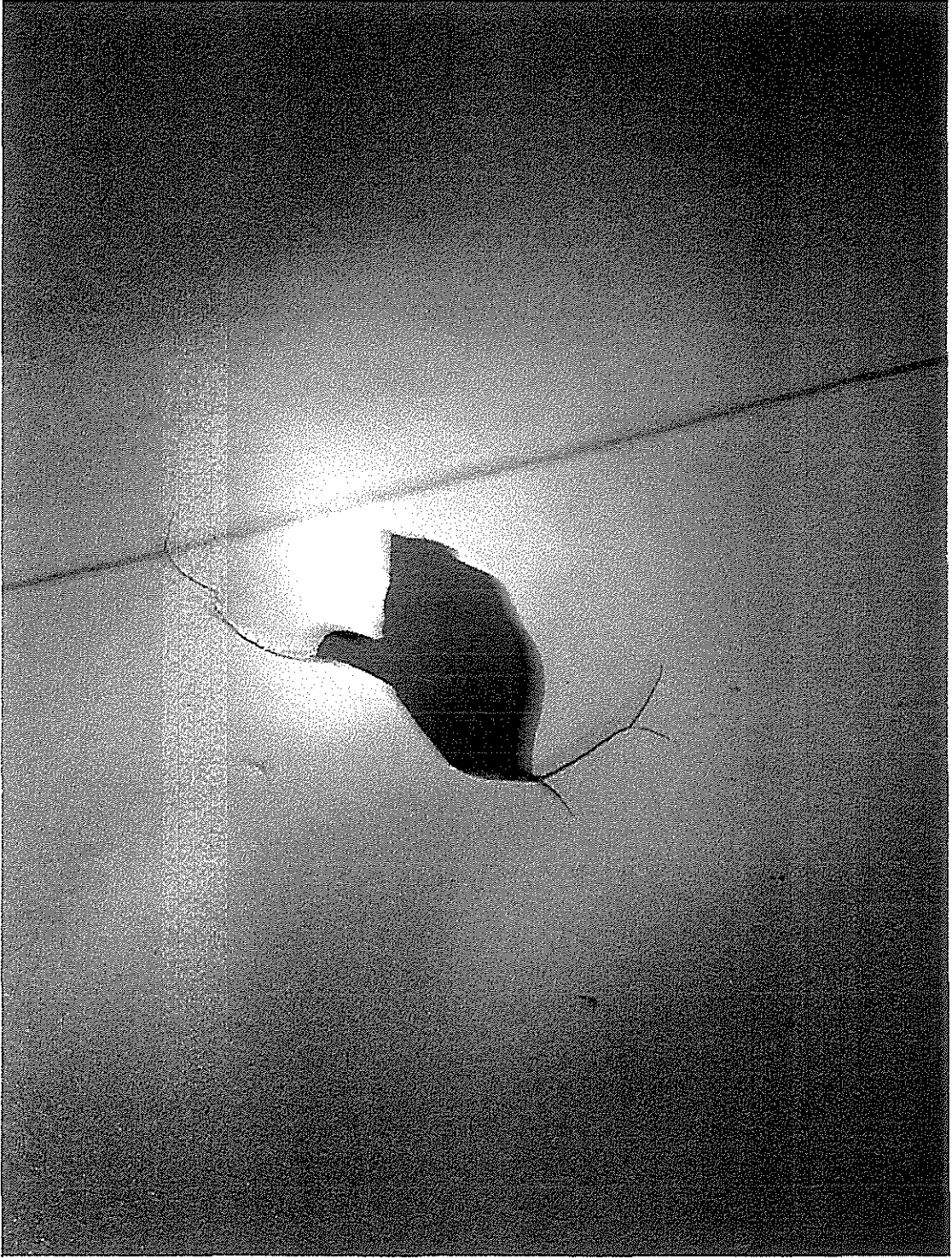
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IWE-134-004

00030914.jpg



IWE-134-004

00030915.jpg


General  
Engineering  
Guideline

## ATTACHMENT D

### General Visual Examination Checklist

IP2-GEG-3113  
Rev. 1  
Rev. Date: 03-10-2000

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining		
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
<b>IWE-DOME-001</b>																	
VCL-22		X		X		X		X		X		X		X		X	 3/10/2000

EXAMINATION PERFORMED BY: *Paul S. Brown* DATE 3/10/2000

## ATTACHMENT D General Visual Examination Checklist

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining		
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
<b>IWE-DOME-002</b>																	
VCL-23		X		X		X		X	X			X	X			X	<i>[Signature]</i> 3/10/2000

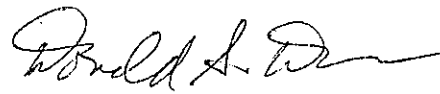
EXAMINATION PERFORMED BY: *Donald S. Brown* DATE 3/10/2000

ATTACHMENT D (cont.)  
Observations

Component or Zone Number: IWE-DOME-002

Item No.	Description	Photo
01	One (1) area approximately 4"x 4" located in the 4th top course from the left shows delamination and peeling in topcoat. Primer intact.	None
02	One (1) area approximately 4"x 5" located in the 2nd course from the left in the middle courses shows delamination and peeling in topcoat. Checking around removed area. Primer intact. Checking classified as ASTM D660, Mosaic Grade 8.	None

EXAMINATION PERFORMED BY:



DATE

3/10/2000

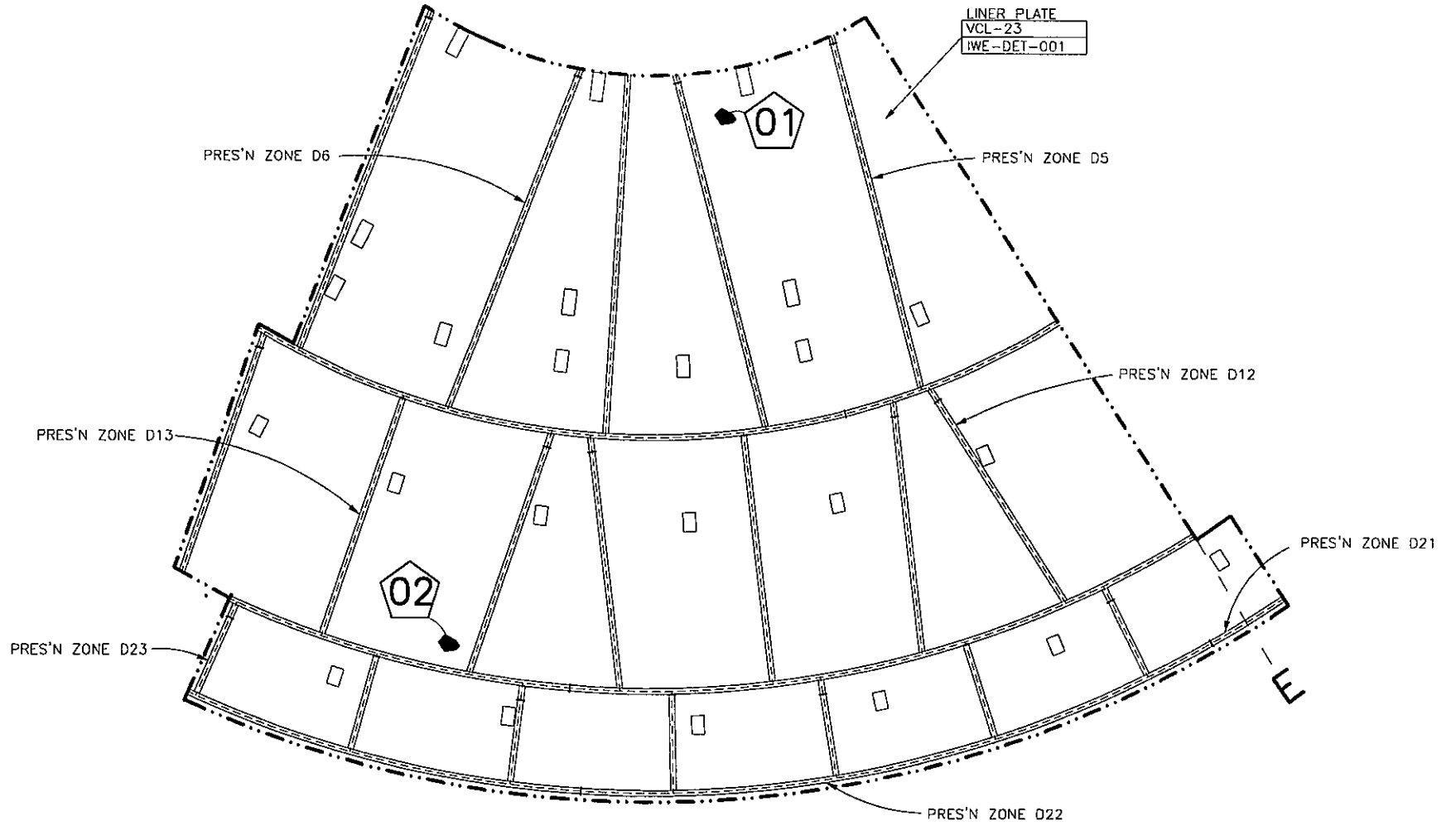


ATTACHMENT D (cont.)  
Responsible Engineer's Review

Component or Zone Number: IWE-DOME-002

Item No.	Discussion	Acceptable	Additional Eval. Req'd.
01, 02	The reported conditions reflect deterioration of the coating (loss of bond between the primer and topcoat). Since the primer is intact there is no reason to suspect any degradation of the liner. This condition is not significant relative to Containment structural integrity. Examination at the next regular inspection period is sufficient to monitor these conditions.	✓	

RESPONSIBLE ENGINEER: *BA S* DATE *7/13/00*



**LINER INSPECTION ZONE IWE-DOME-002**

VIEW LOOKING UP



-DENOTES ITEM NUMBER ON OBSERVATION FORM.

General  
Engineering  
Guideline

## ATTACHMENT D

### General Visual Examination Checklist

IP2-GEG-3113  
Rev. 1  
Rev. Date: 03-10-2000

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining		
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
<b>IWE-DOME-003</b>																	
VCL-24		X		X		X		X	X			X	X			X	<i>[Signature]</i> 3/10/2000

EXAMINATION PERFORMED BY: *Donald S. Down* DATE 3/10/2000



ATTACHMENT D (cont.)  
Observations

Component or Zone Number: IWE-DOME-003

Item No.	Description	Photo
01	Five (5) areas approximately 2-sq. in. located in the 2nd course from the right in the lower courses shows delamination and peeling in topcoat. Checking around removed area. Primer intact. Checking classified as ASTM D660, Mosaic Grade 8.	None

EXAMINATION PERFORMED BY: Donald S. Adam DATE 3/18/2000

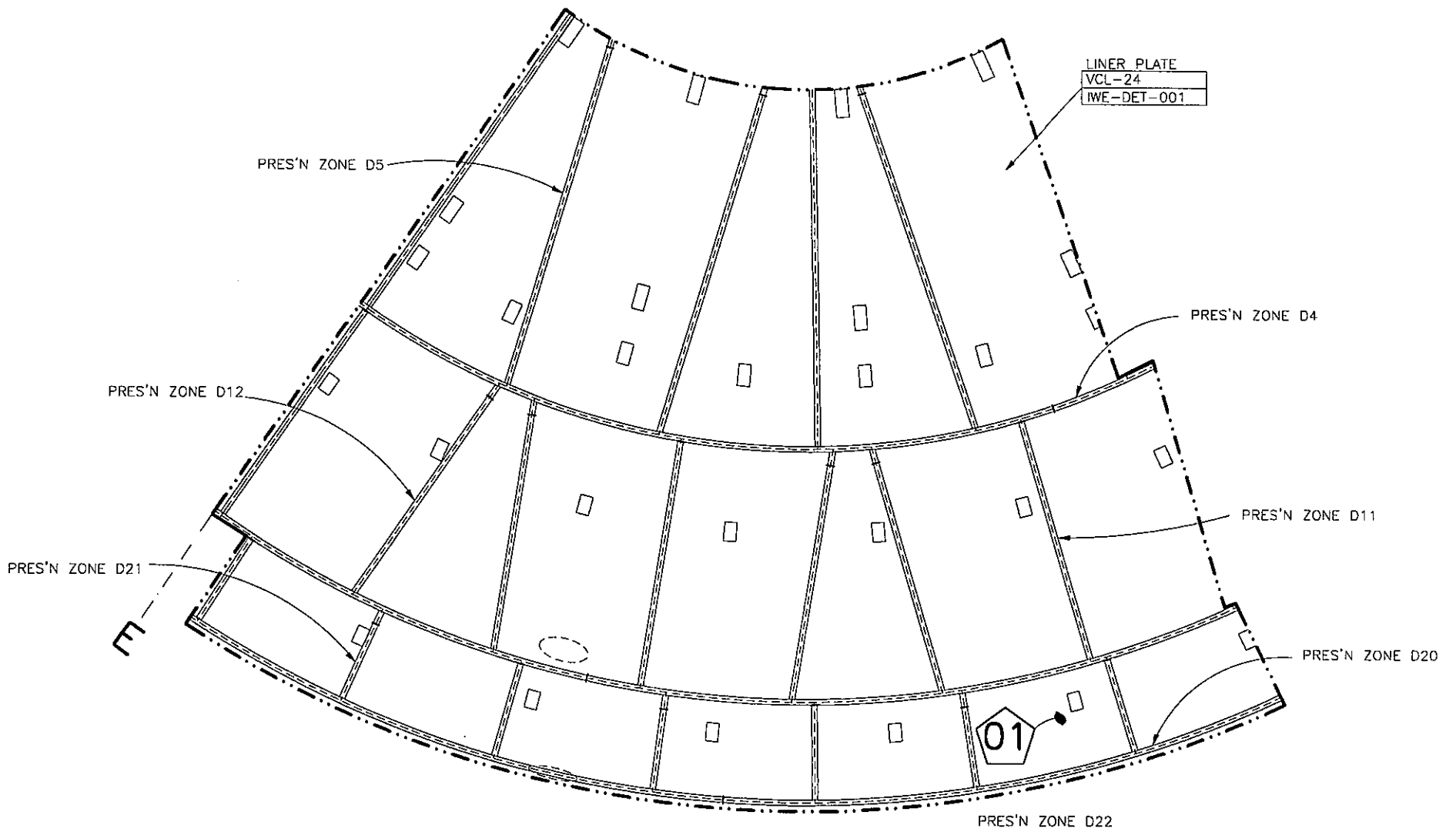


ATTACHMENT D (cont.)  
Responsible Engineer's Review

Component or Zone Number: IWE-DOME-003

Item No.	Discussion	Acceptable	Additional Eval. Req'd.
01	The reported conditions reflect deterioration of the coating (loss of bond between the primer and topcoat). Since the primer is intact there is no reason to suspect any degradation of the liner. This condition is not significant relative to Containment structural integrity. Examination at the next regular inspection period is sufficient to monitor these conditions.	✓	

RESPONSIBLE ENGINEER: *[Signature]* DATE 7/13/00



**LINER INSPECTION ZONE IWE-DOME-003**

VIEW LOOKING UP



-DENOTES ITEM NUMBER ON OBSERVATION FORM.

General  
Engineering  
Guideline

ATTACHMENT D  
General Visual Examination Checklist

IP2-GEG-3113  
Rev. 1  
Rev. Date: 03-10-2000

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date		
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining				
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No			
IWE-DOME-004																			
VCL-25		X		X		X		X		X		X		X		X		X	<i>[Signature]</i> 3/10/2000

EXAMINATION PERFORMED BY: *Donald S. Brown* DATE 3/10/2000

General  
Engineering  
Guideline

ATTACHMENT D  
General Visual Examination Checklist

IP2-GEG-3113  
Rev. 1  
Rev. Date: 03-10-2000

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date		
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining				
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No			
IWE-DOME-005																			
VCL-26		X		X		X		X		X		X		X		X		X	<i>[Signature]</i> 3/10/2000

EXAMINATION PERFORMED BY: *Ronald J. Brown* DATE 3/10/2000

General  
Engineering  
Guideline

ATTACHMENT D  
General Visual Examination Checklist

IP2-GEG-3113  
Rev. 1  
Rev. Date: 03-10-2000


Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date		
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining				
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No			
IWE-DOME-006																			
VCL-27		X		X		X		X		X		X		X		X		X	<i>[Signature]</i> 3/10/2000

EXAMINATION PERFORMED BY: *Donald S. Anton* DATE 3/10/2000

## ATTACHMENT D General Visual Examination Checklist

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria

Component Number or Zone Number	Recording Conditions																Initial and Date
	Nicks, Gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining		
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
IWE-DOME-007																	
VCL-28		X		X		X		X	X			X	X			X	 3/10/2000

EXAMINATION PERFORMED BY: Ronald A. Jones DATE 3/10/2000

ATTACHMENT D (cont.)  
Observations

Component or Zone Number: IWE-DOME-007

Item No.	Description	Photo
01	One (1) area approximately 2-sq. ft. located in the left outside course shows delamination and peeling in topcoat. Checking around removed area. Primer intact. Checking classified as ASTM D660, Mosaic Grade 8.	None

EXAMINATION PERFORMED BY: *Donald S. Do* DATE *2/10/2000*

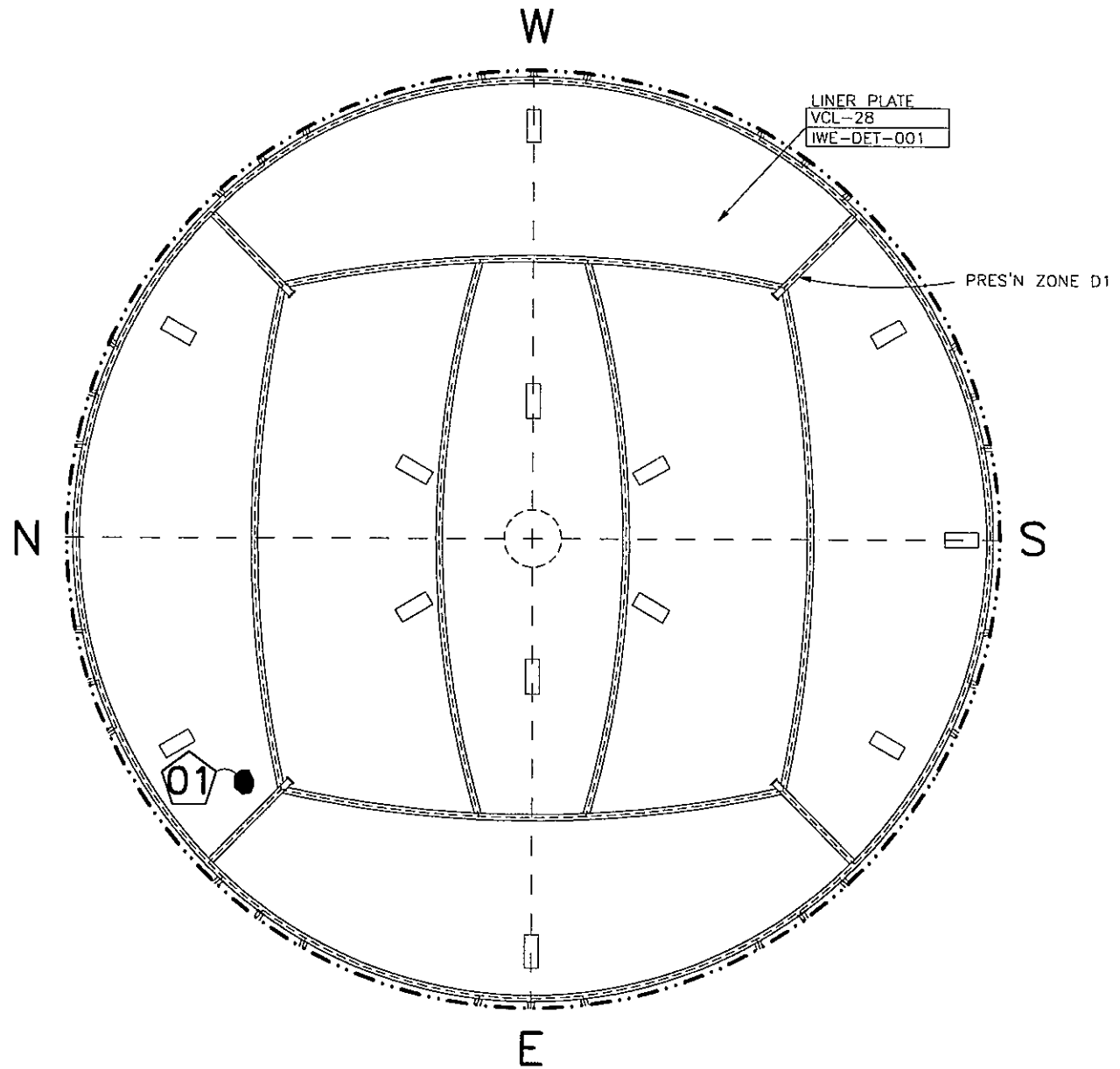


ATTACHMENT D (cont.)  
Responsible Engineer's Review

Component or Zone Number: IWE-DOME-007

Item No.	Discussion	Acceptable	Additional Eval. Req'd.
01	The reported condition reflects deterioration of the coating (loss of bond between the primer and topcoat). Since the primer is intact there is no reason to suspect any degradation of the liner. This condition is not significant relative to Containment structural integrity. Examination at the next regular inspection period is sufficient to monitor this condition.	✓	

RESPONSIBLE ENGINEER: *BA* DATE 7/13/00



**LINER INSPECTION ZONE IWE-DOME-007**

VIEW LOOKING UP



-DENOTES ITEM NUMBER ON OBSERVATION FORM.



## ATTACHMENT E EXAMINATION REVIEW AND COMPLETION

### RESPONSIBLE ENGINEER REVIEW

The following steps will be completed by the Responsible Engineer after completion of the examinations. Each step will be initialed and dated as they are completed.

CAS for BAE

E1. EVALUATE the completed examinations.

N/A

E2. COMPARE current examination results with previous examination results if available.

CAS for BAE

E3. When General Visual Examination results exceed the recording criteria in Section 10.0 determine if the condition warrants further evaluation. If the condition is acceptable, document the basis for the determination on Attachment D.

CAS for BAE

E4. When a condition requires further evaluation perform the following:

E4.1 INITIATE an Engineering Request (ER) to evaluate the current results. Reference the previous results in the request.

E4.2 INITIATE a Condition Report.

E4.3 RECORD the component number, the examination type and the ER number on Attachment F.

E4.4 LIST any additional examinations or corrective actions that are required as a result of this examination in the space provided below. Additional sheets may be added to this surveillance.

Comments:

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Chris Wood for Bryan Erler  
Responsible Engineer/Date



**ATTACHMENT E  
EXAMINATION REVIEW AND COMPLETION (cont'd)**

**SURVEILLANCE COMPLETION**

The following steps will be completed by the examiner that performed the examinations, a lead examiner or the Responsible Engineer after the Responsible Engineer review above has been completed. Each step will be initialed and dated as they are completed.

CAS

E5. VERIFY that the General Visual examinations have been reviewed and approved by the Responsible Engineer.

\*

E6. VERIFY that all Engineering Evaluations have been completed and copies are attached to this procedure.

CAS

E7. ATTACH all completed Attachment C General Visual Examination Checklists to this procedure.

CAS

E8. Forward the completed documentation package to the ISI Coordinator.

\* Evaluation is documented via CRS 200001209.  
This document is maintained within the condition reporting system and does not need to be included herein.



### ATTACHMENT F Engineering Evaluation Checklist

Component Number or Zone Number	Examination type	ER Number	Results	Date
VCL-02	Gen. visual	CRS 2000 01209	Acceptable	
VCL-03	gen visual	CRS 2000 01209	Acceptable	

Responsible Engineer Review Chris Swand Date 6/30/00  
for Bryan Ertler





INDIAN POINT UNIT 2  
CONTAINMENT INSERVICE INSPECTION  
FIRST PERIOD EXAMINATIONS



Category E-A, Liner General Visual Examination  
Tab E - Inspector Certification Records

<u>Examiner</u>	<u>Method</u>	<u>Level</u>
Don Douin	General Visual	N/A

**Attachment G**  
**Personnel Qualification Form**

Inspection and Test Personnel Certification Form For General Visual Examination

Name: DONALD S. DOWIN

Education: B.A. - MANAGEMENT - UNIV. OF IL.  
(RESUME ATTACHED)

Experience: 20 YEARS WHICH INCLUDES ASME AUTA-NUCLEAR  
INSPECTOR, AUTA. INSPECTOR SUPERVISOR

Eye Exam: RESULTS 3/2/00 ACCEPTABLE

Results: \_\_\_\_\_  
\_\_\_\_\_

On the basis of the above, I have determined that the examiner is capable of performing General Visual Examinations as required by ASME Section XI 1992 Edition, 1992 Addenda, Subsection IWE, Subparagraph IWE-3510.1. This certification expires one year from the date of the eye examination.

BAS 3/3/00  
Responsible Engineer Date



NAME DONALD S. DOUIN DIVISION MED

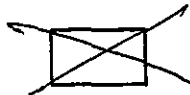
Near Distance

Natural or corrected near distance acuity in at least one eye, such that the individual is capable of reading JAEGER No. 1 letters at a distance of not less than 12 inches (30.5 cm), or an equivalent near distance test. Identify alternate near distance test, if used: \_\_\_\_\_

Acceptable Without  
Eye Correction



Acceptable With  
Eye Correction



Unacceptable



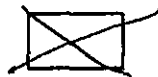
Far Distance

Natural or corrected far distance vision of 20\30 or better, in at least one eye, Linear Snellen Scale.

Acceptable Without  
Eye Correction



Acceptable With  
Eye Correction



Unacceptable



Color Perception

Ishihara color plates or an equivalent color vision test, which demonstrates the capability of distinguishing and differentiating contrast between colors.

Identify alternate color vision test, if used: \_\_\_\_\_

RED/GREEN DIFFERENTIATION

Acceptable



Unacceptable



COMMENTS:

I hereby attest that the above visual examination results are correct and in accordance with my examination of this date. Any alternate tests utilized are the equivalent to or more stringent than the recommended test.

Name Bill Wyssman O.D.

Title optometrist

Address Carsonville South 15617 State Street Chicago IL 60603

Signature Bill Wyssman

Date 3-2-00

**DONALD S. DOUIN**  
**Senior Project Engineer**  
**Construction Management Division**

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**EDUCATION**

University of Illinois  
Bachelors in Management - 1986

**PROFICIENCIES**

Construction Management  
Project & Outage Supervision  
Contract Administration  
Civil / Structural Field Engineering  
Field Inspections & Material Testing  
Nuclear Modifications & Design Change  
Procurement, Material Control and Expediting  
Codes and Standards Specialist  
Computer Literate

**RESPONSIBILITIES**

Mr. Douin's primary responsibility is to coordinate and manage power generation and power services projects relating to construction engineering. These services include coordination with office engineering on design changes, interpretation of design documents with contractors, progress review, schedule monitoring and field quality.

**EXPERIENCE**

Mr. Douin has over 20 years of diverse experience that has enabled him to serve many worldwide clients successfully. His experience includes both nuclear and fossil power from procurement specifications development, bid process, construction management and contract administration, field engineering, nuclear modifications and design changes, spent fuel

storage fabrication and construction, inservice inspection and quality control.

In the last year Mr. Douin has taken on many projects, which include providing containment liner examinations and assessment, nuclear RPV supports condition report resolution, fossil betterment construction services, material control support and asset recovery consulting.

In 1999 and 1997 Mr. Douin spent four months in El Salvador providing construction advisory services for the design and construction of an 18 MW and 12 MW diesel power plants. Representing the client as the owner's architect/engineer, Mr. Douin ensured proper civil/structural and mechanical construction processes and equipment installation were performed by the designers and local contractors for soils testing, concrete supply, placement, testing and inspection, steel erection, piping installation, diesel engine and generator placement. He provided quality oversight inspections for the client at the contractor's batch plant and fabrication facilities. He consulted the client during contractor meetings for design issues, project progress and schedule, manpower loading, change order and partial payment reviews, site quality, and safety.

In 1997 he completed an assignment in China as a Field Design Engineer for the design, construction and start-up of two fossil-fuel units. His duties included resolving turbine island and balance-of-plant system design and installation concerns through design and field change orders.

**DONALD S. DOUIN**  
**Senior Project Engineer**  
**Construction Management Division**

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Mr. Douin was a Procurement Engineer with S&L's project engineering and procurement departments for two Chinese fossil-fuel projects. He facilitated and expedited engineering, procurement and inspection processes, interfaces and activities with S&L vendors as well as steam turbine and boiler consortium members.

Mr. Douin was a Program Manager for two nuclear utilities inservice inspection program updates. His technical responsibilities included ensuring all applicable code, plant licensing, regulatory, detailed examination and testing rules, requirements and results revisions were accurately reflected in the program plan and referenced technical documents.

He also reviewed design, fabrication and construction specifications and drawings, and vendor documents relating to the VSC-24 cask system multi-assembly sealed basket and ventilated concrete cask components.

Mr. Douin spent five years in South Korea assigned to two projects in various capacities. His duties included supervising and consulting utility and engineering personnel in plant design and quality engineering. Specific areas of responsibilities were equipment and piping design, fabrication, inspection, and construction processes. Numerous trips were taken to Korean vendors to assess local manufacturing capabilities.

During the Korean owner support assignment he consulted utility staff in ASME Section III, NE metal containment and Div. 2 concrete containment design, fabrication, examination

and inspection code application and requirements.

Mr. Douin was a field engineer responsible for the diesel generator maintenance and exhaust structural support modification for OPPD at Fort Calhoun 1.

Mr. Douin brought 12 years of experience to Sargent & Lundy which included serving as a third-party ASME Code Authorized Nuclear Inspector at three nuclear construction sites and one operating station. He reviewed design, procurement, fabrication and installation drawings, processes and documents for code compliance and installation.

Specific client experience includes:

**NUCLEAR**

• **Consolidated Edison**

- Indian Point 2, 970MW  
Containment liner examination to Section XI, IWE requirements (2000).

• **American Electric Power Co.**

- D. C. Cook 1 & 2, nuclear, 1100MW each  
Managed task to resolve condition reports for Unit 1 RPV supports and design change package input for Unit 2 containment liner and concrete repair. (1999 - 2000).

• **Wisconsin Public Service Co.**

- Kewaunee nuclear 500MW  
Technical Specialist for Steam Generator Replacement Audit at

**DONALD S. DOUIN**  
**Senior Project Engineer**  
**Construction Management Division**

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Westinghouse - Pensacola (1998)

Diesel Generator Modification Engineer  
(1988)

• **Private Interest Group**

- WNP 3, nuclear 1050MW  
Asset Recovery Study for potential  
material and equipment purchase (1998)

**ComEd**

- Dresden 2 and 3, nuclear, 632 MW each.  
Fire Protection Mod. Engineer (1997)
- Quad Cities 1 and 2, nuclear, 800 MW  
each.  
ISI Technical Consultant. (1995 to 1996)
- LaSalle 1 and 2, nuclear, 1132 MW each.  
ISI Program Update - Program Manager  
(1993 to 1994)

• **Consumers Power Company**

- Palisades, nuclear, 730 MW.  
Dry Fuel Storage VSC-24 Fabrication  
Engineer (1994 - 1995)  
ISI Program Update-Program Manager  
(1993 - 1994)

• **Korea Electric Power Corporation  
(KEPCO) and Korea Power Engineering  
Company (KOPEC)**

- Uichin 3 and 4, nuclear, 900 MW each.  
Plant Design Material & Specification  
Consultant (KOPEC). (1991 to 1993)
- Yonggwang 3 and 4, nuclear, 900 MW  
each.  
Quality Engineering Group Supervisor  
(KOPEC). (1990)  
Owner Support Manufacturing Engineer  
(KEPCO). (1989)

• **Omaha Public Power District**

- Fort Calhoun 1, nuclear, 475 MW.

**FOSSIL & OTHERS**

• **Cemento de El Salvador (CESSA)**

- El Ronco, Units 1-3 & 4-5, diesel, 30MW.  
Construction Engineer (1999 & 1997)

• **Dominion Energy Construction Co.**

- Kincaid 1 and 2, coal 650 MW each  
Construction Engineer (1998 -1999)

• **Zhejiang Provincial Electric Power Bureau**

- Beilungang 3,4 and 5, coal 650MW each  
Procurement Material Control consulting  
at site (1998)

• **Jiangsu Ligang Electric Power Co. Ltd.  
Phase II**

- Ligang 3 and 4, coal, 350 MW each.  
Field Design Engineer (1997)

• **Huaneng International Power  
Development Corp.**

- Dandong 1 and 2, coal, 600 MW each.
- Dalian 3 and 4, coal, MW each.  
Procurement Engineer (1996)





**INDIAN POINT UNIT 2  
CONTAINMENT INSERVICE INSPECTION  
FIRST PERIOD EXAMINATIONS**



**Category E-A, Liner General Visual Examination**

**Tab F - Inspection Procedures**



GENERAL VISUAL EXAMINATION OF CONTAINMENT LINER  
FOR ASME SUBSECTION IWE

Prepared By: Chris Sward Chris Sward Date: 1/25/01  
Reviewed By: Steve Davis Steve Davis Date: 1/25/01  
Approved By: Chris Sward Chris Sward Date: 1/29/01



## 1.0 PURPOSE

The purpose of this procedure is to provide the requirements and instructions for performance of General Visual examinations of the accessible surfaces of the metallic shell liner.

This procedure applies to surface areas as defined in the Containment Inservice Inspection Program Plan for Category E-A Item 1.11.

## 2.0 DEFINITIONS

- 2.1 Bulging – a movement or displacement of the liner away from the backing concrete.
- 2.2 Arc strike -- a loss or displacement of base metal caused during the weld process by the introduction of an electric current sufficient in intensity to change phase from solid to liquid. Arc strikes are rounded depressions in the base metal with some discoloration.
- 2.3 Corrosion – the deterioration of a metal due to an electro-chemical reaction with its environment
- 2.4 Dent – a displacement of the base metal, usually due to impact.
- 2.5 Gouge – a loss of base metal caused by impact with a foreign object.
- 2.6 Pitting – localized corrosion that generally produces sharply defined cavities in a metal surface.
- 2.7 Responsible Engineer- Registered Professional Engineer or knowledgeable individual as defined in ASME IWE-3510.1.



### 3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 Personnel performing General Visual Examination shall be cognizant of, and adhere to, all applicable plant safety policies and procedures throughout the execution of this surveillance.
- 3.2 When performing remote examinations using visual aids the examination method must be demonstrated that at the maximum distance the examination method can resolve the required characters or line thickness identified by the Responsible Engineer.
- 3.3 Any condition that may affect containment structural integrity or leak tightness identified as a result of the General Visual Examination shall be accepted by engineering evaluation or corrected by repair or replacement prior to performing the next Appendix J type A test.
- 3.4 When conditions exist in accessible areas that indicate the presence of or result in degradation to inaccessible areas an engineering evaluation shall be performed to evaluate the acceptability of the inaccessible areas. For each area identified the following shall be reported in the ISI summary report:
  - 3.4.1 A description of the type and estimated extent of degradation, and the conditions that lead to the degradation;
  - 3.4.2 An evaluation of each area, and the result of the evaluation;
  - 3.4.3 A description of necessary corrective actions.
- 3.5 In the event the Acceptance Criteria as specified in this procedure is not met, promptly NOTIFY the utility's responsible engineer.
- 3.6 As allowed by 10CFR50.55a(b)(2)(x)(D) the following requirements will be used in lieu of IWE-2430:

For each flaw or area of degradation identified which exceeds acceptance standards, provide the following in the ISI Summary Report required by IWA-6000:

- (a) A description of each flaw or area, including the extent of degradation, and the conditions that led to the degradation;
- (b) The acceptability of each flaw or area, and the need for additional examinations to verify that similar degradation does not exist in similar components,

- (c) A description of necessary corrective actions.
- (d) If required, the number and type of additional examinations to ensure detection of similar degradation in similar components.

## 4.0 EQUIPMENT AND PERSONNEL

### 4.1 Measuring and Test Equipment

- Flashlight(s)
- Binoculars or instrument capable of distinguishing flaws as defined by the Responsible Engineer.
- Remote lighting, flood lights, etc.

### 4.2 Personnel

General Visual Examination personnel shall have a valid eye examination and be knowledgeable in inservice inspection of metallic liners. These requirements for the General Visual examination personnel shall be reviewed by the Responsible Engineer prior to the start of the examination.

### 4.3 Responsibilities

Per the requirements of ASME IWE-3510.1, the General Visual Examination is to be performed by, or under the direction of, the Responsible Engineer. The Responsible Engineer, therefore, is responsible for review of examiner qualifications, establishment of the General Visual Examination requirements, and review of the examination results.

The Visual Examiner is responsible for conduct of the examinations in accordance with this procedure.

## 5.0 PREREQUISITES

The Visual Examiner shall perform steps B1 thru B16 of Attachment B. Each step shall be initialed and dated as they are completed.

## 6.0 EXAMINATION

The Visual Examiner shall perform steps B17 thru B21 of Attachment B. Each step shall be initialed and dated as they are completed.



## 7.0 GENERAL VISUAL EXAMINATION REVIEW

The Responsible Engineer shall perform steps E1 thru E4 of Attachment E. Each step shall be initialed and dated as they are completed.

## 8.0 SURVEILLANCE COMPLETION

The lead examiner or Responsible Engineer shall perform steps E5 thru E8 of Attachment E after the Responsible Engineer review in steps E1 thru E4 has been completed. Each step shall be initialed and dated as they are completed.

## 9.0 DOCUMENTATION

The forms and checklists in this procedure shall be completed and compiled into a documentation package. The package shall be assembled and processed per the instructions in this procedure and the attachments.



## 10.0 ACCEPTANCE CRITERIA

The Visual Examiner shall use the following criteria to determine conditions which must be recorded for further evaluation by the Responsible Engineer.

Condition	Recording Criteria
Nicks, gouges, arc strikes	Nicks, gouges, arc strikes whose depth exceeds 10% of the metal thickness.
Metal cracking	All
Metal corrosion	All active corrosion. Note: Pitting may exist from original fabrication and construction and may be accepted provided there is no evidence of ongoing activity and it does not exceed 10% of the base metal thickness.
Blistering (coating)	Greater than size no. 4 and/or density exceeding "few" per ASTM D 714.
Checking (coating)	Greater than ASTM rating 6 per ASTM D 660.
Cracking (coating)	All, except where it can be definitively confirmed that the crack does not propagate from the base metal. Record degree of cracking per ASTM D 661.
Peeling (coating)	All. Record degree of peeling per ASTM D 772.
Rust staining	Any staining that is more than loose surface staining or that can be attributed to a source other than the containment component.

The General Visual examination shall be reviewed and approved by the Responsible Engineer. The examinations shall be reviewed for any signs of degradation that may affect the containment structural integrity or leak tightness.



## 11.0 REFERENCES

- 11.1 10CFR50 Appendix J.
- 11.2 ASME Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components, Subsection IWE and IWL, 1992 Edition, 1992 Addenda.
- 11.3 10CFR 50.55a(b)(2)(x), Code of Federal Regulations, Title 10, Part 50.55a, Alternative requirements for evaluation of examinations.
- 11.4 ASTM D 610-95, "Standard Test Method for Evaluating Degree of rusting on Painted Steel Surfaces."
- 11.5 ASTM D 660-93, "Standard Test Method for Evaluating Checking of Exterior Paints."
- 11.6 ASTM D 661-93, "Standard Test Method for Evaluating Degree of Cracking of Exterior Paints."
- 11.7 ASTM D 714-87, "Standard Test Method for Evaluating Degree of Blistering of Paints."
- 11.8 ASTM D 772-68, "Evaluating Degree of Flaking (Scaling) of Exterior Paints."

## 12.0 ATTACHMENTS

- 12.1 Attachment A General Visual Exam Requirements Sheet
- 12.2 Attachment B Prerequisites and Examination Instructions
- 12.3 Attachment C Demonstration of Remote Examination Equipment
- 12.4 Attachment D General Visual Inspection Checklist
- 12.5 Attachment E Examination Review and Completion
- 12.6 Attachment F Engineering Evaluation Checklist



## ATTACHMENT A General Visual Exam Requirements Sheet

### SCOPE OF GENERAL VISUAL EXAMINATION:

Accessible surface areas of the containment liner as defined in the Containment ISI Program Plan and inspection drawings.

### CONDITIONS TO BE EXAMINED FOR:

General conditions for all areas and components:

- a. Nicks, gouges, arc strikes
- b. Metal cracking
- c. Metal corrosion
- d. Rust staining

Painted or coated surfaces shall be examined for evidence of missing paint or coating, flaking, wear, erosion, blistering, peeling, discoloration, nicks or gouges that extend to the base metal and other signs which may indicate degradation of the substrate beneath the coatings.

Non coated surfaces shall be examined for evidence of cracking, discoloration, wear, pitting, excessive corrosion, arc strikes, gouges, surface discontinuities, dents, and other signs of surface irregularities.

### PERSONNEL CERTIFICATION REQUIREMENTS:

Personnel performing General Visual Examinations shall be qualified by the Responsible Engineer. Completed Attachment G forms shall be attached to the documentation package.



**ATTACHMENT A**  
**General Visual Exam Requirements Sheet (cont'd)**

**LIGHTING REQUIREMENTS:**

Flashlight or floodlights shall be used as required to perform the examinations. Illumination shall be verified by demonstrating that a 1/32" black line on a white background can be resolved.

**EXAMINATION DISTANCE REQUIREMENTS:**

Examinations shall be performed from floors, platforms and other permanent vantage points which provide the closest examination distance practical. Remote examination methods (e.g., binoculars) shall be used where access is not available for unaided visual examination. Remote examination methods require that distance and illumination be demonstrated and documented per Attachment C.

---

The Responsible Engineer has reviewed these requirements for applicability to \_\_\_\_\_  
and approves them for conduct of the General Visual Examination.

RESPONSIBLE ENGINEER: \_\_\_\_\_ DATE \_\_\_\_\_

---

These requirements have been reviewed with the examiners to ensure understanding.

REVIEW CONDUCTED BY: \_\_\_\_\_ DATE \_\_\_\_\_

GENERAL VISUAL EXAMINER \_\_\_\_\_ DATE \_\_\_\_\_

GENERAL VISUAL EXAMINER \_\_\_\_\_ DATE \_\_\_\_\_

GENERAL VISUAL EXAMINER \_\_\_\_\_ DATE \_\_\_\_\_

GENERAL VISUAL EXAMINER \_\_\_\_\_ DATE \_\_\_\_\_

GENERAL VISUAL EXAMINER \_\_\_\_\_ DATE \_\_\_\_\_



## ATTACHMENT B Prerequisites and Examination Instructions

### PREREQUISITES

The following steps shall be completed by the lead examiner or Responsible Engineer prior to performing the examinations. Each step shall be initialed and dated as it is completed.

- \_\_\_\_\_ B1. REVIEW the ISI Program Plan to identify the components/areas to be examined.
- \_\_\_\_\_ B2. RECORD the Component number or Zone Number on Attachment D.
- \_\_\_\_\_ B3. REVIEW the inspection criteria on Attachment A with the Responsible Engineer prior to the start of the examinations.
- \_\_\_\_\_ B4. OBTAIN copies of the containment ISI drawings (e.g., general arrangement, zone and detail drawings) which define the components and boundaries for inspection and verify that they are the latest revision.
- \_\_\_\_\_ B5. REVIEW the containment ISI drawings for the areas which require examination.
- \_\_\_\_\_ B6. REVIEW the examination scope with Radiation Protection and Work Planning to determine the required support to perform the examinations and Work Area Permit required.
- \_\_\_\_\_ B7. IDENTIFY any areas if known which require scaffold.
- \_\_\_\_\_ B8. IDENTIFY any areas if known which require insulation removal.
- \_\_\_\_\_ B9. IDENTIFY the equipment required to perform the examinations. (i.e. flashlights, flood lights, binoculars, cameras etc.)
- \_\_\_\_\_ B10. IDENTIFY the number of required inspectors to complete examinations in the required time frame.
- \_\_\_\_\_ B11. OBTAIN copies of the Personnel Qualification Forms (Att. G) of the inspectors that will perform the examinations and forward to the Responsible Engineer for review and acceptability. Have Responsible Engineer sign the form when complete.





## ATTACHMENT B

### Prerequisites and Examination Instructions (cont'd)

- \_\_\_\_\_ B12. ATTACH copies of the certification forms to the surveillance documentation package.
- \_\_\_\_\_ B13. VERIFY that personnel assigned to perform this surveillance are familiar with the contents of this procedure and associated attachments and checklists.
- \_\_\_\_\_ B14. VERIFY the Authorized Nuclear Inservice Inspector (ANII) has been notified of the examinations that are scheduled to be performed in accordance with this surveillance procedure. The ANII shall be given ample notice so he may have the opportunity to establish witness points.
- \_\_\_\_\_ B15. VERIFY that certification records for personnel performing examinations and testing have been provided to the ANII for review.
- \_\_\_\_\_ B16. When required DEMONSTRATE the visual and lighting requirements for performing the remote examinations to the ANII, Attachment C.



## ATTACHMENT B

### Prerequisites and Examination Instructions (cont'd)

#### EXAMINATION

The following steps shall be completed by the examiner performing the examinations. Each step shall be initialed and dated as they are completed.

- \_\_\_\_\_ B17. REVIEW the General Visual Exam Requirements Sheet (Attachment A) with the Responsible Engineer. After all questions are answered sign the sheet as the Examiner.
- \_\_\_\_\_ B18. PERFORM the general visual examination on the areas specified on the drawings per the requirements of Attachment A.
- \_\_\_\_\_ B19. RECORD the general visual examination results on the Attachment D data sheets. Record conditions exceeding the recording criteria of Section 10.0 on the observation form in Attachment D. Additional information that meets the acceptance criteria can be recorded in the comments section of the attachment.

#### **CAUTION**

**If areas are identified with indications prior to completing all of the required examinations for this surveillance, SIGN the data sheets for those areas and immediately forward to the Responsible Engineer for disposition.**

- \_\_\_\_\_ B20. SIGN the Attachment D data sheets and attach the sheets to surveillance documentation package.
- \_\_\_\_\_ B21. SUBMIT the completed checklists to the Responsible Engineer for review.



**ATTACHMENT C**  
**Demonstration of Remote Examination Equipment**

Type of equipment used \_\_\_\_\_

Maximum Examination Distance: \_\_\_\_\_

Description of demonstration:

This demonstration is required to be performed prior to executing the General Visual Examinations when the use of remote equipment is required.

The remote equipment shall be able to resolve a 1/32" black line on a white background. Resolution and illumination shall be verified at a distance equal to the examination distance plus 20%. The light source shall be setup in an area to simulate the examination conditions. Measure the distance that is required to perform the demonstration. On one end of this distance setup the test line. On the other end of this distance setup the remote lighting and the remote examination equipment. Turn on the light. From the side with the remote equipment verify that the specified line thickness can be seen.

This demonstration only needs to be performed once at the beginning of this surveillance to qualify the light source and the remote equipment used. If the light source or the remote equipment is changed then the new equipment shall be qualified prior to use.

The acceptance of the results of this demonstration qualifies both this procedure and the remote equipment used to perform this procedure.

Demonstration distance \_\_\_\_\_

Demonstration performed by: \_\_\_\_\_ Date \_\_\_\_\_

Demonstration witnessed by: \_\_\_\_\_ Date \_\_\_\_\_



### ATTACHMENT D General Visual Examination Checklist

Yes = exceeds the recording criteria  
No = does not exceed the recording criteria.

Component Number or Zone Number	Recordable Conditions																Initial and Date		
	Nicks, gouges, arc strikes		Metal Cracking		Metal Corrosion		Blistering (coating)		Checking (coating)		Cracking (coating)		Peeling (coating)		Rust staining				
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No			

EXAMINATION PERFORMED BY: \_\_\_\_\_ DATE \_\_\_\_\_



ATTACHMENT D (cont.)

### Observations

Component or Zone Number: \_\_\_\_\_

Item No.	Description	Photo

EXAMINATION PERFORMED BY: \_\_\_\_\_ DATE \_\_\_\_\_

ATTACHMENT D (cont.)  
Responsible Engineer's Review

Component or Zone Number: \_\_\_\_\_

Item No.	Discussion	Acceptable	Additional Eval. Req'd.

RESPONSIBLE ENGINEER: \_\_\_\_\_ DATE \_\_\_\_\_



**ATTACHMENT E  
EXAMINATION REVIEW AND COMPLETION**

**RESPONSIBLE ENGINEER REVIEW**

The following steps will be completed by the Responsible Engineer after completion of the examinations. Each step will be initialed and dated as they are completed.

- \_\_\_\_\_ E1. EVALUATE the completed examinations.
- \_\_\_\_\_ E2. COMPARE current examination results with previous examination results if available.
- \_\_\_\_\_ E3. When General Visual Examination results exceed the recording criteria in Section 10.0 determine if the condition warrants further evaluation. If the condition is acceptable, document the basis for the determination on Attachment D.
- \_\_\_\_\_ E4. When a condition requires further evaluation perform the following:
  - E4.1 INITIATE an Engineering Request (ER) to evaluate the current results. Reference the previous results in the request.
  - E4.2 INITIATE a Condition Report.
  - E4.3 RECORD the component number, the examination type and the ER number on Attachment F.
  - E4.4 LIST any additional examinations or corrective actions that are required as a result of this examination in the space provided below. Additional sheets may be added to this surveillance.

Comments:

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\_\_\_\_\_  
Responsible Engineer/Date



**ATTACHMENT E**  
**EXAMINATION REVIEW AND COMPLETION (cont'd)**

**SURVEILLANCE COMPLETION**

The following steps will be completed by the examiner that performed the examinations, a lead examiner or the Responsible Engineer after the Responsible Engineer review above has been completed. Each step will be initialed and dated as they are completed.

- \_\_\_\_\_ E5. VERIFY that the General Visual examinations have been reviewed and approved by the Responsible Engineer.
- \_\_\_\_\_ E6. VERIFY that all Engineering Evaluations have been completed and copies are attached to this procedure.
- \_\_\_\_\_ E7. ATTACH all completed Attachment C General Visual Examination Checklists to this procedure.
- \_\_\_\_\_ E8. Forward the completed documentation package to the ISI Coordinator.





### ATTACHMENT F Engineering Evaluation Checklist

Component Number or Zone Number	Examination type	ER Number	Results	Date

Responsible Engineer Review \_\_\_\_\_ Date \_\_\_\_\_



**Attachment G**  
**Personnel Qualification Form**

Inspection and Test Personnel Certification Form For General Visual Examination

Name: \_\_\_\_\_

Education: \_\_\_\_\_

\_\_\_\_\_

Experience: \_\_\_\_\_

\_\_\_\_\_

Eye Exam: \_\_\_\_\_

\_\_\_\_\_

Results: \_\_\_\_\_

\_\_\_\_\_

On the basis of the above, I have determined that the examiner is capable of performing General Visual Examinations as required by ASME Section XI 1992 Edition, 1992 Addenda, Subsection IWE, Subparagraph IWE-3510.1. This certification expires one year from the date of the eye examination.

\_\_\_\_\_  
Responsible Engineer

\_\_\_\_\_  
Date





**INDIAN POINT UNIT 2  
CONTAINMENT INSERVICE INSPECTION  
FIRST PERIOD EXAMINATIONS**



**APPENDIX II  
Examination Category E-D, Moisture Barrier VT-3**

- Tab A Inspection Drawings
- Tab B Listing of Scheduled Examinations
- Tab C Listing of Examination Results
- Tab D Inspection Records
- Tab E Inspector Certification Records
- Tab F Inspection Procedure