

CONCRETE INSPECTION ZONE IWL-108-003
 (EXTERIOR DEVELOPED VIEW, LOOKING FROM OUTSIDE)



-DENOTES COMMENT NUMBER ON INSPECTION FORM.



IWL-108-003

00053113.jpg



IWL-108-003

00053114.jpg



IWL-108-003

00053115.jpg



IWL-108-003

00053116.jpg



IWL-108-003

00053117.jpg



IWL-108-003

00053118.jpg



IWL-108-003

00053119.jpg



IWL-108-003

00053132.jpg



FORM VT-3C
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-3C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-21
 ZONE NUMBER: IWL-108-004 DRAWING NO.: 320855
 EQUIPMENT USED: Celestron Giant 20x80 Binoculars (Ser. No. 990176)

Work Order No. NP-99-11274

| Recording Conditions | RI | NRI | NI | NA | Comments |
|-------------------------------------|----|-----|----|----|----------------|
| 7.1.1.a Leaching or chemical attack | | | X | | |
| 7.1.1.b Abrasion or corrosion | | | X | | |
| 7.1.1.c Popouts or voids | X | | | | 9 |
| 7.1.1.d Scaling | | | X | | |
| 7.1.1.e Spalling | X | | | | 2,3,4,5,6,7,10 |
| 7.1.1.f Corrosion staining | | | X | | |
| 7.1.1.g Cracks | | | X | | |
| 7.1.1.h Settlement or deflection | | | X | | |
| 7.1.1.i Exposed reinforcing steel | X | | | | 2,4,8,9,10 |
| 7.1.1.j Coating deterioration | | | | X | |
| Other | | X | | | 1 |
| | | | | | |

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: R. Namperumal *R. Namperumal* DATE: 5/25/00

RESPONSIBLE ENGINEER REVIEW:

Acceptable : Yes No (VT-1C Examination Required)

Comments: _____

Signature: *R. Namperumal* Date: 6/30/00

AUTHORIZED NUCLEAR INSPECTOR REVIEW:

Signature: _____ Date: _____



FORM VT-1C
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-21
 ZONE NUMBER: IWL-108-004 DRAWING NO.: 320855
 EQUIPMENT USED: Celestron Giant 20x80 Binoculars (Ser. No. 990176)

Work order No. NP-99-11274

| Recording Conditions | RI | NRI | NI | NA | Comments |
|-------------------------------------|----|-----|----|----|----------------|
| 7.1.1.a Leaching or chemical attack | | | X | | |
| 7.1.1.b Abrasion or corrosion | | | X | | |
| 7.1.1.c Popouts or voids | X | | | | 9 |
| 7.1.1.d Scaling | | | X | | |
| 7.1.1.e Spalling | X | | | | 2,3,4,5,6,7,10 |
| 7.1.1.f Corrosion staining | | | X | | |
| 7.1.1.g Cracks | | | X | | |
| 7.1.1.h Settlement or deflection | | | X | | |
| 7.1.1.i Exposed reinforcing steel | X | | | | 2,4,8,9,10 |
| 7.1.1.j Coating deterioration | | | | X | |
| Other | | X | | | 1 |
| | | | | | |

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: R. Namperumal *R. Namperumal* DATE: 5/25/00

RESPONSIBLE ENGINEER REVIEW:

Acceptable: Yes No

Engineering Evaluation Required: Yes No Evaluation No.: CRS 200004138

Comments: The surface texture (comment #1) resulted from original construction and does not reflect degradation. Engineering evaluation is needed for all of the other observed conditions.

Signature: *R. Namperumal* Date: 6/30/00

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

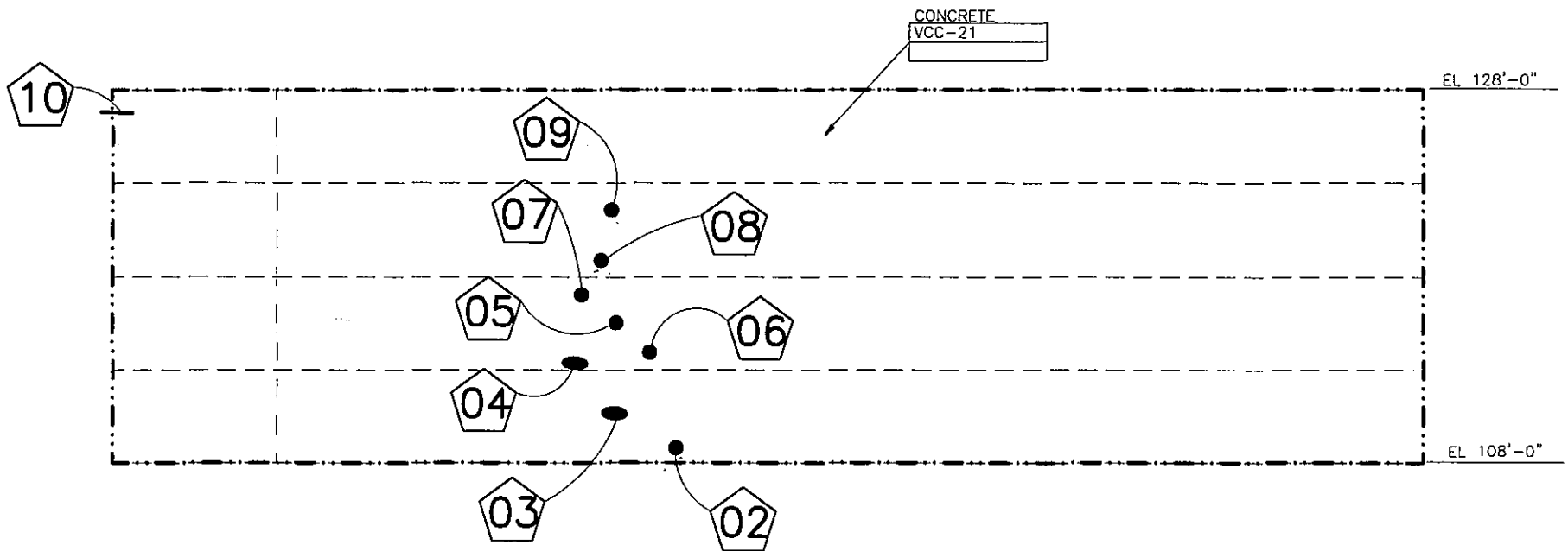
Signature: _____ Date: _____



FORM VT-3C (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-3C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-21

| No. | Comment | Initials |
|-----|--|----------|
| 1 | Non-uniformity of surface color and texture observed at various locations in the zone. The condition does not indicate significant material deterioration of the concrete. | LN |
| 2 | 1 1/2" rebar exposed due to spall. See photo 00052618 | RN |
| 3 | Concrete spall, 8" concrete about to popout. See photo 00052618 | RN |
| 4 | 10"x4" concrete spall exposing rebar over 8" length. See photo 00052619 | RN |
| 5 | 2" concrete spall. See photo 00052621 | RN |
| 6 | 6" concrete about to spall. See photo 00052621 | RN |
| 7 | same as item 6. See photo 00052621 | RN |
| 8 | rebar (rusty) exposed at 2 locations spaced 9". See photo 00052622 | RN |
| 9 | 2" hole exposing rebar. See photo 00052622 | RN |
| 10 | 1/2" cover concrete spalled off over 10" square exposing 9" length of cadweld sleeve. See photo 00052623 | RN |



CONCRETE INSPECTION ZONE IWL-108-004
 (EXTERIOR DEVELOPED VIEW, LOOKING FROM OUTSIDE)

XX -DENOTES COMMENT NUMBER ON INSPECTION FORM.



IWL-108-004

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IWL-108-004



00052621.jpg

IWL-108-004



00052622.jpg

IWL-108-004



00052623.jpg

IWL-108-004



FORM VT-3C
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-3C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-22
 ZONE NUMBER: IWL-108-005 DRAWING NO.: 320856
 EQUIPMENT USED: Celestron Giant 20x80 Binoculars (Ser. No. 990176)

Work Order No. NP-99-11274

| Recording Conditions | RI | NRI | NI | NA | Comments |
|-------------------------------------|----|-----|----|----|----------|
| 7.1.1.a Leaching or chemical attack | | | X | | |
| 7.1.1.b Abrasion or corrosion | | | X | | |
| 7.1.1.c Popouts or voids | | | X | | |
| 7.1.1.d Scaling | | | X | | |
| 7.1.1.e Spalling | | | X | | |
| 7.1.1.f Corrosion staining | | | X | | |
| 7.1.1.g Cracks | | | X | | |
| 7.1.1.h Settlement or deflection | | | X | | |
| 7.1.1.i Exposed reinforcing steel | | | X | | |
| 7.1.1.j Coating deterioration | | | | X | |
| Other | | X | | | 1 |
| | | | | | |

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: R. Namperumal *R. Namperumal* DATE: 5/25/00

RESPONSIBLE ENGINEER REVIEW:

Acceptable: Yes No (VT-1C Examination Required)

Comments: The surface texture resulted from original construction and does not reflect degradation of the containment.

Signature: *[Signature]* Date: 6/30/00

AUTHORIZED NUCLEAR INSPECTOR REVIEW:

Signature: _____ Date: _____



FORM VT-3C (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-3C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-22

| No. | Comment | Initials |
|-----|--|----------|
| 1 | Non-uniformity of surface color and texture observed at various locations in the zone. The condition does not indicate significant material deterioration of the concrete. | AL |
| | | |



FORM VT-3C
 CONTAINMENT INSERVICE INSPECTION
 RECORD OF VT-3C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-23
 ZONE NUMBER: IWL-108-006 DRAWING NO.: 320857
 EQUIPMENT USED: Celestron Giant 20x80 Binoculars (Ser. No. 990176)

Work order No. NP-99-11274

| Recording Conditions | RI | NRI | NI | NA | Comments |
|-------------------------------------|----|-----|----|----|----------|
| 7.1.1.a Leaching or chemical attack | | | X | | |
| 7.1.1.b Abrasion or corrosion | | | X | | |
| 7.1.1.c Popouts or voids | | | X | | |
| 7.1.1.d Scaling | | | X | | |
| 7.1.1.e Spalling | | | X | | |
| 7.1.1.f Corrosion staining | | | X | | |
| 7.1.1.g Cracks | | | X | | |
| 7.1.1.h Settlement or deflection | | | X | | |
| 7.1.1.i Exposed reinforcing steel | | | X | | |
| 7.1.1.j Coating deterioration | | | | X | |
| Other | | X | | | 1 |
| | | | | | |

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: R. Namperumal *R. Namperumal* DATE: 5/25/00

RESPONSIBLE ENGINEER REVIEW:

Acceptable: Yes No (VT-1C Examination Required)

Comments: The surface texture resulted from original construction and does not reflect degradation of the containment.

Signature: *BA* Date: 6/30/00

AUTHORIZED NUCLEAR INSPECTOR REVIEW:

Signature: _____ Date: _____



FORM VT-3C (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-3C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-23

| No. | Comment | Initials |
|-----|--|----------|
| 1 | Non-uniformity of surface color and texture observed at various locations in the zone. The condition does not indicate significant material deterioration of the concrete. | RN |
| | | |



FORM VT-3C
 CONTAINMENT INSERVICE INSPECTION
 RECORD OF VT-3C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-24
 ZONE NUMBER: IWL-128-001 DRAWING NO.: 320858
 EQUIPMENT USED: Celestron Giant 20x80 Binoculars (Ser. No. 990176)

Work order No. NP-99-11274

| Recording Conditions | RI | NRI | NI | NA | Comments |
|-------------------------------------|----|-----|----|----|----------|
| 7.1.1.a Leaching or chemical attack | X | | | | 2,3 |
| 7.1.1.b Abrasion or corrosion | | | X | | |
| 7.1.1.c Popouts or voids | X | | | | 6 |
| 7.1.1.d Scaling | | | X | | |
| 7.1.1.e Spalling | X | | | | 4 |
| 7.1.1.f Corrosion staining | X | | | | 5 |
| 7.1.1.g Cracks | | | X | | |
| 7.1.1.h Settlement or deflection | | | X | | |
| 7.1.1.i Exposed reinforcing steel | X | | | | 5,6 |
| 7.1.1.j Coating deterioration | | | | X | |
| Other | | X | | | 1 |
| | | | | | |

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: R. Namperumal *R. Namperumal* DATE: 5/26/00

RESPONSIBLE ENGINEER REVIEW:

Acceptable : Yes No (VT-1C Examination Required)

Comments: _____

Signature: *BA Esler* Date: 6/20/00

AUTHORIZED NUCLEAR INSPECTOR REVIEW:

Signature: _____ Date: _____



FORM VT-1C
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-24
 ZONE NUMBER: IWL-128-001 DRAWING NO.: 320858
 EQUIPMENT USED: Celestron Giant 20x80 Binoculars (Ser. No. 990176)

Work Order No. NP-99-11274

| Recording Conditions | RI | NRI | NI | NA | Comments |
|-------------------------------------|----|-----|----|----|----------|
| 7.1.1.a Leaching or chemical attack | X | | | | 2,3 |
| 7.1.1.b Abrasion or corrosion | | | X | | |
| 7.1.1.c Popouts or voids | X | | | | 6 |
| 7.1.1.d Scaling | | | X | | |
| 7.1.1.e Spalling | X | | | | 4 |
| 7.1.1.f Corrosion staining | X | | | | 5 |
| 7.1.1.g Cracks | | | X | | |
| 7.1.1.h Settlement or deflection | | | X | | |
| 7.1.1.i Exposed reinforcing steel | X | | | | 5,6 |
| 7.1.1.j Coating deterioration | | | | X | |
| Other | | X | | | 1 |
| | | | | | |

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: R. Namperumal *R. Namperumal* DATE: 5/26/00

RESPONSIBLE ENGINEER REVIEW:

Acceptable: Yes No

Engineering Evaluation Required: Yes No Evaluation No.: CRS 2000 04138

Comments: The leaching is not significant. The surface texture resulted from original construction and does not reflect degradation of the containment. Engineering evaluation is needed for the spalling/corrosion associated with the reinforcing steel (comment nos. 4, 5 & 6).

Signature: *R. Namperumal* Date: 6/20/00

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

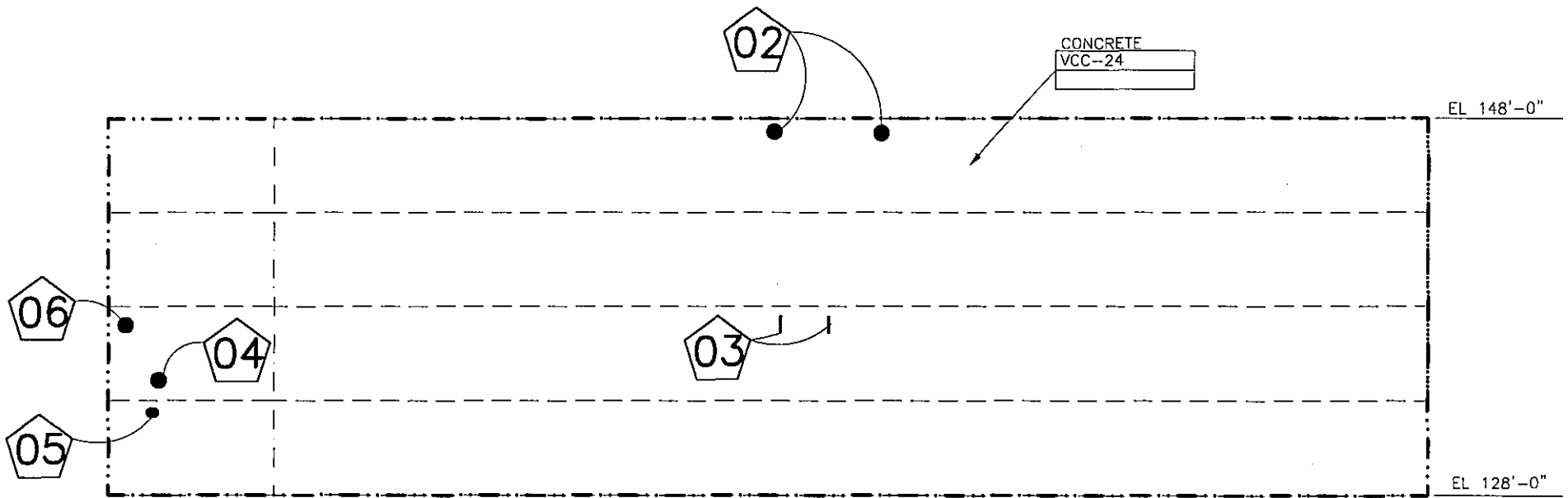
Signature: _____ Date: _____



FORM VT-3C (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-3C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-24

| No. | Comment | Initials |
|-----|--|----------|
| 1 | Non-uniformity of surface color and texture observed at various locations in the zone. The condition does not indicate significant material deterioration of the concrete. | RW |
| 2 | minor leaching from construction joints - 2 places | RW |
| 3 | same as in item 2 | RW |
| 4 | 6" of mortar about to spall. See photo 00052602 | RW |
| 5 | Rust stain on concrete below, from exposed cadweld sleeve with rust over 6" length. Inadequate concrete (about 1/2") cover. See photo 00052601. | RW |
| 6 | 1" deep hole created in concrete cover by inadequate consolidation during pouring exposing 2" of reinforcing steel. See photo 00052603 | RW |
| | | |



CONCRETE INSPECTION ZONE IWL-128-001
(EXTERIOR DEVELOPED VIEW, LOOKING FROM OUTSIDE)

 -DENOTES COMMENT NUMBER ON INSPECTION FORM.



00052601.jpg

IWL-128-001



IWL-128-001

00052602.jpg



IWL-128-001

00052603.jpg



FORM VT-3C
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-3C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-25
 ZONE NUMBER: IWL-128-002 DRAWING NO.: 320859
 EQUIPMENT USED: Celestron Giant 20x80 Binoculars (Ser. No. 990176)

Work Order No. NP-99-11274

| Recording Conditions | RI | NRI | NI | NA | Comments |
|-------------------------------------|----|-----|----|----|----------|
| 7.1.1.a Leaching or chemical attack | | | X | | |
| 7.1.1.b Abrasion or corrosion | | | X | | |
| 7.1.1.c Popouts or voids | | | X | | |
| 7.1.1.d Scaling | | | X | | |
| 7.1.1.e Spalling | X | | | | 5,6 |
| 7.1.1.f Corrosion staining | | | X | | |
| 7.1.1.g Cracks | | | X | | |
| 7.1.1.h Settlement or deflection | | | X | | |
| 7.1.1.i Exposed reinforcing steel | X | | | | 2,3,4 |
| 7.1.1.j Coating deterioration | | | | X | |
| Other | | X | | | 1 |
| | | | | | |

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: C. Sward *Chris Sward* DATE: 6/1/00

RESPONSIBLE ENGINEER REVIEW:

Acceptable: Yes No (VT-1C Examination Required)

Comments: _____

Signature: *BAE* Date: 6/30/00

AUTHORIZED NUCLEAR INSPECTOR REVIEW:

Signature: _____ Date: _____



FORM VT-1C
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-1C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-25
 ZONE NUMBER: IWL-128-002 DRAWING NO.: 320859
 EQUIPMENT USED: Celestron Giant 20x80 Binoculars (Ser. No. 990176)

Work order No. NP-99-11274

| Recording Conditions | RI | NRI | NI | NA | Comments |
|-------------------------------------|----|-----|----|----|----------|
| 7.1.1.a Leaching or chemical attack | | | X | | |
| 7.1.1.b Abrasion or corrosion | | | X | | |
| 7.1.1.c Popouts or voids | | | X | | |
| 7.1.1.d Scaling | | | X | | |
| 7.1.1.e Spalling | X | | | | 5,6 |
| 7.1.1.f Corrosion staining | | | X | | |
| 7.1.1.g Cracks | | | X | | |
| 7.1.1.h Settlement or deflection | | | X | | |
| 7.1.1.i Exposed reinforcing steel | X | | | | 2,3,4 |
| 7.1.1.j Coating deterioration | | | | X | |
| Other | | X | | | 1 |
| | | | | | |

(Note: Sketches may be attached to clarify inspection areas and locations of indications.)

EXAMINED BY: C. Sward *C. Sward* DATE: 6/1/00

RESPONSIBLE ENGINEER REVIEW:

Acceptable: Yes No

Engineering Evaluation Required: Yes No Evaluation No.: CRS 2000 04138

Comments: The surface texture (comment #1) resulted from original construction and does not reflect degradation of the containment. Engineering evaluation is needed for the spalling/exposed reinforcing steel (comments #2-#6).

Signature: *[Signature]* Date: 6/30/00

AUTHORIZED NUCLEAR INSPECTOR (ANII) REVIEW:

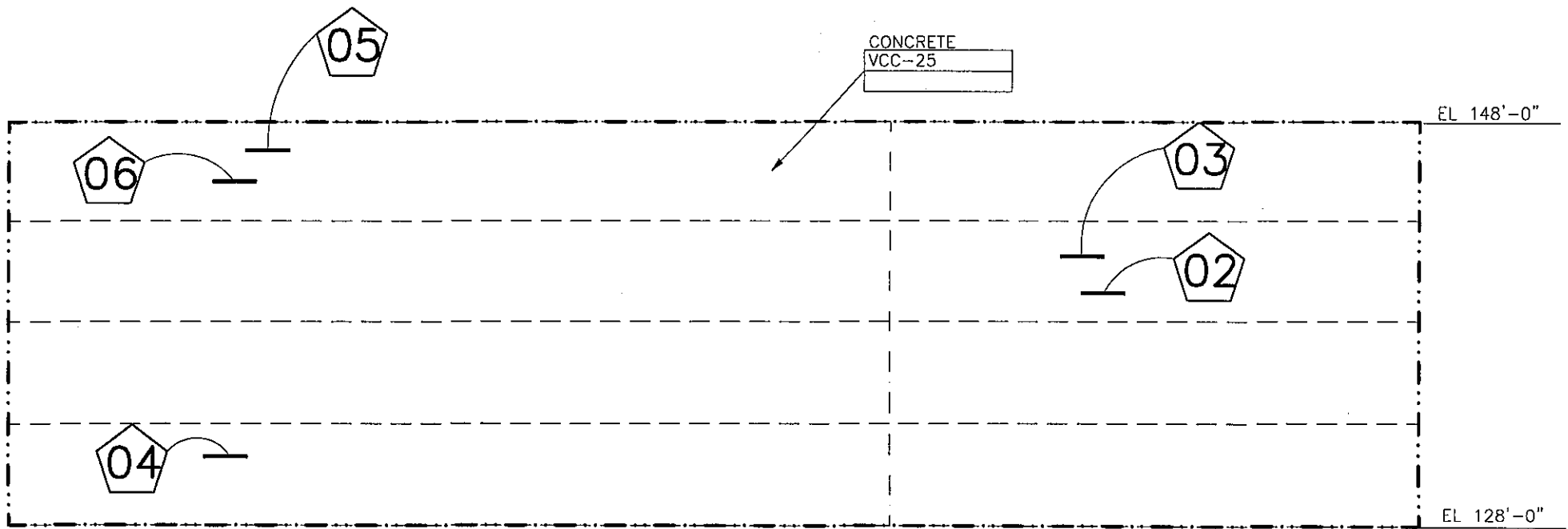
Signature: _____ Date: _____



FORM VT-3C (cont.)
CONTAINMENT INSERVICE INSPECTION
RECORD OF VT-3C EXAMINATION

STATION/UNIT: Indian Point 2 COMPONENT NO.: VCC-25

| No. | Comment | Initials |
|-----|--|----------|
| 1 | Non-uniformity of surface color and texture observed at various locations in the zone. The condition does not indicate significant material deterioration of the concrete. | CAS |
| 2 | Cadweld exposed & corroded due to loss of concrete cover. See photos 00053136 and 00053139 | CAS |
| 3 | Cadweld exposed & corroded due to loss of concrete cover. See photo 00053137 00053139 | CAS |
| 4 | Cadweld exposed & corroded due to loss of concrete cover. See photo 00060119 | CAS |
| 5 | A small area of concrete has cracked and is likely to spall off. By comparison to other similar areas it is believed to be a cadweld or reinforcing steel which is corroded due to insufficient concrete cover. See photo 00053150 | CAS |
| 6 | The concrete has cracked & bulged in a small area that is likely to spall off. By comparison to other similar areas it is believed to be a cadweld or reinforcing steel which is corroded due to insufficient concrete cover. See photo 00053150 | CAS |
| | | |



CONCRETE INSPECTION ZONE IWL-128-002
 (EXTERIOR DEVELOPED VIEW, LOOKING FROM OUTSIDE)

XX —DENOTES COMMENT NUMBER ON INSPECTION FORM.



IWL-128-002

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IWL-128-002



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