

CATEGORY 1

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SUBJECT: Forwards response to NRC Bulletin 96-001, "Control Rod Insertion Problems."

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Carolina Power & Light Company

Robinson Nuclear Plant
3581 West Entrance Road
Hartsville SC 29550

Robinson File No: 13510

Serial: RNP-RA/96-0208

NOV 14 1996

United States Nuclear Regulatory Commission
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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23
REQUIRED RESPONSE 3 TO NRC BULLETIN 96-01,
"CONTROL ROD INSERTION PROBLEMS"

Gentlemen:

NRC Bulletin 96-01, "Control Rod Insertion Problems," required that licensees that completed Requested Action 3 for each outage submit a report that summarizes the data and the results obtained within 30 days after completing the Requested Action. Control rod testing during Refueling Outage 17 was completed on October 16, 1996; therefore, the enclosed report is due to be submitted by November 15, 1996.

Questions regarding this matter may be referred to me at (803) 857-1437.

Very truly yours,

H. K. Chernoff
Supervisor-Licensing/Regulatory Programs

JSK/klb

Enclosures

- c: Mr. S. D. Ebnetter, Regional Administrator, USNRC, Region II
Ms. B. L. Mozafari, USNRC Project Manager, HBRSEP
Mr. J. Zeiler, USNRC Resident Inspector, HBRSEP

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Affidavit

State of South Carolina

County of Darlington

C. S. Hinnant, having been first duly sworn, did depose and say that the information contained in letter 96-0208 is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, contractors, and agents of Carolina Power & Light Company.

C. S. Hinnant

Sworn to and subscribed before me

this 14 day of November 1996

(Seal)

David Cook

Notary Public for South Carolina

My commission expires: March 21, 2005

H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2
REQUIRED RESPONSE 3 TO NRC BULLETIN 96-01,
"CONTROL ROD INSERTION PROBLEMS"

Required Response

NRC Bulletin 96-01, "Control Rod Insertion Problems," dated March 8, 1996, requested that licensees take specific actions and required certain responses regarding recent problems with control rod insertion. Our letter dated April 4, 1996, contained the information concerning the Bulletin's Required Response 1 and Required Response 2. Required Response 3 states the following.

"Within 30 days after completing Requested Action (3) for each outage, a report that summarizes the data and that documents the results obtained; this is also applicable to Requested Action (4) when any abnormal rod behavior is observed."

Requested Action 3 consisted of the following.

"Measure and evaluate at each outage of sufficient duration during calendar year 1996 (end of cycle, maintenance, etc.), the control rod drop times and rod recoil data for all control rods. If appropriate plant conditions exist where the vessel head is removed, measure and evaluate drag forces for all rodded assemblies.

- a. Rods failing to meet the rod drop times in the technical specifications shall be deemed inoperable.
- b. Rods failing to bottom or exhibiting high drag forces shall require prompt corrective actions in accordance with Appendix B to Part 50 of Title 10 of the Code Of Federal Regulations (10 CFR Part 50)."

Response

Control Rod Drop Time/Rod Recoil Testing

On September 7, 1996, H. B. Robinson Steam Electric Plant (HBRSEP), Unit 2 was being shutdown for the commencement of Refueling Outage 17. Due to a problem with the High Pressure Turbine Electro-Hydraulic Control System, it was necessary to initiate a manual reactor scram from 28 percent of full power, as described in Licensee Event Report (LER) No. 96-004-00, dated October 7, 1996. The HBRSEP, Unit No. 2 Nuclear Steam Supply System was manufactured by the Westinghouse Electric Corporation; however, the fuel currently installed was manufactured by Siemens Power Corporation. The control rods were manufactured by Westinghouse.

Control rod drop time testing was performed on control rods on September 8 1996, at Hot Shutdown conditions. The testing involved 9 Standard Mixing Vane (SMV) fuel assemblies that had achieved burnups between 41,000 and 49,000 MWD/MTU, as well as 36 High Thermal Performance (HTP) fuel assemblies that had achieved burnups between 19,000 and 47,000 MWD/MTU. The SMV assemblies do not have Intermediate Flow Mixer (IFM) grids installed, while the HTP assemblies have 3 IFMs installed. Attachment 1 provides both the Beginning of Cycle (BOC) 17 drop time test results and End of Cycle (EOC) 17 drop time test results, and shows that there is no significant change in the measured drop times. Rod recoil was seen at the end of rod travel for the control rods tested.

Control Rod drop time testing was also performed on October 16, 1996, at Hot Shutdown conditions to fulfill the requirements of Technical Specification Section 4.1, "Operational Safety Review," prior to the commencement of Operating Cycle 18. This testing involved 1 SMV assembly that had achieved a burnup of 23,000 MWD/MTU, and 44 HTP assemblies that had achieved burnups ranging from 0 to 35,000 MWD/MTU. Attachment 2 provides the BOC 18 drop time test results. Rod recoil was seen at the end of travel for the control rods tested.

The Control Rod drop time testing performed during Refueling Outage 17 supports the conclusion in our initial response to NRC Bulletin 96-01 dated April 4, 1996, that there is no observed correlation at HBRSEP, Unit No. 2 between fuel assembly burnup and control rod drop times for either the SMV fuel assemblies, or for the HTP fuel assemblies.

Control Rod Drag Testing

Control rod drag testing was performed during Refueling Outage 17 in the Spent Fuel Pool for the Operating Cycle 17 rodded assemblies for which control rods were being relocated for Operating Cycle 18. Five Cycle 17 control rods were not drag tested, but other control rods in fuel assemblies with equivalent burnup levels were tested. The drag testing was performed using the portable Rod Control Cluster Assembly (RCCA) Change Tool fitted with a load cell. Attachment 3 provides the results of the control rod drag testing. The method used to perform the drag testing overestimates the drag forces from the fuel assembly above the dashpot region since it measures both the drag caused by the control rod passing through the RCCA Change Tool guide cards, as well as the drag caused by the control rod moving through the fuel assembly guide tubes. These data exhibit a large amount of scatter, and no correlation between the measured drag forces and the fuel assembly burnup is apparent. Although we do not have any historical data for comparison, the measured drag forces compare well with industry data provided by the Westinghouse Owners Group (WOG).

Control Rod Performance During Reactor Trips

During the shutdown for Refueling Outage 17, a manual reactor trip was required due to problems with the Turbine Electro-Hydraulic Control System. As reported in LER 96-004-00, the rod bottom lights for control rods B-10 and H-8 did not illuminate immediately. The rod bottom light for H-8 illuminated in approximately 30 seconds and the rod bottom light for B-10 illuminated in approximately 41 minutes. Our investigation into the cause of this failure to illuminate indicated that a zero shift was seen in the control rod position indication circuitry. Control rod drop testing performed on September 8, 1996, demonstrated that these two control rods would insert fully within the Technical Specifications requirement. Control rod B-10 had a drop time from the All Rods Out (ARO) position to the dashpot of 1.40 seconds, and a drop time from the dashpot to rod bottom of 0.60 seconds. Control rod H-8 had a drop time from the ARO position to the dashpot of 1.34 seconds, and a drop time from the dashpot to rod bottom of 0.71 seconds during the September 8, 1996, testing. Rod recoil was seen at the end of rod travel for both control rods.

During startup from Refueling Outage 17 on October 20, 1996, a reactor trip from approximately 20% power was received due to the failure of a feedwater manual/automatic controller. The control rods fully inserted upon reactor trip. No control rod testing was performed subsequent to this reactor trip since this shutdown did not meet the criteria for our plan to implement Requested Action (3) outlined in our April 4, 1996, letter.

Conclusion

The control rod drop time testing and drag testing performed during Refueling Outage 17 supports the conclusion in our April 4, 1996, submittal that our control rods are operable and capable of fully inserting upon a reactor trip.

Cycle 17 Drop Time Testing Results

| | | | | | BOC 17 | | | EOC 17 | | | Delta (EOC-BOC) | | | |
|------------------|---------------|------------------------|--------------------|----------------------|----------------|---------------------------|---------------------------------|----------------|---------------------------|---------------------------------|------------------------|----------------|---------------------------|---------------------------------|
| Control Rod Bank | Core Location | Fuel Assembly Serial # | Fuel Assembly Type | Control Rod Serial # | Burnup MWD/MTU | Time to Dashpot (seconds) | Dashpot to Rod Bottom (seconds) | Burnup MWD/MTU | Time to Dashpot (seconds) | Dashpot to Rod Bottom (seconds) | Rod Recoil (# bounces) | Burnup MWD/MTU | Time to Dashpot (seconds) | Dashpot to Rod Bottom (seconds) |
| Control A | E09 | X33 | HTP | CR28 | 15330 | 1.23 | 0.60 | 33840 | 1.30 | 0.60 | 1 | 18510 | 0.07 | 0.00 |
| Control A | L07 | X44 | HTP | CR50 | 15330 | 1.25 | 0.55 | 33820 | 1.30 | 0.56 | 2 | 18490 | 0.05 | 0.01 |
| Control A | J11 | X41 | HTP | CR502 | 15280 | 1.33 | 0.59 | 33840 | 1.40 | 0.60 | 1 | 18560 | 0.07 | 0.01 |
| Control A | G05 | X36 | HTP | CR48 | 15280 | 1.24 | 0.52 | 33840 | 1.29 | 0.55 | 1 | 18560 | 0.05 | 0.03 |
| Control A | E07 | X38 | HTP | CR29 | 15060 | 1.23 | 0.53 | 33640 | 1.28 | 0.56 | 1 | 18580 | 0.05 | 0.03 |
| Control A | J05 | X42 | HTP | CR41 | 15040 | 1.32 | 0.52 | 33610 | 1.40 | 0.54 | 2 | 18570 | 0.08 | 0.02 |
| Control A | G11 | X35 | HTP | CR26 | 15040 | 1.33 | 0.56 | 33640 | 1.45 | 0.56 | 2 | 18600 | 0.12 | 0.00 |
| Control A | L09 | X39 | HTP | CR25 | 15060 | 1.28 | 0.62 | 33620 | 1.34 | 0.66 | 1 | 18560 | 0.06 | 0.04 |
| Control B | F14 | W37 | HTP | CR46S | 32050 | 1.35 | 0.58 | 40850 | 1.40 | 0.56 | 2 | 8800 | 0.05 | -0.02 |
| Control B | P06 | W39 | HTP | CR08 | 32270 | 1.27 | 0.57 | 41060 | 1.27 | 0.59 | 2 | 8790 | 0.00 | 0.02 |
| Control B | F02 | W34 | HTP | CR03 | 32100 | 1.23 | 0.53 | 40910 | 1.28 | 0.55 | 2 | 8810 | 0.05 | 0.02 |
| Control B | B10 | W38 | HTP | CR52 | 32260 | 1.38 | 0.57 | 41070 | 1.40 | 0.60 | 2 | 8810 | 0.02 | 0.03 |
| Control B | P10 | W35 | HTP | CR06 | 32200 | 1.32 | 0.57 | 41010 | 1.32 | 0.57 | 2 | 8810 | 0.00 | 0.00 |
| Control B | B06 | W33 | HTP | CR02 | 32200 | 1.28 | 0.60 | 41020 | 1.32 | 0.60 | 2 | 8820 | 0.04 | 0.00 |
| Control B | K02 | W40 | HTP | CR34 | 32050 | 1.35 | 0.55 | 40860 | 1.38 | 0.56 | 2 | 8810 | 0.03 | 0.01 |
| Control B | K14 | W36 | HTP | CR31 | 32100 | 1.32 | 0.55 | 40900 | 1.34 | 0.58 | 1 | 8800 | 0.02 | 0.03 |
| Control C | F04 | P27 | SMV | CR39 | 34390 | 1.23 | 0.55 | 48620 | 1.26 | 0.56 | 2 | 14230 | 0.03 | 0.01 |
| Control C | F12 | P17 | SMV | CR35 | 34970 | 1.32 | 0.51 | 49090 | 1.35 | 0.54 | 1 | 14120 | 0.03 | 0.03 |
| Control C | M06 | P12 | SMV | CR45 | 35040 | 1.31 | 0.66 | 49040 | 1.38 | 0.67 | 2 | 14000 | 0.07 | 0.01 |
| Control C | K12 | P26 | SMV | CR27 | 34390 | 1.22 | 0.56 | 48620 | 1.27 | 0.60 | 2 | 14230 | 0.05 | 0.04 |
| Control C | M10 | P15 | SMV | CR42 | 35040 | 1.25 | 0.52 | 49060 | 1.26 | 0.53 | 2 | 14020 | 0.01 | 0.01 |
| Control C | D06 | P13 | SMV | CR07 | 35040 | 1.22 | 0.62 | 49070 | 1.27 | 0.63 | 1 | 14030 | 0.05 | 0.01 |
| Control C | D10 | P14 | SMV | CR47 | 35040 | 1.33 | 0.60 | 49060 | 1.38 | 0.62 | 1 | 14020 | 0.05 | 0.01 |
| Control C | K04 | P16 | SMV | CR13 | 35040 | 1.22 | 0.57 | 49140 | 1.28 | 0.55 | 2 | 14100 | 0.06 | -0.02 |
| Control D | M08 | W05 | HTP | CR43 | 32570 | 1.35 | 0.53 | 47720 | 1.34 | 0.56 | 2 | 15150 | -0.01 | 0.03 |
| Control D | H12 | W07 | HTP | CR503 | 31920 | 1.28 | 0.57 | 47130 | 1.26 | 0.58 | 2 | 15210 | -0.02 | 0.01 |
| Control D | H08 | J20 | SMV | CR21 | 32590 | 1.33 | 0.65 | 41720 | 1.34 | 0.71 | 2 | 9130 | 0.01 | 0.06 |
| Control D | D08 | W08 | HTP | CR51 | 32570 | 1.28 | 0.52 | 47740 | 1.26 | 0.54 | 2 | 15170 | -0.02 | 0.02 |
| Control D | H04 | W06 | HTP | CR01 | 31920 | 1.27 | 0.55 | 47130 | 1.26 | 0.58 | 1 | 15210 | -0.01 | 0.03 |
| Shutdown A | J03 | W46 | HTP | CR36 | 27100 | 1.30 | 0.57 | 43490 | 1.34 | 0.57 | 2 | 16390 | 0.04 | 0.00 |
| Shutdown A | C07 | W41 | HTP | CR17 | 27050 | 1.32 | 0.79 | 43600 | 1.38 | 0.82 | 1 | 16550 | 0.06 | 0.03 |
| Shutdown A | G13 | W48 | HTP | CR32 | 27100 | 1.22 | 0.54 | 43480 | 1.26 | 0.54 | 2 | 16380 | 0.04 | 0.00 |
| Shutdown A | G03 | W45 | HTP | CR14 | 26940 | 1.27 | 0.68 | 43360 | 1.28 | 0.73 | 3 | 16420 | 0.01 | 0.05 |
| Shutdown A | N09 | W43 | HTP | CR33 | 27050 | 1.25 | 0.57 | 43580 | 1.28 | 0.57 | 1 | 16530 | 0.03 | 0.00 |
| Shutdown A | J13 | W47 | HTP | CR09 | 26940 | 1.22 | 0.58 | 43350 | 1.27 | 0.59 | 2 | 16410 | 0.05 | 0.01 |
| Shutdown A | N07 | W42 | HTP | CR23 | 26900 | 1.24 | 0.59 | 43440 | 1.28 | 0.60 | 2 | 16540 | 0.04 | 0.01 |
| Shutdown A | C09 | W44 | HTP | CR19 | 26900 | 1.31 | 0.56 | 43460 | 1.37 | 0.55 | 2 | 16560 | 0.06 | -0.01 |
| Shutdown B | K08 | Y04 | HTP | CR508 | 0 | 1.37 | 0.58 | 19850 | 1.38 | 0.60 | 1 | 19850 | 0.01 | 0.02 |
| Shutdown B | H06 | Y01 | HTP | CR05 | 0 | 1.27 | 0.53 | 19870 | 1.26 | 0.56 | 2 | 19870 | -0.01 | 0.03 |
| Shutdown B | L05 | X05 | HTP | CR46 | 18180 | 1.35 | 0.58 | 36560 | 1.34 | 0.61 | 2 | 18380 | -0.01 | 0.03 |
| Shutdown B | L11 | X10 | HTP | CR49 | 18140 | 1.25 | 0.53 | 36570 | 1.25 | 0.56 | 2 | 18430 | 0.00 | 0.03 |
| Shutdown B | E11 | X07 | HTP | CR505 | 18180 | 1.33 | 0.58 | 36610 | 1.33 | 0.59 | 2 | 18430 | -0.00 | 0.01 |
| Shutdown B | H10 | Y03 | HTP | CR501 | 0 | 1.35 | 0.58 | 19890 | 1.36 | 0.60 | 2 | 19890 | 0.01 | 0.02 |
| Shutdown B | E05 | X12 | HTP | CR504 | 18140 | 1.32 | 0.58 | 36580 | 1.32 | 0.56 | 1 | 18440 | 0.00 | -0.02 |
| Shutdown B | F08 | Y02 | HTP | CR18 | 0 | 1.33 | 0.52 | 19860 | 1.34 | 0.57 | 2 | 19860 | 0.01 | 0.05 |

Beginning Of Cycle 18 Drop Time Test Results

BOC 18

| Control Rod Bank | Core Location | Fuel Assembly Serial # | Fuel Assembly Type | Control Rod Serial # | Burnup MWD/MTU | Time to Dashpot (seconds) | Dashpot to Rod Bottom (seconds) | Rod Recoil (# bounces) |
|------------------|---------------|------------------------|--------------------|----------------------|----------------|---------------------------|---------------------------------|------------------------|
| Control A | E09 | X31 | HTP | CR23 | 28750 | 1.26 | 0.59 | 2 |
| Control A | L07 | X28 | HTP | CR34 | 28760 | 1.26 | 0.54 | 2 |
| Control A | J11 | X29 | HTP | CR33 | 28900 | 1.38 | 0.58 | 2 |
| Control A | G05 | X26 | HTP | CR42 | 28900 | 1.28 | 0.53 | 1 |
| Control A | E07 | X27 | HTP | CR13 | 28720 | 1.26 | 0.59 | 2 |
| Control A | J05 | X30 | HTP | CR35 | 28830 | 1.36 | 0.54 | 2 |
| Control A | G11 | X25 | HTP | CR47 | 28850 | 1.41 | 0.57 | 2 |
| Control A | L09 | X32 | HTP | CR508 | 28720 | 1.31 | 0.65 | 1 |
| Control B | F14 | X21 | HTP | CR503 | 35750 | 1.38 | 0.58 | 2 |
| Control B | P06 | X17 | HTP | CR29 | 35740 | 1.27 | 0.51 | 3 |
| Control B | F02 | X24 | HTP | CR39 | 35770 | 1.27 | 0.57 | 1 |
| Control B | B10 | X19 | HTP | CR46 | 35720 | 1.39 | 0.57 | 2 |
| Control B | P10 | X20 | HTP | CR01 | 35820 | 1.32 | 0.56 | 1 |
| Control B | B06 | X18 | HTP | CR501 | 35820 | 1.32 | 0.58 | 2 |
| Control B | K02 | X23 | HTP | CR27 | 35790 | 1.35 | 0.55 | 2 |
| Control B | K14 | X22 | HTP | CR51 | 35780 | 1.34 | 0.58 | 2 |
| Control C | F04 | Y10 | HTP | CR32 | 21040 | 1.26 | 0.54 | 2 |
| Control C | F12 | Y11 | HTP | CR08 | 20990 | 1.36 | 0.6 | 2 |
| Control C | M06 | Y14 | HTP | CR06 | 21030 | 1.38 | 0.58 | 2 |
| Control C | K12 | Y12 | HTP | CR02 | 21040 | 1.24 | 0.56 | 2 |
| Control C | M10 | Y13 | HTP | CR03 | 21090 | 1.28 | 0.54 | 2 |
| Control C | D06 | Y15 | HTP | CR31 | 21090 | 1.28 | 0.58 | 2 |
| Control C | D10 | Y16 | HTP | CR46S | 21050 | 1.38 | 0.56 | 1 |
| Control C | K04 | Y09 | HTP | CR52 | 20990 | 1.28 | 0.58 | 1 |
| Control D | M08 | X01 | HTP | CR18 | 35900 | 1.39 | 0.55 | 1 |
| Control D | H12 | X02 | HTP | CR48 | 35900 | 1.28 | 0.5 | 2 |
| Control D | H08 | M24 | SMV | CR05 | 23670 | 1.36 | 0.56 | 1 |
| Control D | D08 | X03 | HTP | CR26 | 35900 | 1.29 | 0.55 | 1 |
| Control D | H04 | X04 | HTP | CR28 | 35900 | 1.28 | 0.62 | 2 |
| Shutdown A | J03 | Y44 | HTP | CR49 | 20240 | 1.36 | 0.58 | 2 |
| Shutdown A | C07 | Y42 | HTP | CR41 | 20250 | 1.36 | 0.56 | 2 |
| Shutdown A | G13 | Y38 | HTP | CR511 | 20250 | 1.26 | 0.62 | 2 |
| Shutdown A | G03 | Y41 | HTP | CR50 | 20300 | 1.26 | 0.56 | 1 |
| Shutdown A | N09 | Y40 | HTP | CR502 | 20250 | 1.26 | 0.58 | 1 |
| Shutdown A | J13 | Y39 | HTP | CR507 | 20300 | 1.28 | 0.6 | 1 |
| Shutdown A | N07 | Y43 | HTP | CR505 | 20230 | 1.28 | 0.58 | 2 |
| Shutdown A | C09 | Y37 | HTP | CR19 | 20250 | 1.35 | 0.57 | 2 |
| Shutdown B | K08 | Z15 | HTP | CR509 | 0 | 1.38 | 0.61 | 2 |
| Shutdown B | H06 | Z16 | HTP | CR506 | 0 | 1.3 | 0.58 | 1 |
| Shutdown B | L05 | Y17 | HTP | CR43 | 19630 | 1.4 | 0.58 | 2 |
| Shutdown B | L11 | Y20 | HTP | CR504 | 19660 | 1.28 | 0.58 | 1 |
| Shutdown B | E11 | Y19 | HTP | CR09 | 19650 | 1.36 | 0.59 | 2 |
| Shutdown B | H10 | Z14 | HTP | CR510 | 0 | 1.36 | 0.6 | 1 |
| Shutdown B | E05 | Y18 | HTP | CR36 | 19670 | 1.36 | 0.59 | 1 |
| Shutdown B | F08 | Z13 | HTP | CR512 | 0 | 1.36 | 0.62 | 1 |

Control Rod Drag Test Results

| Fuel Assembly Serial # | Fuel Assembly Type | Control Rod Serial # | Burnup MWD/MTU | Drag Force in Dashpot (lbs) | Drag Force Above Dashpot (lbs) |
|------------------------|--------------------|----------------------|----------------|-----------------------------|--------------------------------|
| X33 | HTP | CR28 | 33840 | 12.4 | 23.3 |
| X44 | HTP | CR50 | 33820 | 7.8 | 20.2 |
| X41 | HTP | CR502 | 33840 | 9.3 | 21.7 |
| X36 | HTP | CR48 | 33840 | 21.7 | 41.9 |
| X38 | HTP | CR29 | 33640 | 4.7 | 18.6 |
| X42 | HTP | CR41 | 33610 | 7.8 | 26.4 |
| X35 | HTP | CR26 | 33640 | 15.5 | 24.8 |
| X39 | HTP | CR25 | 33620 | 10.9 | 37.2 |
| W37 | HTP | CR46S | 40850 | 9.3 | 10.9 |
| W39 | HTP | CR08 | 41060 | 10.9 | 7.8 |
| W34 | HTP | CR03 | 40910 | 12.4 | 69.8 |
| W38 | HTP | CR52 | 41070 | 7.8 | 10.9 |
| W35 | HTP | CR06 | 41010 | 10.9 | 10.9 |
| W33 | HTP | CR02 | 41020 | 15.5 | 34.1 |
| W40 | HTP | CR34 | 40860 | 18.6 | 18.6 |
| W36 | HTP | CR31 | 40900 | 15.5 | 17.1 |
| P27 | SMV | CR39 | 48620 | 10.9 | 29.5 |
| P17 | SMV | CR35 | 49090 | 3.1 | 10.9 |
| P26 | SMV | CR27 | 48620 | 15.5 | 24.8 |
| P15 | SMV | CR42 | 49060 | 27.9 | 51.2 |
| P14 | SMV | CR47 | 49060 | 23.3 | 43.3 |
| P16 | SMV | CR13 | 49140 | 38.8 | 60.5 |
| W05 | HTP | CR43 | 47720 | 7.8 | 21.7 |
| W07 | HTP | CR503 | 47130 | 7.8 | 23.3 |
| W08 | HTP | CR51 | 47740 | 17.1 | 51.2 |
| W06 | HTP | CR01 | 47130 | 6.2 | 18.6 |
| W46 | HTP | CR36 | 43490 | 24.8 | 32.6 |
| W48 | HTP | CR32 | 43480 | 9.3 | 20.2 |
| W43 | HTP | CR33 | 43580 | 9.3 | 20.2 |
| W47 | HTP | CR09 | 43350 | 7.8 | 18.6 |
| W42 | HTP | CR23 | 43440 | 46.5 | 46.5 |
| W44 | HTP | CR19 | 43460 | 3.1 | 7.8 |
| Y04 | HTP | CR508 | 19850 | 10.9 | 24.8 |
| Y01 | HTP | CR05 | 19870 | 17.1 | 46.5 |
| X05 | HTP | CR46 | 36560 | 10.9 | 26.4 |
| X10 | HTP | CR49 | 36570 | 7.8 | 15.5 |
| X07 | HTP | CR505 | 36610 | 7.8 | 9.3 |
| Y03 | HTP | CR501 | 19890 | 3.0 | 3.0 |
| X12 | HTP | CR504 | 36580 | 14.0 | 27.9 |
| Y02 | HTP | CR18 | 19860 | 3.1 | 10.9 |
| Z44 | HTP | CR511 | 0 | 21.7 | 21.7 |
| Z26 | HTP | CR507 | 0 | 6.2 | 17.1 |
| S15H | SMV | CR511 | 64562 | 20.2 | 35.7 |