James S. Baumstark
Vice President
Nuclear Engineering

Consolidated Edison Company of New York, Inc.
Indian Point 2 Station
Broadway & Bleakley Avenue
Buchanan, New York 10511

Internet: baumstarkj@coned.com
Telephone: (914) 734-5354
Cellular: (914) 391-9005
Pager: (917) 457-9698
Fax: (914) 734-5718

June 20, 2000

Re: Indian Point Unit No. 2
Docket No. 50-247

Document Control Desk
US Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555-0001

Subject: Response to Request for Additional Information – Proposed Steam Generator Tube Examination Program – Supplement One (TAC No. MA8219)

Pursuant to 10 CFR 50.54(f), Consolidated Edison Company of New York, Inc. (Con Edison) hereby provides responses to Questions 6 and 20 contained in the Staff's request for additional information dated March 24, 2000 relative to the Indian Point 2 steam generator tube examination program.

No new regulatory commitments are being made by Con Edison in this correspondence.

Should you or your staff have any concerns regarding this matter, please contact Mr. John McCann, Manager, Nuclear Safety & Licensing.

Sincerely,

Attachment

A001

C Mr. Hubert J. Miller
Regional Administrator-Region I
US Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Patrick Milano, Project Manager
Project Directorate I-1
Division of Regulatory Projects I/II
US Nuclear Regulatory Commission
Mail Stop O-8-C2
Washington, DC 20555

Senior Resident Inspector
US Nuclear Regulatory Commission
PO Box 38
Buchanan, NY 10511

Attachment

Responses to RAI Questions 6 and 20

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247
June 2000

NRC RAI Letter dated March 24, 2000

Question 6

Provide a description of the leakage monitoring program to be implemented upon plant restart, including monitoring systems, surveillance intervals, action levels, alarm setpoints, and leakage criteria for initiating plant shutdown.

Reply

The leakage monitoring program to be implemented upon plant restart consists of several secondary-side system radiation monitors, and a secondary-side chemistry sampling program.

Each main steam line is provided with instrumentation which continuously detects for Nitrogen 16 (N-16). These monitors are installed on the main steam discharge lines from each steam generator and would detect for N-16, which would be present in the event of a primary to secondary leak. The N-16 monitor has an indication in the control room via a common alarm on the Accident Assessment Panel. There is also a local alarm by the panel located on the turbine floor. If a common alarm were to come up, an operator would be dispatched to investigate. Abnormal Operating Procedure (AOI 1.2) defines specific action level criteria and the action responses to those criteria.

The air ejector discharge is continuously monitored by radiation monitor R45, and is also routinely sampled by Chemistry. The set point for the R45 alarm is based on the equations in the Off Site Dose Calculation Manual, not on a primary to secondary leak rate. The set point relates to 1% of our site boundary dose rate per 10 CFR 20.

Chemistry calculates a primary to secondary leak rate based upon the concentration of noble gas in the air ejector discharge. IP2 Chemistry Procedure IPC-A-110 provides the method for the determination of secondary leak rates and for projecting the leak rate trends. If no activity were present, the sample frequency would be weekly. However, if activity were present, this frequency would be increased to at least daily. The nuclide distribution and the condenser air in-leakage can cause the activity concentration that correlates to a primary to secondary leak to vary. Chemistry takes these variables into account when performing these calculations.

To improve the monitoring of related events, Con Edison will reduce the administrative limits from 150 gpd to 30 gpd. This is more conservative than the 75 gpd guideline that was proposed in the new EPRI guidelines which became effective February of 2000.

Additional information regarding these program changes were provided to the NRC in response to Root Cause Evaluation – Issue No. 4. Table 1 specifies the primary to secondary leak rate limits, and the appropriate action responses for each threshold.

Table 1

IP2 Action Level Table for Primary-to-Secondary Leakage[1]

	Leak Rate In Any One SG[3]	Increasing Leak Rate[3]	Action Responses
No Operable Continuous RMS	0-5 gpd	NA	• Repair RMS ASAP • Take grab samples at frequency in EPRI, Table 3-1, or observe portable RMS at frequency, in EPRI, Table 3-1
Increased Monitoring	≥ 5 gpd < 30 gpd	NA	• Identify leaking SG and requantify leakage • Repair out-of-service RMS ASAP • Increase grab sample frequency and RMS monitoring frequency, recorrelate RMS, adjust RMS • Review procedures • Trend and report leakage • When conditions stabilize, reset set points
Action Level 1	≥ 30 gpd < 75 gpd	<1.25 gph over 1 hour period[2,4]	• Be in Mode 3 in ≤ 24 hr • Monitor rate of increase in leak rate[2] • Identify leaking SG and quantify leak rate • Increase frequency of RMS monitoring • Contain systems to minimize spread of contamination
Action Level 2a	≥ 75 gpd sustained for ≥ 1 hr	≥ 1.25 gph over 1 hour period[2]	• Reduce power to ≤50% in 1 hr[5] • Be in Mode 3 in next 2 hr[5] • Identify leaking SG and quantify leakage • Increase frequency of RMS monitoring • Contain systems to minimize spread of contamination
Action Level 2b	≥ 150 gpd		• Be in Mode 3 in ≤ 6 hr[5] • Identify leaking SG and quantify leakage • Increase frequency of RMS monitoring • Contain systems to minimize spread of contamination

Table 1 Notes

1. During power maneuvers it is impractical to accurately determine leak rates and their rate of change. During power increases, radiation monitors should be trended. If unusual behavior is noted, such as an unexpected increase in radiation monitor readings, consideration should be given to suspending power ascension, stabilizing conditions and quantifying leakage. During power reductions, radiation monitors should also be trended for indication of a large increase in leakage that would justify accelerated shutdown. Plant shutdown based on exceeding action levels in these guidelines should not be suspended based on radiation monitor reading until conditions are stabilized in Mode 3.

2. The rate of increase limit is provided to identify the potential need for a rapid power reduction to 50% power. This limit applies to progressively increasing leak rates and does not apply to leak rate spikes followed by decreasing leak rates. The rate of increase can be evaluated as leak rate changes over time intervals not exceeding 30 minutes. Alternate methods may be used to implement the rate of increase limit on a plant specific basis. Some examples of acceptable implementation include: 1) leak rate increase of 15 gpd above 75 gpd in a 30 minute period, 2) leak rate reaches 100 gpd within the 24 hour period allowed by Action 2 or 3) direct determination of leak rate slop changes taken from continuous monitor leak rate data showing that 30 gpd/hour has been reached and is not followed by a negative slope (i.e. is not due to a spike).

3. All leak rates and rates of increase in leak rates are in gallons based on room temperature measurements. 5 gpd equates to 1.7 lbm/hr, 30 gpd to 10.4 lbm/hr, 75 gpd to about 26 lbm/hr and 150 gpd to 52 lbm/hour.

4. Action Level 1 defines the action responses required when leakage is between 30 and 75 gpd and an increase in leakage rate that may be occurring but has not exceeded 1.25 gph over 1 hour period.

5 Action Level 2 defines the action response for two discrete events. The first addresses a sustained leak ≥ 75 gpd and an increasing leak rate greater than 1.25 gph over a 1-hr period. In this case the plant shall be in Mode 3 in 3 hrs. The second case addresses a significant leak ≥ 150 gpd that is not associated with a rapidly increasing leakage rate. This situation is considered less urgent and requires the plant to be in Mode 3 within 6 hrs.

Notes 1 - 3 from Table 3-2, EPRI PWR Primary-to-Secondary Leakage Monitoring Guidelines, Revision 2, February 2000

NRC RAI Letter dated March 24, 2000

Question 20

Identify the number of tubes inspected with probes smaller than 0.700 inches in diameter. For these tubes, document the eddy current indications in these inspections (both Cecco and bobbin results, as well as rotating pancake coil results).

Reply

Identify the number of tubes inspected with probes smaller than 0.700 inches in diameter.

	SG 21	SG 22	SG 23	SG 24
Number of tubes which required inspection with probes smaller than 0.700 inches in diameter.	336	353	381	286

For these tubes, document the eddy current indications in these inspections (both Cecco and bobbin results, as well as rotating pancake coil results).

The attached spreadsheets document the eddy current indications as reported with any probe type or size for this population. There is one spreadsheet for each steam generator.

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	BEGT	ENDT	PDIA	PTYPE
17	4	0.38	118	NQN		M1	TSH	15.67	6H	TEH	0.64	CCAGC
17	4	0.25	128	NQN		M1	TSH	16.01	6H	TEH	0.64	CCAGC
17	4	0.37	125	NQN		M1	TSH	15.67	TSH	TEH	0.68	CCAGC
17	4	0.41	129	NQN		M1	TSH	16.01	TSH	TEH	0.68	CCAGC
17	4	0.63	132	NQN		M1	TSH	15.67	TSH	TEH	0.7	MBALL
17	4	0.63	138	NQN		M1	TSH	16.01	TSH	TEH	0.7	MBALL
17	4	0.57	123	NQN		M1	TSH	15.68	TSH	TEH	0.7	CCAGC
17	4	0.29	128	NQN		M25	TSH	16	TSH	TEH	0.7	CCAGC
4	8	0.62	5	MAI		2	TEH	1.74	TEH	TEH	0.72	ZMAGR
4	8	14.33	11	DRI		M1	TEH	1.18	5H	TEH	0.68	CCAGC
4	8	47.11	31	DRI		C8	TEH	1.51	TSH	TEH	0.68	CCAGC
4	8	6.36	19	DRI		M1	TEH	2.13	6H	TEH	0.7	MBALL
4	8	35.48	19	DRI		22	TEH	1.51	TSH	TEH	0.7	CCAGC
4	9	2.22	18	MAI		3	TEH	0.11	TEH	TSH	0.72	ZPANM
4	11	5.21	25	MAI		3	TEH	0.38	TEH	TSH	0.72	ZPANM
4	14	3.96	18	SAI		3	TEH	0.12	TEH	TSH	0.72	ZPANM
3	15	29.22	8	DRN		M1	TEH	1.26	6C	TEH	0.61	ZBALL
3	15	9.33	26	DRN		C23	TEH	0.85	TSH	TEH	0.68	CCAGC
3	15	17.83	5	DRN		M1	TEH	0.91	5H	TEH	0.68	CCAGC
3	15	21.5	4	DRN		M1	TEH	1.15	5H	TEH	0.7	CCAGC
4	16	1.57	20	MAI		3	TEH	0.2	TEH	TSH	0.72	ZPANM
4	16	1.35	21	SAI		3	TEH	1.05	TEH	TSH	0.72	ZPANM
34	16	118	122	SPI		C13	2C	0.28	2C	2C	0.7	CCAGC
4	17	2.56	10	MAI		4	TEH	1.58	TEH	TEH	0.72	ZMAGR
4	17	9.07	90	PIN		C6	TSH	0.74	TSH	TEH	0.68	CCAGC
3	18	3.38	7	MAI		4	TEH	1.5	TEH	TEH	0.72	ZMAGR
3	18	34.11	12	DRI		M1	TEH	1.34	6H	TEH	0.7	MBALL
3	18	34.18	18	DRI		M1	TEH	1.3	5H	TEH	0.68	CCAGC
3	18	16.39	16	DRI		30	TEH	1.34	TSH	TEH	0.68	CCAGC
4	18	3.17	21	MAI		3	TEH	0.2	TEH	TSH	0.72	ZPANM
3	19	1.99	20	MAI		3	TEH	0.15	TEH	TSH	0.72	ZPANM
2	20	0.93	59	SAI		3	TEH	0.09	TEH	TSH	0.72	ZPANM
3	20	4.37	21	MAI		3	TEH	0.11	TEH	TSH	0.72	ZPANM
36	20	23.21	18	DRN		38	TEH	1.44	TSH	TEH	0.68	CCAGC
36	20	3.34	87	PIN		39	TSH	2.51	TSH	TEH	0.68	CCAGC
36	20	24.79	11	DRN		13	TEH	1.24	TSH	TEH	0.7	CCAGC

36	20	6.32	109	PIN		37	TSH	2.97	TSH	TEH	0.7	CCAGC
3	21	2.14	19	MAI		3	TEH	0.13	TEH	TSH	0.72	ZPANM
2	22	1.22	10	SAI		3	TEH	0.17	TEH	TSH	0.72	ZPANM
3	22	2.92	12	SAI		4	TEH	0.09	TEH	TSH	0.72	ZPANM
4	22	1.04	19	SAI		3	TEH	0.15	TEH	TSH	0.72	ZPANM
4	22	0.1	117	PIT		3	TSC	2.01	TSC	TSC	0.68	ZPANM
4	22	0.11	98	PIT		3	TSC	3.15	TSC	TSC	0.68	ZPANM
4	22	0.14	131	PCT	14	M1	TSC	2.23	6H	TEC	0.7	MBALL
4	22	0.2	136	PCT	5	M1	TSC	3.43	6H	TEC	0.7	MBALL
4	22	0.27	128	PCT	12	M1	TSC	2.2	6C	TEC	0.68	CCAGC
4	22	0.22	110	PCT	29	M1	TSC	1.85	6C	TEC	0.7	CCAGC
4	22	0.71	126	PCT	3	M1	TSC	2.96	6C	TEC	0.7	CCAGC
4	22	2.37	99	PIN		38	TSC	3.5	TSC	TEC	0.7	CCAGC
5	22	0.87	20	SAI		3	TEH	0.11	TEH	TSH	0.72	ZPANM
38	22	23.82	9	DRN		38	TEH	1.04	TSH	TEH	0.68	CCAGC
38	22	11.34	14	DRN		63	TEH	0.98	TSH	TEH	0.7	CCAGC
4	23	6.06	28	MCI		3F	TEH	1.29	TEH	TSH	0.72	ZPANM
4	24	2.94	18	SAI		3	TEH	0.18	TEH	TSH	0.72	ZPANM
5	24	4.61	19	SAI		3	TEH	0.22	TEH	TSH	0.72	ZPANM
5	24	0.37	101	PIT		3	TSC	1.96	TSC	TSC	0.68	ZPANM
5	24	0.65	91	PIT		3	TSC	2.18	TSC	TSC	0.68	ZPANM
5	24	1.01	110	PCT	25	M1	TSC	2.28	2C	TEC	0.64	CCAGC
5	24	32.37	117	PIN		48	TSC	2.28	TSC	TEC	0.64	CCAGC
5	24	1.8	112	PIN		26	TSC	4.94	TSC	TEC	0.64	CCAGC
5	24	1.14	117	PCT	29	M1	TSC	2.35	6C	TEC	0.68	CCAGC
5	24	14.52	87	PIN		44	TSC	2.3	TSC	TEC	0.7	CCAGC
5	24	0.38	113	PCT	25	M1	TSC	2.7	3C	TEC	0.7	CCAGC
5	24	6.11	88	PIN		40	TSC	4.86	TSC	TEC	0.7	CCAGC
2	25	1.98	20	MAI		3	TEH	0.12	TEH	TSH	0.72	ZPANM
3	25	1.12	21	SAI		3	TEH	0.17	TEH	TSH	0.72	ZPANM
33	25	0.66	108	NQN		M1	TSH	22.06	TEC	TEH	0.7	CCAGC
2	26	3.21	23	MAI		3	TEH	0.17	TEH	TSH	0.72	ZPANM
3	26	2.19	12	SAI		3	TEH	0.17	TEH	TSH	0.72	ZPANM
2	28	1.8	21	MAI		3	TEH	0.27	TEH	TSH	0.72	ZPANM
3	29	0.46	118	NQN		M1	TSC	1.1	6C	TEC	0.7	CCAGC
3	29	10.69	108	PIN		C11	TSC	1.39	TSC	TEC	0.7	CCAGC
4	30	15.91	15	DRI		37	TEH	0.73	TSH	TEH	0.7	CCAGC

4	30	24.95	7	DRI	M1	TEH	1.23	6H	TEH	0.7	CCAGC
43	33	7.74	93	PIN	25	TSC	7.72	TSC	TEC	0.7	CCAGC
2	34	7.64	26	SAI	3	TEH	0.13	TEH	TSH	0.72	ZPANM
40	34	3.84	74	PIN	39	TSC	3.98	TSC	TEC	0.68	CCAGC
2	35	5.61	193	MAI	3	TEH	0.06	TEH	TSH	0.72	ZPANM
2	36	6.65	22	MAI	3	TEH	0.19	TEH	TSH	0.72	ZPANM
3	36	4.03	21	MAI	3	TEH	1.55	TEH	TSH	0.72	ZPANM
3	36	1.86	20	MAI	3	TEH	1.34	TEH	TSH	0.68	ZPANM
3	36	21.63	6	DRN	M1	TEC	1.29	6C	TEC	0.7	MBALL
3	36	15.87	4	DRN	M1	TEC	1.3	6C	TEC	0.68	CCAGC
3	36	77.27	20	DRI	29	TEH	1.14	TSH	TEH	0.68	CCAGC
3	36	57.18	18	DRI	M1	TEH	1.29	6H	TEH	0.68	CCAGC
3	36	19.07	9	DRN	M1	TEC	3.96	4C	TEC	0.7	CCAGC
3	36	54.48	17	DRI	M1	TEH	1.13	6H	TEH	0.7	CCAGC
3	36	21.33	16	DRI	27	TEH	1.14	TSH	TEH	0.7	CCAGC
4	36	0.28	120	NQN	M1	TSC	1.81	6H	TEC	0.7	MBALL
4	36	0.36	129	NQN	M1	TSC	1.51	5C	TEC	0.7	CCAGC
5	36	0.36	117	NQN	M1	TSC	2.69	6C	TEC	0.68	CCAGC
5	36	0.37	125	NQN	M1	TSC	2.4	5C	TEC	0.7	CCAGC
2	37	7.71	199	MAI	3	TEH	0.09	TEH	TSH	0.72	ZPANM
4	37	1.02	14	MAI	3	TEH	1.37	TEH	TSH	0.72	ZPANM
4	37	0.51	104	MAI	3	TEH	3.45	TEH	TSH	0.72	ZPANM
4	37	0.3	126	SAI	2	TEH	3.77	TEH	TEH	0.72	ZMAGR
4	37	2.82	13	MAI	1	TEH	1.38	TEH	TEH	0.72	ZMAGR
4	37	28.88	22	DRI	38	TEH	1.5	TSH	TEH	0.68	CCAGC
2	38	7.55	16	MAI	3	TEH	0.16	TEH	TSH	0.72	ZPANM
4	38	1.49	16	SAI	3	TEH	0.1	TEH	TSH	0.72	ZPANM
2	39	14.74	27	MAI	3	TEH	0.12	TEH	TSH	0.72	ZPANM
4	39	3.57	20	SAI	3	TEH	0.16	TEH	TSH	0.72	ZPANM
8	39	0.51	23	MAI	3	TEH	1.34	TEH	TSH	0.72	ZPANM
2	40	9.52	25	SAI	3	TEH	0.18	TEH	TSH	0.72	ZPANM
2	41	6.31	27	MAI	3	TEH	0.21	TEH	TSH	0.72	ZPANM
4	41	0.83	205	MAI	3	TEH	0.18	TEH	TSH	0.72	ZPANM
2	42	6.94	28	MAI	3	TEH	0.25	TEH	TSH	0.72	ZPANM
4	42	2.57	207	SAI	3	TEH	0.24	TEH	TSH	0.72	ZPANM
20	42	13.09	13	DRI	M1	TEH	1.17	1H	TEH	0.7	MBALL
20	42	13.44	9	DRI	M1	TEH	1.28	TEC	TEH	0.7	MBALL

20	42	21.02	7	DRI	2	TEH	1.18	TSH	TEH	0.7	CCAGC
22	42	12.8	88	TSI	C11	TSH	-0.04	TSH	TEH	0.7	CCAGC
20	43	2.55	93	PIN	C6	TSC	1.51	TSC	TEC	0.7	CCAGC
20	43	14.57	3	DRI	M1	TEH	2.83	TEC	TEH	0.7	MBALL
20	43	16.71	24	DRI	45	TEH	1.21	TSH	TEH	0.7	CCAGC
22	43	23.66	12	DRI	M1	TEH	0.91	TEC	TEH	0.7	MBALL
22	43	0.9	146	NQN	1	TSC	2.03	TEC	TEH	0.7	MBALL
22	43	0.59	127	NQN	M1	TSC	2.21	1C	TEC	0.64	CCAGC
22	43			PIN	35	TSC	2.29	TSC	TEC	0.64	CCAGC
22	43	12.3	16	DRI	21	TEH	1.38	TSH	TEH	0.68	CCAGC
22	43	24.12	6	DRI	M1	TEH	1.4	6H	TEH	0.68	CCAGC
22	43	6.21	198	DRI	M1	TEH	1	TEC	TEH	0.68	CCAGC
22	43	0.78	116	NQN	M1	TSC	2.13	TEC	TEH	0.68	CCAGC
22	43	0.87	149	NQN	73	TSC	2.11	6C	TEC	0.68	CCAGC
3	45	3.5	15	MAI	1	TEH	1.37	TEH	TEH	0.72	ZMAGR
3	45	28.4	13	DRI	M1	TEH	1.15	6H	TEH	0.7	MBALL
3	45	31.8	8	DRI	M1	TEH	1.34	6H	TEH	0.68	CCAGC
3	46	4.54	20	MAI	1	TEH	1.47	TEH	TEH	0.72	ZMAGR
3	46	40.29	14	DRI	M1	TEH	1.12	6H	TEH	0.7	MBALL
3	46	70.75	14	DRI	29	TEH	1.06	TSH	TEH	0.68	CCAGC
3	52	0.82	19	SAI	3	TEH	0.19	TEH	TSH	0.72	ZPANM
2	56	2.03	17	MAI	3	TEH	0.15	TEH	TSH	0.72	ZPANM
40	56	138.9	84	PIN	C8	TSC	0.24	TSC	TEC	0.7	CCAGC
2	57	5.37	17	MAI	3	TEH	0.21	TEH	TSH	0.72	ZPANM
2	58	3.49	19	MAI	3	TEH	0.18	TEH	TSH	0.72	ZPANM
4	59	3.17	21	MAI	3	TEH	0.14	TEH	TSH	0.72	ZPANM
3	62	0.64	14	SAI	3	TEH	0.17	TEH	TSH	0.72	ZPANM
2	64	2.6	33	SCI	3F	TEH	0.1	TEH	TSH	0.72	ZPANM
2	65	0.45	16	SAI	3	TEH	0.25	TEH	TSH	0.72	ZPANM
4	67	3.28	75	SAI	3	TEH	8.16	TEH	TSH	0.72	ZPANM
4	67	1.81	94	SAI	3	TEH	9.92	TEH	TSH	0.72	ZPANM
2	69	1.97	22	MAI	3	TEH	0.23	TEH	TSH	0.72	ZPANM
5	69	1.52	9	MAI	3	TEH	0.27	TEH	TSH	0.72	ZPANM
2	71	12.2	23	MAI	3	TEH	0.3	TEH	TSH	0.72	ZPANM
4	71	1.6	13	SAI	3	TEH	0.24	TEH	TSH	0.72	ZPANM
2	72	12.15	107	TSI	C11	TSH	0.06	TSH	TEH	0.7	CCAGC
2	73	6.9	13	MAI	3	TEH	0.25	TEH	TSH	0.72	ZPANM

4	73	0.8	70	SAI	3	TEH	0.11	TEH	TSH	0.72	ZPANM
2	75	10.62	21	MAI	3	TEH	0.2	TEH	TSH	0.72	ZPANM
2	76	8.45	21	MAI	3	TEH	0.19	TEH	TSH	0.72	ZPANM
2	76	1.44	15	DRI	32	TEH	0.85	TSH	TEH	0.7	CCAGC
2	82	2.82	198	MAI	3	TEH	0.28	TEH	TSH	0.7	ZPANM
26	83	35.46	99	PIN	32	TSH	15.95	TSH	TEH	0.68	CCAGC
2	84	2.59	27	MAI	3	TEH	0.16	TEH	TSH	0.72	ZPANM
2	84	3.2	26	MAI	3	TEH	0.22	TEH	TSH	0.7	ZPANM
3	84	3.09	18	SAI	3	TEH	0.23	TEH	TSH	0.7	ZPANM
5	84	1.37	18	SAI	3	TEH	0.19	TEH	TSH	0.7	ZPANM
11	85	3.07	22	SAI	3	TEH	0.2	TEH	TSH	0.7	ZPANM
11	85	1.38	15	SAI	3	TEH	1.33	TEH	TSH	0.7	ZPANM
13	86	1.64	16	SAI	3	TEH	0.21	TEH	TSH	0.7	ZPANM
2	87	8.19	25	MAI	3	TEH	0.18	TEH	TSH	0.7	ZPANM
2	87	3.9	24	MAI	2	6C	6.57	6H	6C	0.62	ZPUHF
2	87	5.88	23	MAI	3	6C	6.57	6H	6C	0.62	ZPUHF
2	87	3.51	18	MAI	4	6C	6.57	6H	6C	0.62	ZPUHF
2	87	2.12	21	MAI	5	6C	6.57	6H	6C	0.62	ZPUHF
2	87	2.23	26	MAI	1	6C	6.57	6H	6C	0.62	ZPUHF
2	87	2.91	22	MAI	5	6C	7.13	6H	6C	0.62	ZPUHF
2	87	7.77	24	MAI	3	6C	7.13	6H	6C	0.62	ZPUHF
2	87	4.72	19	MAI	4	6C	7.13	6H	6C	0.62	ZPUHF
2	87	2.93	28	MAI	1	6C	7.13	6H	6C	0.62	ZPUHF
2	87	5.12	26	MAI	2	6C	7.13	6H	6C	0.62	ZPUHF
2	87	2.05	26	MAI	5	6C	7.31	6H	6C	0.62	ZPUHF
2	87	3.23	26	MAI	4	6C	7.31	6H	6C	0.62	ZPUHF
2	87	3.3	31	MAI	2	6C	7.31	6H	6C	0.62	ZPUHF
2	87	5.1	30	MAI	3	6C	7.31	6H	6C	0.62	ZPUHF
2	87	1.88	33	MAI	1	6C	7.31	6H	6C	0.62	ZPUHF
2	87	1.01	23	SAI	1	6H	6.31	6H	6C	0.62	ZPUMB
2	87	1.04	24	SAI	1	6H	6.92	6H	6C	0.62	ZPUMB
2	87	1.03	27	SAI	1	6H	7.13	6H	6C	0.62	ZPUMB
2	87	1.43	22	SAI	1	6H	6.3	6H	6C	0.62	ZPUMB
2	87	0.85	21	SAI	1	6H	6.82	6H	6C	0.62	ZPUMB
2	87	0.79	21	SAI	1	6H	7	6H	6C	0.62	ZPUMB
2	88	4.17	25	MAI	3	TEH	0.14	TEH	TSH	0.72	ZPANM
2	88	6.47	23	MAI	3	TEH	0.21	TEH	TSH	0.7	ZPANM

2	90	7.76	20	MAI	3	TEH	0.18	TEH	TSH	0.7	ZPANM
4	90	2.06	10	SAI	3	TEH	0.19	TEH	TSH	0.7	ZPANM

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	BEGT	ENDT	PDIA	PTYPE
9	4	2.6	33	MAI		3	TEH	0	TEH	TSH	0.72	ZPANM
12	4	1.98	10	SAI		3	TEH	2.88	TEH	TSH	0.7	ZPACC
10	5	0.73	26	SAI		3	TEH	0.25	TEH	TSH	0.7	ZPACC
5	8	0.53	80	PIN		M5	TEH	7.34	TSH	TEH	0.64	CCAGC
4	9	1.38	27	PIN		M3	TEH	8	TSH	TEH	0.64	CCAGC
4	10	0.64	5	PIN		M9	TEH	6.97	TSH	TEH	0.64	CCAGC
2	11	0.48	38	PIN		M6	TEH	5.87	TSH	TEH	0.64	CCAGC
28	11	1.22	11	SAI		2	TEH	0.45	TEH	TSH	0.7	ZPACC
4	12	0.46	42	PIN		M16	TEH	7.08	TSH	TEH	0.64	CCAGC
28	12	0.47	128	PIT		2	TSH	3.38	TEH	TSH	0.7	ZPACC
28	12	0.71	132	PIT		3	TSH	3.64	TSH	TSH	0.68	ZPANM
28	12	1.52	134	PCT	6	M1	TSH	3.85	TEC	TEH	0.7	CCAGC
28	12	0.66	133	PCT	11	M1	TSH	3.81	TEC	TEH	0.7	CCAGC
29	12	0.44	146	PIT		1	TSH	4.04	TEH	TSH	0.61	ZPADP
29	12	0.38	137	PIT		1	TSH	4.24	TEH	TSH	0.61	ZPADP
29	12	0.24	153	PIT		1	TSH	7.15	TEH	TSH	0.61	ZPADP
3	13	0.38	106	PIN		M3	TEH	6.41	TSH	TEH	0.64	CCAGC
33	16	0.48	115	PIT		1	TSH	15.67	TEH	TSH	0.7	ZPACC
35	18	0.37	147	PIT		2	TSH	0.35	TEH	TSH	0.7	ZPACC
35	18	0.31	149	PIT		2	TSH	6.27	TEH	TSH	0.7	ZPACC
36	19	0.3	146	PIT		2	TSH	5	TEH	TSH	0.7	ZPACC
36	19	0.49	117	NQN		M1	TSH	5.21	6H	TEH	0.64	CCAGC
36	19	0.51	140	NQN		M1	TSH	5.13	1H	TEH	0.7	CCAGC
36	19	0.53	95	NQN		M1	TSH	5.18	1H	TEH	0.7	CCAGC
3	20	1.02	20	PIN		M7	TEH	14.07	TSH	TEH	0.64	CCAGC
33	20	0.46	147	PIT		2	TSH	1.32	TEH	TSH	0.7	ZPACC
33	20	0.53	138	PIT		1	TSH	10.69	TEH	TSH	0.7	ZPACC
36	20	2.71	33	SCI		2F	TEH	0.19	TEH	TSH	0.7	ZPACC
37	20	0.47	136	PIT		2	TSH	4.5	TEH	TSH	0.7	ZPACC
37	20	1.8	104	PIT		1	TSH	4.2	TEH	TSH	0.7	ZPACC
37	20	0.61	122	PIT		3	TSH	4.31	TSH	TSH	0.68	ZPANM
37	20	4.26	103	PCT	27	M1	TSH	4.51	6H	TEH	0.61	ZBALL
37	20	2.93	105	PCT	30	M1	TSH	4.7	1H	TEH	0.64	CCAGC
37	20	32.87	82	PIN		43	TSH	4.51	TSH	TEH	0.7	CCAGC
37	20	2.15	115	PCT	34	M1	TSH	4.59	1H	TEH	0.7	CCAGC
37	20	3.53	140	PCT	37	M1	TSH	4.66	1H	TEH	0.7	CCAGC

37	21	0.53	145	PIN	M4	TEH	14.64	TSH	TEH	0.7	CCAGC
36	22	1.38	111	PIN	M19	TEH	4.86	TSH	TEH	0.7	CCAGC
3	24	0.53	104	MAI	3	TEH	3.37	TEH	TSH	0.68	ZPANM
3	24	0.14	147	SAI	3	TEH	13.16	TEH	TSH	0.68	ZPANM
3	24	0.1	110	SAI	3	TEH	13.96	TEH	TSH	0.68	ZPANM
3	24	0.13	111	SAI	3	TEH	15.05	TEH	TSH	0.68	ZPANM
3	24	3.93	71	MAI	3	TEH	5.9	TEH	TSH	0.68	ZPANM
3	24	1.26	77	PI	1	TEH	2.68	TSH	TEH	0.68	CCAGC
3	24	0.98	78	NQI	M25	TEH	3.18	TSH	TEH	0.68	CCAGC
3	24	0.83	112	PI	1	TEH	3.76	TSH	TEH	0.68	CCAGC
3	24	0.62	59	NQI	M25	TEH	3.89	TSH	TEH	0.68	CCAGC
3	24	0.77	118	PI	1	TEH	4.13	TSH	TEH	0.68	CCAGC
3	24	2.3	60	NQI	M25	TEH	4.22	TSH	TEH	0.68	CCAGC
3	24	2.39	73	PI	1	TEH	4.95	TSH	TEH	0.68	CCAGC
3	24	5.65	56	NQI	M25	TEH	5.24	TSH	TEH	0.68	CCAGC
3	24	1.31	98	PI	1	TEH	5.63	TSH	TEH	0.68	CCAGC
3	24	2.59	72	NQI	M25	TEH	5.8	TSH	TEH	0.68	CCAGC
3	24	0.32	53	PI	1	TEH	5.99	TSH	TEH	0.68	CCAGC
3	24	0.74	44	NQI	M25	TEH	6.27	TSH	TEH	0.68	CCAGC
3	24	0.57	79	NQI	M25	TEH	6.9	TSH	TEH	0.68	CCAGC
3	24	0.32	107	PI	1	TEH	6.99	TSH	TEH	0.68	CCAGC
3	24	0.49	104	PI	1	TEH	7.33	TSH	TEH	0.68	CCAGC
3	24	0.45	56	NQI	M25	TEH	7.4	TSH	TEH	0.68	CCAGC
3	24	0.98	65	PI	1	TEH	7.92	TSH	TEH	0.68	CCAGC
3	24	0.61	94	PI	1	TEH	8.2	TSH	TEH	0.68	CCAGC
3	24	1.15	74	NQI	M25	TEH	8.35	TSH	TEH	0.68	CCAGC
3	24	0.57	72	NQI	M25	TEH	9.02	TSH	TEH	0.68	CCAGC
3	24	0.34	126	NQI	M25	TEH	9.43	TSH	TEH	0.68	CCAGC
3	24	0.35	99	PI	1	TEH	9.56	TSH	TEH	0.68	CCAGC
3	24	0.62	77	NQI	M25	TEH	9.84	TSH	TEH	0.68	CCAGC
3	24	5.24	62	PI	1	TEH	10.36	TSH	TEH	0.68	CCAGC
3	24	4.26	59	NQI	M25	TEH	10.62	TSH	TEH	0.68	CCAGC
3	24	1.21	99	MAI	3	TEH	4.28	TSH	TEH	0.68	ZPANM
3	24	1.27	96	MAI	3	TEH	4.64	TSH	TEH	0.68	ZPANM
3	24	3.81	75	MAI	3	TEH	5.52	TSH	TEH	0.68	ZPANM
3	24	0.37	101	MAI	3	TEH	8.74	TSH	TEH	0.68	ZPANM
3	24	3.36	73	MAI	3	TEH	10.49	TSH	TEH	0.68	ZPANM

3	24	0.77	65	NQI		M1	TEH	4.83	6H	TEH	0.64	CCAGC
3	24	0.53	72	NQI		M1	TEH	4.93	6H	TEH	0.64	CCAGC
3	24	3.94	63	NQI		M1	TEH	5.83	6H	TEH	0.64	CCAGC
3	24	31.99	83	PI		C10	TEH	5.96	TSH	TEH	0.64	CCAGC
3	24	2.56	63	NQI		M1	TEH	6.58	6H	TEH	0.64	CCAGC
3	24	17.81	90	PI		C10	TEH	6.63	TSH	TEH	0.64	CCAGC
3	24	1.08	65	NQI		M1	TEH	8.82	6H	TEH	0.64	CCAGC
3	24	0.45	80	NQI		M1	TEH	10.13	6H	TEH	0.64	CCAGC
3	24	29.07	76	PI		C10	TEH	10.96	TSH	TEH	0.64	CCAGC
3	24	3.49	59	NQI		M1	TEH	11.02	6H	TEH	0.64	CCAGC
3	24	10.03	42	PI		M10	TEH	11.12	TSH	TEH	0.64	CCAGC
3	24	0.42	101	NQI		M1	TEH	4.27	TSH	TEH	0.68	CCAGC
3	24	1.01	79	NQI		M1	TEH	4.6	TSH	TEH	0.68	CCAGC
3	24	3.64	69	NQI		M1	TEH	5.59	TSH	TEH	0.68	CCAGC
3	24	2.27	75	NQI		M1	TEH	6.22	TSH	TEH	0.68	CCAGC
3	24	1.01	74	NQI		M1	TEH	8.73	TSH	TEH	0.68	CCAGC
3	24	0.4	81	NQI		M1	TEH	10.17	TSH	TEH	0.68	CCAGC
3	24	3.32	65	NQI		M1	TEH	11.12	TSH	TEH	0.68	CCAGC
3	24	0.48	99	NQI		M1	TEH	4.33	TSH	TEH	0.7	CCAGC
3	24	0.97	80	NQI		M1	TEH	4.76	TSH	TEH	0.7	CCAGC
3	24	3.67	65	NQI		M1	TEH	5.62	TSH	TEH	0.7	CCAGC
3	24	2.33	77	NQI		M1	TEH	6.25	TSH	TEH	0.7	CCAGC
3	24	1.01	70	NQI		M1	TEH	8.62	TSH	TEH	0.7	CCAGC
3	24	0.43	70	NQI		M1	TEH	9.95	TSH	TEH	0.7	CCAGC
3	24	3.2	63	NQI		M1	TEH	10.78	TSH	TEH	0.7	CCAGC
39	26	54.01	89	PIN		C12	TSH	0.27	TSH	TEH	0.7	CCAGC
2	27	2.15	18	MAI		2	TEH	0.28	TEH	TSH	0.7	ZPACC
3	28	0.16	91	SAI		2	TEH	4.19	TEH	TSH	0.7	ZPACC
41	28	0.16	125	PIT		3	TSC	11.38	TSC	1C	0.68	ZPANM
41	28	0.26	106	PIT		3	TSC	12.85	TSC	1C	0.68	ZPANM
41	28	0.19	133	PCT	0	M1	TSC	11.8	4H	TEC	0.7	CCAGC
41	28	6.53	87	PIN		C18	TSC	12.66	TSC	TEC	0.7	CCAGC
41	28	0.44	123	PCT	13	M1	TSC	13.13	4H	TEC	0.7	CCAGC
9	29	0.33	103	PIT		3	TSC	3.93	TEC	TSC	0.72	ZPAMR
9	29	0.54	153	PCT	0	M1	TSC	4.01	6C	TEC	0.7	MBALL
9	29	0.94	161	PCT	0	M1	TSC	4.04	4H	TEC	0.7	MBALL
40	30	0.38	134	PIT		2	TSH	5.89	TEH	TSH	0.7	ZPACC

40	30	0.28	130	PIT		2	TSH	5.92	TEH	TSH	0.7	ZPACC
7	33	1.42	143	NQN		M1	TSC	2.59	6C	TEC	0.7	CCAGC
7	33	0.66	133	NQN		M1	TSC	4.03	6C	TEC	0.7	CCAGC
7	33	0.4	135	NQN		M1	TSC	6.29	6C	TEC	0.7	CCAGC
7	33	6.91	89	PIN		C19	TSC	6.47	TSC	TEC	0.7	CCAGC
2	35	5.82	23	MAI		2	TEH	0.29	TEH	TSH	0.7	ZPACC
2	36	5.24	26	MAI		2	TEH	0.37	TEH	TSH	0.7	ZPACC
7	36	0.63	132	NQN		M1	TSC	4.95	6C	TEC	0.7	CCAGC
4	37	0.35	122	NQN		M1	TSH	16.58	TSH	TEH	0.7	MBALL
4	37	0.43	114	NQN		M1	TSH	16.53	6H	TEH	0.64	CCAGC
4	37	0.37	117	NQN		M1	TSH	16.3	TSH	TEH	0.7	CCAGC
7	37	0.22	104	PIT		3	TSC	4.91	TSC	TSC	0.68	ZPANM
7	37	0.35	112	PIT		3	TSC	5.55	TSC	TSC	0.68	ZPANM
7	37	0.61	116	PCT	30	M1	TSC	4.78	6C	TEC	0.7	CCAGC
7	37	11.31	105	PIN		C5	TSC	5.1	TSC	TEC	0.7	CCAGC
8	37	0.19	101	PIT		3	TSC	8.86	TSC	TSC	0.68	ZPANM
8	37	9.24	96	PIN		C23	TSC	8.27	TSC	TEC	0.7	CCAGC
8	37	0.39	126	PCT	17	M1	TSC	8.82	6C	TEC	0.7	CCAGC
44	37	3.75	41	MCI		3F	TEH	0.14	TEH	TSH	0.72	ZPANM
44	38	6.04	21	MCI		3F	TEH	0.09	TEH	TSH	0.72	ZPANM
5	39	27.78	4	DRN		M1	TEH	2.28	TSH	TEH	0.7	MBALL
5	39	18.76	186	DRN		M1	TEH	2.43	TSH	TEH	0.7	CCAGC
7	39	0.77	147	NQN		M1	TSC	5.83	6C	TEC	0.7	CCAGC
44	39	4.25	32	SCI		3F	TEH	0.14	TEH	TSH	0.72	ZPANM
2	40	10.66	26	MAI		2	TEH	0.18	TEH	TSH	0.7	ZPACC
5	40	1.55	14	SAI		2	TEH	0.2	TEH	TSH	0.7	ZPACC
45	40	1.84	61	MCI		3F	TEH	0.11	TEH	TSH	0.72	ZPANM
2	41	6.53	27	MAI		2	TEH	0.24	TEH	TSH	0.7	ZPACC
4	41	0.98	25	SAI		2	TEH	0.23	TEH	TSH	0.7	ZPACC
6	41	0.66	148	NQN		M1	TSH	9.49	6H	TEH	0.68	CCAGC
6	41	1.89	131	NQN		M1	TSH	9.46	6H	TEH	0.7	CCAGC
6	41	0.66	122	NQN		M1	TSH	9.28	6H	TEH	0.7	CCAGC
36	41	6.21	105	SPI		C15	5H	-0.14	5H	5H	0.7	CCAGC
44	42	0.52	109	NQN		M1	TSH	10.27	6H	TEH	0.64	CCAGC
44	42	0.55	110	NQN		M1	TSH	11.87	6H	TEH	0.64	CCAGC
44	42	0.62	108	NQN		M1	TSH	10.72	6H	TEH	0.68	CCAGC
44	42	6.38	104	PIN		39	TSH	11.28	TSH	TEH	0.68	CCAGC

44	42	0.63	106	NQN		M1	TSH	11.86	6H	TEH	0.68	CCAGC
44	42	131.6	100	PIN		C9	1H	-0.44	1H	1H	0.68	CCAGC
44	42	71.2	27	PIN		12	2H	-0.63	2H	2H	0.68	CCAGC
44	42	89.16	110	PIN		C21	3H	-0.74	3H	3H	0.68	CCAGC
44	42	0.49	121	NQN		M1	TSH	10.53	TSC	TEH	0.7	MBALL
44	42	0.49	100	NQN		M1	TSH	11.87	TSC	TEH	0.7	MBALL
44	42	11.59	103	PIN		28	TSH	10.37	TSH	TEH	0.7	CCAGC
44	42	24.01	126	PIN		30	1H	-0.28	1H	1H	0.7	CCAGC
44	42	4.99	111	PIN		47	2H	-0.69	2H	2H	0.7	CCAGC
5	44	2.53	19	MAI		2	TEH	0.16	TEH	TSH	0.7	ZPACC
44	44	0.61	146	PIT		3	TSC	8.97	TSC	1C	0.68	ZPANM
44	44	0.47	129	PIT		3	TSC	9.52	TSC	1C	0.68	ZPANM
44	44	0.63	140	PIT		3	TSC	10.01	TSC	1C	0.68	ZPANM
44	44	0.41	109	PCT	38	M1	TSC	9.05	2H	TEC	0.7	MBALL
44	44	0.37	116	PCT	30	M1	TSC	9.57	2H	TEC	0.7	MBALL
44	44	0.44	135	PCT	8	M1	TSC	10.2	2H	TEC	0.7	MBALL
44	44	14.36	120	PIN		C7	TSC	9.02	TSC	TEC	0.68	CCAGC
44	44	0.49	119	PCT	16	M1	TSC	9.21	6C	TEC	0.68	CCAGC
44	44	0.47	108	PCT	34	M1	TSC	9.58	6C	TEC	0.68	CCAGC
44	44	0.86	153	PCT	18	73	TSC	10.05	6C	TEC	0.68	CCAGC
44	44	13.21	103	PIN		C5	TSC	10.11	TSC	TEC	0.68	CCAGC
45	44	7.75	127	PIN		28	TSH	0.55	TSH	TEH	0.68	CCAGC
45	44	9.87	123	PIN		26	TSH	0.36	TSH	TEH	0.7	CCAGC
45	44	7.28	127	PIN		28	TSH	0.3	TSH	TEH	0.7	CCAGC
4	46	2.23	17	SAI		2	TEH	0.06	TEH	TSH	0.7	ZPACC
36	47	0.72	22	PIN		M4	TEH	5.84	TSH	TEH	0.7	CCAGC
37	47	0.24	142	PIN		M2	TEH	14.98	TSH	TEH	0.7	CCAGC
42	47	0.34	65	PIN		M17	TEH	2.91	TSH	TEH	0.7	CCAGC
44	47	0.71	32	PIN		M4	TEH	2.9	TSH	TEH	0.7	CCAGC
45	47	2.98	41	MCI		3F	TEH	0.13	TEH	TSH	0.72	ZPANM
42	48	0.51	54	PIN		M9	TEH	10.23	TSH	TEH	0.7	CCAGC
45	48	1.02	27	PIN		M4	TEH	16.17	TSH	TEH	0.7	CCAGC
42	49	3.73	62	DRN		C17	TEH	2.63	TSH	TEH	0.7	CCAGC
42	50	0.55	65	PIN		M10	TEH	16.18	TSH	TEH	0.7	CCAGC
44	50	1.47	77	PIN		M6	TEH	6.55	TSH	TEH	0.7	CCAGC
45	50	3.41	20	MAI		3	TEH	0.3	TEH	TSH	0.68	ZPANM
45	50	0.52	115	PIN		M4	TEH	7.57	TSH	TEH	0.7	CCAGC

42	51	0.73	66	PIN		M8	TEH	8.75	TSH	TEH	0.7	CCAGC
43	52	1.34	30	MAI		3	TEH	0.2	TEH	TSH	0.7	ZPACC
2	55	2.72	25	MAI		3	TEH	0.08	TEH	TSH	0.72	ZPANM
5	55	0.67	125	PIT		2	TSC	1.67	TEC	TSC	0.7	ZPACC
5	55	0.72	127	PIT		3	TSC	1.7	TSC	TSC	0.68	ZPANM
5	55	3.62	167	PCT	1	1	TSC	1.45	3H	TEC	0.7	MBALL
5	55	1.88	130	PCT	1	M1	TSC	1.64	6C	TEC	0.64	CCAGC
5	55	2.08	139	PCT	1	M1	TSC	1.74	6C	TEC	0.68	CCAGC
5	55	2.06	142	PCT	1	M1	TSC	1.55	6C	TEC	0.7	CCAGC
7	55	0.29	83	PIT		3	TSC	4.18	TSC	TSC	0.68	ZPANM
7	55	0.31	101	PIT		3	TSC	7.35	TSC	TSC	0.68	ZPANM
7	55	2.02	131	PCT	8	M1	TSC	4.22	2H	TEC	0.7	MBALL
7	55	0.45	121	PCT	23	M1	TSC	6.89	2H	TEC	0.7	MBALL
7	55	1.85	131	PCT	11	M1	TSC	4.16	6C	TEC	0.68	CCAGC
7	55	0.42	120	PCT	23	M1	TSC	6.93	6C	TEC	0.68	CCAGC
7	55	9.55	90	PIN		C1	TSC	6.95	TSC	TEC	0.68	CCAGC
7	55	1.72	132	PCT	5	M1	TSC	4.37	6C	TEC	0.7	CCAGC
7	55	0.45	124	PCT	17	M1	TSC	7.3	6C	TEC	0.7	CCAGC
2	56	4.65	24	MAI		3	TEH	0.22	TEH	TSH	0.72	ZPANM
42	56	0.34	131	PIT		3	TSH	9.29	TEH	TSH	0.72	ZPANM
42	56	2.14	153	NQN		1	6H	5.63	6H	TEH	0.7	MBALL
42	56	1.51	145	NQN		M1	6H	5.73	6H	6C	0.61	ZBALL
42	56	2.22	155	NQN		73	6H	5.13	6H	TEH	0.7	CCAGC
2	64	2.5	26	MAI		3	TEH	0.16	TEH	TSH	0.72	ZPANM
2	65	2.3	15	SCI		3F	TEH	0.38	TEH	TSH	0.72	ZPANM
2	65	0.17	133	SAI		3	TEH	11.25	TEH	TSH	0.72	ZPANM
2	66	8.71	27	MAI		3	TEH	0.2	TEH	TSH	0.72	ZPANM
2	67	3.41	31	MAI		3	TEH	0.24	TEH	TSH	0.72	ZPANM
2	71	4.32	16	MAI		3	TEH	0.35	TEH	TSH	0.72	ZPANM
2	71	0.07	47	MAI		3	TEH	4.87	TEH	TSH	0.72	ZPANM
2	72	5.33	22	MAI		3	TEH	0.16	TEH	TSH	0.72	ZPANM
2	73	5	19	MAI		3	TEH	0.17	TEH	TSH	0.72	ZPANM
2	76	2.54	22	MAI		2	TEH	0.17	TEH	TSH	0.7	ZPACC
2	77	4.27	27	MAI		3	TEH	0.27	TEH	TSH	0.72	ZPANM
2	80	4.81	32	MAI		3	TEH	0.18	TEH	TSH	0.72	ZPANM
27	80	0.81	125	PIN		M8	TEH	17.21	TSH	TEH	0.68	CCAGC
2	81	3.34	25	MAI		3	TEH	0.2	TEH	TSH	0.72	ZPANM

2	82	4	32	MAI	3	TEH	0.18	TEH	TSH	0.72	ZPANM
2	83	2.49	21	MAI	3	TEH	0.23	TEH	TSH	0.72	ZPANM
2	90	5.79	28	MAI	3	TEH	0.23	TEH	TSH	0.72	ZPANM

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	BEGT	ENDT	PDIA	PTYPE
8	3	3.81	22	DRI		5	TEH	1.36	TSH	TEH	0.7	CCAGC
9	4	1.94	8	MAI		1	TEH	1.39	TEH	TEH	0.72	ZMAGR
9	4	30.63	21	DRI		37	TEH	1.34	TSH	TEH	0.68	CCAGC
9	4	29.47	15	DRI		28	TEH	1.44	TSH	TEH	0.7	CCAGC
4	6	20.09	13	DRI		28	TEH	1.07	TSH	TEH	0.7	CCAGC
4	7	26.21	14	DRI		48	TEH	1.17	TSH	TEH	0.68	CCAGC
4	7	44.62	24	DRI		39	TEH	1.3	TSH	TEH	0.7	CCAGC
5	7	15.69	7	DRI		37	TEH	1.12	TSH	TEH	0.68	CCAGC
5	7	16.59	10	DRI		39	TEH	1.2	TSH	TEH	0.7	CCAGC
18	7	329.7	123	SPI		C24	2C	0.06	2C	2C	0.7	CCAGC
5	8	19.17	14	DRN		44	TEH	1.2	TSH	TEH	0.68	CCAGC
5	8			DRN			TEH	1.2	TSH	TEH	0.68	CCAGC
5	8	1.27	65	DRN		C13	TEH	2.05	TSH	TEH	0.7	CCAGC
4	9	1.58	2	SAI		1	TEH	1.33	TEH	TEH	0.72	ZMAGR
4	9	11.97	25	DRN		C14	TEH	1.15	TSH	TEH	0.68	CCAGC
4	9	20.18	8	DRN		25	TEH	1.29	TSH	TEH	0.7	CCAGC
6	9	6.65	110	PIN		C9	TSH	3.09	TSH	TEH	0.68	CCAGC
6	9	6.99	138	PIN		13	TSH	3.09	TSH	TEH	0.7	CCAGC
4	10	20.5	12	DRN		48	TEH	1.18	TSH	TEH	0.68	CCAGC
5	11	0.96	17	SAI		1	TEH	1.37	TEH	TEH	0.72	ZMAGR
5	11	12.07	23	DRN		35	TEH	1.09	TSH	TEH	0.68	CCAGC
5	11	9.36	23	DRI		26	TEH	1.2	TSH	TEH	0.68	CCAGC
5	11	8.89	22	DRI		C19	TEH	1.37	TSH	TEH	0.7	CCAGC
4	12	18.91	16	DRI		41	TEH	1.39	TSH	TEH	0.68	CCAGC
4	12	22.42	16	DRI		29	TEH	1.39	TSH	TEH	0.7	CCAGC
3	19	41.47	17	DRI		38	TEH	1.55	TSH	TEH	0.68	CCAGC
3	19	31.98	8	DRI		2	TEH	1.55	TSH	TEH	0.7	CCAGC
3	20	10.96	30	DRI		45	TEH	1.28	TSH	TEH	0.7	CCAGC
3	21	1.21	11	MAI		1	TEH	1.25	TEH	TEH	0.72	ZMAGR
3	21	17.9	17	DRI		9	TEH	0.91	TSH	TEH	0.68	CCAGC
3	21	12.51	19	DRI		37	TEH	1.44	TSH	TEH	0.7	CCAGC
4	21	10.69	26	DRI		M1	TEH	1.24	6H	TEH	0.7	MBALL
4	21	16.4	37	DRI		44	TEH	1.08	TSH	TEH	0.7	CCAGC
4	21	9.19	19	DRI		M1	TEH	1.13	5H	TEH	0.7	CCAGC
3	24	4.32	20	SAI		3	TEH	0.16	TEH	TSH	0.72	ZPANM
3	26	0.43	16	SAI		3	TEH	0.01	TEH	TSH	0.72	ZPACC

5	26	1.3	21	SAI		3	TEH	0.11	TEH	TSH	0.72	ZPACC
2	27	8.33	30	MAI		3	TEH	0.26	TEH	TSH	0.72	ZPACC
2	27	1.85	27	MAI		3	TEH	2.61	TEH	TSH	0.72	ZPACC
2	34	5.96	15	MAI		1	TEH	0.2	TEH	TSH	0.72	ZPACC
2	35	1.52	17	MAI		3	TEH	0.28	TEH	TSH	0.72	ZPACC
3	35	3.61	23	MAI		3	TEH	0.27	TEH	TSH	0.72	ZPACC
2	36	1.21	16	MAI		3	TEH	0.2	TEH	TSH	0.72	ZPACC
3	36	2.55	31	MAI		3	TEH	0.26	TEH	TSH	0.72	ZPACC
4	36	0.67	16	SAI		3	TEH	0.31	TEH	TSH	0.72	ZPACC
4	37	1.48	16	SAI		3	TEH	0.2	TEH	TSH	0.72	ZPACC
3	38	4.58	26	MAI		3	TEH	0.31	TEH	TSH	0.72	ZPACC
3	38	0.63	23	SAI		3	TEH	2.88	TEH	TSH	0.72	ZPACC
4	38	0.97	12	MAI		3	TEH	0.34	TEH	TSH	0.72	ZPACC
5	38	1.3	21	MAI		3	TEH	0.32	TEH	TSH	0.72	ZPACC
6	38	0.71	80	PIT		3	TSC	1.61	TEC	TSC	0.72	ZPANM
6	38	0.3	118	PCT	24	M1	TSC	2.18	2C	TEC	0.7	MBALL
3	39	2.59	20	MAI		3	TEH	0.16	TEH	TSH	0.72	ZPACC
5	39	1.31	15	SAI		3	TEH	0.28	TEH	TSH	0.72	ZPACC
5	39	0.84	35	MAI		3	TEH	2.87	TEH	TSH	0.72	ZPACC
2	40	1.91	16	MAI		2	TEH	0.17	TEH	TSH	0.7	ZPAMC
3	40	2.28	36	MAI		3	TEH	0.28	TEH	TSH	0.72	ZPACC
4	40	0.85	9	SAI		3	TEH	0.43	TEH	TSH	0.72	ZPACC
45	40	3.71	47	DRN		27	TEH	1.08	TSH	TEH	0.7	CCAGC
3	41	6.03	25	MAI		2	TEH	0.17	TEH	TSH	0.7	ZPAMC
43	41	1.85	30	SAI		3	TEH	0.29	TEH	TSH	0.72	ZPANM
43	41	8.01	100	PIN		35	TSC	9.11	TSC	TEC	0.7	CCAGC
44	41	20.17	97	PIN		37	TSH	4.25	TSH	TEH	0.7	CCAGC
45	41	48.97	68	SPI		C7	1H	0	1H	1H	0.68	CCAGC
45	41	233.2	59	SPI		C10	1H	0	1H	1H	0.7	CCAGC
3	42	3.24	23	MAI		2	TEH	0.22	TEH	TSH	0.7	ZPAMC
45	42	4.92	32	SCI		3F	TEH	0.16	TEH	TSH	0.72	ZPANM
45	42	21.96	13	DRI		M1	TEH	2.22	TEC	TEH	0.7	MBALL
45	42	12.38	45	DRI		44	TEH	1.39	TSH	TEH	0.68	CCAGC
45	42	20.82	14	DRI		M1	TEH	2.28	6H	TEH	0.68	CCAGC
45	43	5.66	31	SCI		3F	TEH	0.16	TEH	TSH	0.72	ZPANM
44	44	1.2	22	MAI		3	TEH	1.54	TEH	TSH	0.72	ZPANM
44	44	1.3	27	MAI		2	TEH	1.4	TEH	TEH	0.72	ZMAGR

44	44	52.25	14	DRI	6	TEH	0.89	TSH	TEH	0.7	CCAGC
44	44	41.86	15	DRI	30	TEH	1.48	TSH	TEH	0.7	CCAGC
33	45	2.43	24	MAI	3	TEH	0.21	TEH	TSH	0.72	ZPANM
33	45	0.67	16	SAI	3	TEH	3.02	TEH	TSH	0.72	ZPANM
44	45	17.9	4	DRI	M1	TEH	1.16	TEC	TEH	0.7	MBALL
44	45	20.67	7	DRI	M1	TEH	1.13	6H	TEH	0.68	CCAGC
44	45	23.51	15	DRI	39	TEH	1.49	TSH	TEH	0.68	CCAGC
44	45	0.54	139	NQN	M1	TSH	10.39	6H	TEH	0.68	CCAGC
44	46	27.89	13	DRI	M1	TEH	1.18	TEC	TEH	0.7	MBALL
44	46	202.2	30	DRI	C15	TEH	1.33	TSH	TEH	0.7	CCAGC
44	46	7.2	20	DRI	M1	TEH	1.18	2H	TEH	0.7	CCAGC
45	46	11.14	13	DRI	M1	TEH	1.54	TEC	TEH	0.7	MBALL
45	46	116.3	8	DRI	6	TEH	1.26	TSH	TEH	0.7	CCAGC
45	46	4.84	18	DRI	M1	TEH	1.35	2H	TEH	0.7	CCAGC
45	48	18.65	8	DRI	M1	TEH	1.2	TSH	TEH	0.7	MBALL
45	48	20.73	5	DRI	M1	TEH	1.33	6H	TEH	0.64	CCAGC
45	48	24	5	DRI	M1	TEH	1.33	TSH	TEH	0.68	CCAGC
45	48	26.9	18	DRI	30	TEH	1.2	TSH	TEH	0.7	CCAGC
45	48	23.71	6	DRI	M1	TEH	1.33	TSH	TEH	0.7	CCAGC
45	49	3.2	15	DRN	M1	TEH	1.5	TSH	TEH	0.7	MBALL
45	49	29.82	4	DRN	M1	TEH	1.56	6H	TEH	0.64	CCAGC
45	49	17.4	7	DRN	M1	TEH	1.5	TSH	TEH	0.68	CCAGC
45	49	33.37	15	DRN	28	TEH	1.5	TSH	TEH	0.7	CCAGC
45	49	3.49	8	DRN	M1	TEH	1.57	TSH	TEH	0.7	CCAGC
42	50	33.5	31	DRI	38	TEH	1.01	TSH	TEH	0.7	CCAGC
3	51	1.46	21	SAI	2	TEH	0.16	TEH	TSH	0.7	ZPAMC
41	51	65.37	18	DRI	28	TEH	0.88	TSH	TEH	0.7	CCAGC
41	51	28.87	14	DRI	42	TEH	1.38	TSH	TEH	0.7	CCAGC
43	51	16.26	5	DRI	M1	TEH	1.13	TSH	TEH	0.7	MBALL
43	51	20.24	5	DRI	M1	TEH	1.61	2H	TEH	0.64	CCAGC
43	51	22.83	4	DRI	M1	TEH	1.21	6H	TEH	0.68	CCAGC
43	51	19.47	11	DRI	48	TEH	1.45	TSH	TEH	0.68	CCAGC
44	51	36.58	11	DRI	M1	TEH	1.26	4H	TEH	0.7	MBALL
44	51	30.62	8	DRI	M1	TEH	1.29	6H	TEH	0.64	CCAGC
44	51	37.87	9	DRI	M1	TEH	1.17	5C	TEH	0.68	CCAGC
44	51	29.94	7	DRI	39	TEH	1.35	TSH	TEH	0.68	CCAGC
3	52	7.1	23	DRI	M1	TEH	1.2	6H	TEH	0.64	CCAGC

3	52	6.36	24	DRI		M1	TEH	1.2	1H	TEH	0.68	CCAGC
3	52	21.01	23	DRI		20	TEH	1.33	TSH	TEH	0.68	CCAGC
3	52	18.52	190	DRI		M1	TEH	1.2	TSH	TEH	0.7	CCAGC
3	52	13.97	21	DRI		28	TEH	1.25	TSH	TEH	0.7	CCAGC
43	52	30.65	22	DRI		43	TEH	1.05	TSH	TEH	0.7	CCAGC
43	52	23.24	17	DRI		30	TEH	1.12	TSH	TEH	0.7	CCAGC
44	52	0.15	114	PIT		3	TSH	13.11	TSH	TSH	0.68	ZPANM
44	52	44.81	12	DRI		M1	TEH	1.4	6H	TEH	0.64	CCAGC
44	52	0.31	109	PCT	26	M1	TSH	13.65	6H	TEH	0.64	CCAGC
44	52	20.44	8	DRI		M1	TEH	1.4	TSH	TEH	0.68	CCAGC
44	52	0.55	129	PCT	13	M1	TSH	13.64	TSH	TEH	0.68	CCAGC
44	52	20.26	8	DRI		M1	TEH	1.4	TSH	TEH	0.7	CCAGC
44	52	31.67	18	DRI		42	TEH	1.4	TSH	TEH	0.7	CCAGC
44	52	0.45	126	PCT	20	M1	TSH	13.54	TSH	TEH	0.7	CCAGC
43	53	23.93	17	DRI		42	TEH	1.36	TSH	TEH	0.7	CCAGC
3	54	2.08	18	SAI		2	TEH	0.16	TEH	TSH	0.7	ZPAMC
43	54	52.44	19	DRI		29	TEH	1.43	TSH	TEH	0.7	CCAGC
2	55	6.46	34	MAI		2	TEH	0.23	TEH	TSH	0.7	ZPAMC
2	55	0.71	28	MCI		2F	TEH	1.22	TEH	TSH	0.7	ZPAMC
2	56	15.02	15	DRI		M1	TEH	1.63	2H	TEH	0.64	CCAGC
2	56	14.29	10	DRI		M1	TEH	1.21	6H	TEH	0.64	CCAGC
2	56	21.51	12	DRI		M1	TEH	1.22	1H	TEH	0.68	CCAGC
2	56	35.5	22	DRI		42	TEH	1.12	TSH	TEH	0.68	CCAGC
2	56	15.97	19	DRI		M1	TEH	1.22	1H	TEH	0.68	CCAGC
2	56	4.95	22	DRI		C15	TEH	1.33	TSH	TEH	0.7	CCAGC
2	56	16.39	14	DRI		M1	TEH	1.37	1H	TEH	0.7	CCAGC
2	57	5.36	30	MAI		2	TEH	0.13	TEH	TSH	0.7	ZPAMC
3	57	2.67	21	MAI		2	TEH	0.17	TEH	TSH	0.7	ZPAMC
35	58	0.32	28	SAI		5	TEH	3.39	TEH	TEH	0.72	ZMAGR
35	58	8.66	32	DRI		C19	TEH	1.07	TSH	TEH	0.7	CCAGC
35	58	14.12	38	DRI		C19	TEH	2.78	TSH	TEH	0.7	CCAGC
3	59	28.48	24	DRI		46	TEH	1.11	TSH	TEH	0.7	CCAGC
42	59	28.89	7	DRI		M1	TEH	1.29	6H	TEH	0.68	CCAGC
42	59	36.58	10	DRI		24	TEH	1.42	TSH	TEH	0.68	CCAGC
42	59	28.59	7	DRI		M1	TEH	1.28	TEC	TEH	0.7	MBALL
3	60	43.37	17	DRI		26	TEH	0.95	TSH	TEH	0.7	CCAGC
34	61	0.26	11	MAI		1	TEH	3.71	TEH	TEH	0.72	ZMAGR

34	61	36.82	16	DRI	31	TEH	1.1	TSH	TEH	0.7	CCAGC
3	62	4.46	27	MAI	2	TEH	0.16	TEH	TSH	0.7	ZPAMC
5	62	0.52	16	MAI	2	TEH	1.3	TEH	TSH	0.7	ZPAMC
3	63	0.64	13	SAI	2	TEH	1.23	TEH	TEH	0.72	ZMAGR
3	63	13.09	16	DRI	28	TEH	1.19	TSH	TEH	0.7	CCAGC
3	63	16.48	12	DRI	27	TEH	1.21	TSH	TEH	0.7	CCAGC
3	64	2.08	25	MAI	2	TEH	0.18	TEH	TSH	0.7	ZPAMC
36	64	5.99	21	SAI	3	TEH	0.35	TEH	TSH	0.72	ZPANM
2	65	3.17	22	MAI	2	TEH	0.14	TEH	TSH	0.7	ZPAMC
35	65	2.82	19	MAI	2	TEH	0.18	TEH	TEH	0.72	ZMAGR
35	65	7.66	21	DRI	31	TEH	1	TSH	TEH	0.7	CCAGC
37	65	29.15	20	DRI	29	TEH	1.3	TSH	TEH	0.68	CCAGC
37	65	43.79	12	DRI	M1	TEH	1.39	1H	TEH	0.68	CCAGC
37	65	46.09	15	DRI	M1	TEH	1.3	TEH	TEC	0.7	CCAGC
37	65	14.04	28	DRI	39	TEH	1.3	TSH	TEH	0.7	CCAGC
3	66	69.69	17	DRI	M1	TEH	1.19	6H	TEH	0.7	MBALL
3	66	24.91	13	DRI	M1	TEH	1.29	5H	TEH	0.7	CCAGC
3	66	41.57	23	DRI	32	TEH	1.36	TSH	TEH	0.7	CCAGC
7	66	0.72	10	MAI	2	TEH	1.42	TEH	TEH	0.72	ZMAGR
7	66	26.66	10	DRI	32	TEH	1.16	TSH	TEH	0.7	CCAGC
3	67	2.39	24	MAI	2	TEH	0.16	TEH	TSH	0.7	ZPAMC
35	67	5.7	22	MAI	3	TEH	0.16	TEH	TSH	0.72	ZPANM
3	68	9.2	11	DRN	51	TEH	1.74	TSH	TEH	0.7	CCAGC
36	68	7.35	109	PIN	C1	TSC	1.58	TSC	TEC	0.7	CCAGC
37	68	0.71	22	MAI	3	TEH	0.22	TEH	TSH	0.72	ZPANM
37	68	4.81	103	PIN	C2	TSC	8.79	TSC	TEC	0.7	CCAGC
2	69	2.17	14	SAI	2	TEH	0.16	TEH	TSH	0.7	ZPAMC
36	69	0.47	20	SAI	3	TEH	0.39	TEH	TSH	0.72	ZPANM
2	70	2.69	21	MAI	2	TEH	0.23	TEH	TSH	0.7	ZPAMC
2	70	0.22	97	SAI	2	TEH	7.47	TEH	TSH	0.7	ZPAMC
3	70	0.13	124	SAI	2	TEH	6.58	TEH	TSH	0.7	ZPAMC
3	70	0.56	10	MAI	2	TEH	1.39	TEH	TEH	0.72	ZMAGR
3	70	34.23	15	DRI	47	TEH	1.46	TSH	TEH	0.7	CCAGC
4	70	0.17	112	MAI	2	TEH	9.49	TEH	TSH	0.7	ZPAMC
2	71	3.92	18	MAI	2	TEH	0.15	TEH	TSH	0.7	ZPAMC
3	71	7.41	29	SAI	2	TEH	0.17	TEH	TSH	0.7	ZPAMC
2	72	5.26	22	MAI	2	TEH	0.19	TEH	TSH	0.7	ZPAMC

3	72	4.22	23	MAI
33	72	3.07	28	MAI
34	72	0.9	23	SAI
35	72	0.65	21	MAI
2	73	7.35	26	MAI
31	73	25.08	11	DRI
35	73	1	19	MAI
31	74	0.83	16	SCI
33	74	0.77	15	SCI
36	74	0.58	20	SCI
31	75	0.78	12	MCI
34	75	0.27	62	NQN
2	76	0.26	118	MAI
3	76	5.68	24	MAI
32	77	2.37	16	MAI
32	77	18.76	18	DRI
2	80	4.82	23	MAI
27	80	3.68	20	SAI
28	81	18.15	4	DRN
28	81	21.06	6	DRN
2	82	4.63	21	MAI
29	82	28.5	6	DRN
29	82	26.89	13	DRN
3	83	4.79	27	MAI
3	83	0.62	23	MAI
4	83	2.65	21	MAI
4	83	1.5	16	MAI
3	84	6.19	19	MAI
4	84	1.01	19	SAI
5	84	0.7	19	SAI
3	85	2.28	21	MAI
4	85	0.99	16	SAI
4	85	1.46	19	MAI
23	85	10.5	70	SPI
3	86	3.12	25	MAI
5	86	1.5	30	MAI
13	86	1.22	26	SAI

2	TEH	0.18	TEH	TSH	0.7	ZPAMC
3	TEH	0.2	TEH	TSH	0.72	ZPANM
3	TEH	0.39	TEH	TSH	0.72	ZPANM
3	TEH	0.3	TEH	TSH	0.72	ZPANM
2	TEH	0.12	TEH	TSH	0.7	ZPAMC
44	TEH	1.18	TSH	TEH	0.7	CCAGC
3	TEH	0.22	TEH	TSH	0.72	ZPANM
3F	TEH	1.35	TEH	TSH	0.72	ZPANM
3F	TEH	1.4	TEH	TSH	0.72	ZPANM
3F	TEH	1.36	TEH	TSH	0.72	ZPANM
3F	TEH	1.54	TEH	TSH	0.72	ZPANM
M1	TSH	10.84	4H	TEH	0.68	CCAGC
2	TEH	7.1	TEH	TSH	0.7	ZPAMC
2	TEH	0.15	TEH	TSH	0.7	ZPAMC
4	TEH	1.43	TEH	TEH	0.72	ZMAGR
44	TEH	1.34	TSH	TEH	0.7	CCAGC
2	TEH	0.14	TEH	TSH	0.7	ZPAMC
3	TEH	0.15	TEH	TSH	0.7	ZPAMC
M1	TEH	1.23	2C	TEH	0.7	MBALL
M1	TEH	1.54	6H	TEH	0.68	CCAGC
2	TEH	0.16	TEH	TSH	0.7	ZPAMC
M1	TEH	1.37	6H	TEH	0.68	CCAGC
M1	TEH	1.33	2C	TEH	0.7	MBALL
2	TEH	0.16	TEH	TSH	0.7	ZPAMC
2	TEH	1.01	TEH	TSH	0.7	ZPAMC
2	TEH	0.14	TEH	TSH	0.7	ZPAMC
2	TEH	1.17	TEH	TSH	0.7	ZPAMC
2	TEH	0.14	TEH	TSH	0.7	ZPAMC
2	TEH	0.27	TEH	TSH	0.7	ZPAMC
2	TEH	0.16	TEH	TSH	0.7	ZPAMC
2	TEH	0.17	TEH	TSH	0.7	ZPAMC
2	TEH	0.18	TEH	TSH	0.7	ZPAMC
2	TEH	1.22	TEH	TSH	0.7	ZPAMC
C4	6H	0.02	6H	6H	0.7	CCAGC
2	TEH	0.16	TEH	TSH	0.7	ZPAMC
2	TEH	0.28	TEH	TSH	0.7	ZPAMC
2	TEH	0.32	TEH	TSH	0.7	ZPAMC

14	86	1.13	30	SAI	2	TEH	0.3	TEH	TSH	0.7	ZPAMC
15	86	0.88	45	SCI	2F	TEH	0.35	TEH	TSH	0.7	ZPAMC
19	86	2.15	17	MAI	2	TEH	0.32	TEH	TSH	0.7	ZPAMC
22	86	0.37	16	SAI	2	TEH	1.33	TEH	TEH	0.72	ZMAGR
22	86	16.57	5	DRI	M1	TEH	1.28	5H	TEH	0.64	CCAGC
22	86	19.2	7	DRI	M1	TEH	1.37	6H	TEH	0.68	CCAGC
22	86	29.73	4	DRI	M1	TEH	1.1	3H	TEH	0.7	CCAGC
3	87	3.61	26	MAI	2	TEH	0.11	TEH	TSH	0.7	ZPAMC
4	87	4.36	206	MAI	2	TEH	0.16	TEH	TSH	0.7	ZPAMC
3	88	6.39	29	MAI	2	TEH	0.08	TEH	TSH	0.7	ZPAMC
3	88	0.14	129	SAI	2	TSH	11.29	TEH	TSH	0.7	ZPAMC
3	88	3.58	24	MAI	2	TEH	0.13	TEH	TSH	0.7	ZPAMC
3	88	0.13	116	SAI	2	TSH	9.84	TEH	TSH	0.7	ZPAMC
3	89	4.07	24	MAI	2	TEH	0.16	TEH	TSH	0.7	ZPAMC
3	89	0.82	13	SAI	2	TEH	1.59	TEH	TSH	0.7	ZPAMC
2	91	3.03	20	MAI	2	TEH	0.17	TEH	TSH	0.7	ZPAMC
2	92	2.87	17	SAI	2	TEH	0.2	TEH	TSH	0.7	ZPAMC

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ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	BEGT	ENDT	PDIA	PTYPE
4	8	5.19	20	SAI		3	TEH	0.13	TEH	TSH	0.72	ZPANM
4	9	1	38	MAI		3	TEH	0.16	TEH	TSH	0.72	ZPANM
4	11	4.77	23	SAI		3	TEH	0.21	TEH	TSH	0.72	ZPANM
4	12	3.39	11	SAI		3	TEH	0.07	TEH	TSH	0.72	ZPANM
4	13	6.3	24	SAI		3	TEH	0.21	TEH	TSH	0.72	ZPANM
4	14	2.81	17	MAI		3	TEH	0.13	TEH	TSH	0.72	ZPANM
3	15	6.9	17	SAI		3	TEH	0.13	TEH	TSH	0.72	ZPANM
4	15	1.6	36	SAI		3	TEH	0.13	TEH	TSH	0.72	ZPANM
4	16	4.46	27	SAI		2	TEH	0.26	TEH	TSH	0.72	ZPANM
3	17	2.87	17	SAI		3	TEH	0.09	TEH	TSH	0.72	ZPANM
3	17	2.94	13	SAI		3	TEH	0.13	TEH	TSH	0.72	ZPANM
4	17	5.56	23	SAI		3	TEH	0.12	TEH	TSH	0.72	ZPANM
3	18	4.5	18	SAI		3	TEH	0.13	TEH	TSH	0.72	ZPANM
6	18	1.5	130	NQN		M1	6H	3.26	6H	TEC	0.64	CCAGC
6	18	1.07	134	NQN		M1	6H	3.33	6C	5H	0.7	MBALL
3	19	5.57	22	SAI		3	TEH	0.17	TEH	TSH	0.72	ZPANM
3	19	5.65	21	SAI		3	TEH	0.05	TEH	TSH	0.72	ZPANM
3	20	4.84	21	SAI		3	TEH	0.08	TEH	TSH	0.72	ZPANM
3	20	5.03	18	SAI		3	TEH	0.2	TEH	TSH	0.72	ZPANM
3	20	0.26	38	SCI		3F	TEH	2.92	TEH	TSH	0.72	ZPANM
3	21	4.64	20	SAI		3	TEH	0.14	TEH	TSH	0.72	ZPANM
3	22	5.32	25	SAI		3	TEH	0.14	TEH	TSH	0.72	ZPANM
3	22	0.65	20	SAI		3	TEH	3.7	TEH	TSH	0.72	ZPANM
4	22	5.57	20	SAI		3	TEH	0.16	TEH	TSH	0.72	ZPANM
5	22	2.5	15	SAI		3	TEH	0.14	TEH	TSH	0.72	ZPANM
38	22	0.34	23	SAI		3	TEH	1.92	TEH	TSH	0.72	ZPANM
4	24	2.91	16	MAI		3	TEH	0.11	TEH	TSH	0.72	ZPANM
5	24	4.71	30	MAI		3	TEH	0.12	TEH	TSH	0.72	ZPANM
3	25	2.04	24	SAI		3	TEH	0.21	TEH	TSH	0.72	ZPANM
3	25	0.51	81	PIT		2	TSH	0.25	TEH	TSH	0.72	ZPANM
4	25	7.84	20	SAI		3	TEH	0.15	TEH	TSH	0.72	ZPANM
40	26	1.89	0	PCT	26	M2	AV3	0	6H	TEC	0.64	CCAGC
3	29	0.73	57	SAI		3	TEH	0.17	TEH	TSH	0.72	ZPANM
4	30	2.72	25	SAI		3	TEH	0.18	TEH	TSH	0.72	ZPANM
5	37	4.37	23	SAI		3	TEH	0.07	TEH	TSH	0.72	ZPANM
6	38	0.15	111	PIT		3	TSC	5.13	TSC	TSC	0.68	ZPANM

6	38	4.17	99	PIN		C4	TSC	4.95	TSC	TEC	0.7	CCAGC
6	38	0.24	108	PCT	38	M1	TSC	4.97	6C	TEC	0.7	CCAGC
6	39	0.69	110	PIT		3	TSC	1.71	TEC	TSC	0.72	ZPANM
6	39	0.78	118	PCT	24	M1	TSC	2.16	6C	TEC	0.7	CCAGC
44	39	10.24	106	TSI		39	TSH	0.06	TSH	TEH	0.68	CCAGC
35	40	2.11	0	PCT	26	M2	AV1	0	TEC	TEH	0.7	CCAGC
35	40	5.12	0	PCT	37	M2	AV3	0	TEC	TEH	0.7	CCAGC
15	42	0.17	17	SAI		3	TEH	1.41	TEH	TSH	0.72	ZPANM
16	42	2.38	14	SAI		2	TEH	2.62	TEH	TEH	0.72	ZMAGR
16	42	38.07	6	DRI		M1	TEH	2.28	TEH	TEC	0.7	MBALL
16	42	80.16	28	DRI		C21	TEH	2.09	TSH	TEH	0.7	CCAGC
17	42	1.46	26	MAI		3	TEH	2.66	TEH	TSH	0.72	ZPANM
20	42	1.63	17	MAI		3	TEH	2.83	TEH	TSH	0.72	ZPANM
21	42	0.91	27	MAI		2	TEH	2.82	TEH	TSH	0.7	ZPACC
21	42	0.28	68	PIT		3	TSC	3.02	TEC	TSC	0.72	ZPANM
21	42	1.49	17	MAI		3	TEH	2.75	TEH	TSH	0.72	ZPANM
21	42	1.33	151	PCT	24	M1	TSC	3.23	TEC	TEH	0.61	ZBALL
21	42	0.14	94	VOL		3	TSC	3.28	TSC	TSC	0.68	ZPANM
21	42	1.08	107	PCT	34	M1	TSC	3.35	2C	TEC	0.64	CCAGC
21	42	0.98	119	PCT	13	M1	TSC	3.29	TEC	TEH	0.68	CCAGC
21	42	1.05	125	PCT	12	M1	TSC	3.31	TEH	TEC	0.7	MBALL
3	43	1.28	23	MAI		3	TEH	0.09	TEH	TSH	0.72	ZPANM
15	43	0.3	27	SAI		3	TEH	1.41	TEH	TSH	0.72	ZPANM
44	49	0.34	113	VOL		3	TSC	4.08	TSC	TSC	0.68	ZPANM
44	49	0.47	110	PCT	42	M1	TSC	3.85	TEC	TEH	0.7	CCAGC
44	49	5.23	105	PI		C10	TSC	4.16	TSC	TEC	0.7	CCAGC
45	50	0.27	102	PIT		3	TSC	11.44	TSC	1C	0.68	ZPANM
45	50	0.41	120	PCT	3	M1	TSC	11.21	6H	TEC	0.7	MBALL
45	50	0.29	109	PCT	30	M1	TSC	11.22	TEC	TEH	0.68	CCAGC
45	51	0.13	94	PIT		3	TSH	-0.08	TEH	TSH	0.7	ZPANM
45	51	0.19	71	PIT		3	TSH	0.4	TEH	TSH	0.7	ZPANM
45	51	0.21	118	PIT		3	TSH	-0.05	TSH	TSH	0.68	ZPANM
45	51	0.17	107	PIT		3	TSH	0.47	TSH	TSH	0.68	ZPANM
45	51	0.33	80	PCT	64	M1	TSH	0.63	6C	TEH	0.68	CCAGC
45	51	8.4	83	TSI		C22	TSH	0.78	TSH	TEH	0.68	CCAGC
45	51	96.62	70	TSI		C23	TSH	0.06	TSH	TEH	0.7	CCAGC
45	51	192.7	86	PI		C23	TSH	0.51	TSH	TEH	0.7	CCAGC

45	51	0.59	69	PCT	78	M1	TSH	0.67	3H	TEH	0.7	CCAGC
33	52	1.52	23	SAI		3	TEH	0.14	TEH	TSH	0.7	ZPANM
42	55	207.1	109	PIN		C11	TSH	9.88	TSH	TEH	0.7	CCAGC
40	61	11.01	103	PIN		C6	TSC	13	TSC	TEC	0.7	CCAGC
2	64	7.78	34	DRI		28	TEH	2.79	TSH	TEH	0.64	CCAGC
2	65	7.08	41	DRI		27	TEH	2.29	TSH	TEH	0.7	CCAGC
2	69	1.74	29	SAI		1	6H	5.93	6H	6C	0.62	ZPUHF
2	69	0.7	26	MAI		1	6H	6.37	6H	6C	0.62	ZPUHF
2	69	0.6	29	SAI		1	6H	7.15	6H	6C	0.62	ZPUHF
2	69	2.67	24	SAI		1	6H	5.92	6H	6C	0.62	ZPUMB
2	69	1.19	22	SAI		1	6H	7.41	6H	6C	0.62	ZPUMB
2	69	1.57	28	SAI		1	6H	5.97	6H	6C	0.62	ZPUMB
2	69	0.67	21	SAI		1	6H	7.22	6H	6C	0.62	ZPUMB
2	71	3.62	25	SAI		3	6H	6.12	6H	6C	0.62	ZPUHF
3	71	1.22	21	MAI		3	TEC	1.86	TEC	TSC	0.72	ZPANM
3	71	2.14	24	MCI		3F	TEC	1.95	TEC	TSC	0.72	ZPANM
3	71	34.93	15	DRI		6	TEC	2.15	TSC	TEC	0.68	CCAGC
3	71	19.39	15	DRI		9	TEC	2.55	TSC	TEC	0.7	CCAGC
2	72	1.04	29	BDI		1	6H	5.94	6C	6H	0.62	ZPUMB
2	72	2	20	SAI		1	6C	5.79	6C	6H	0.62	ZPUMB
2	74	0.85	18	SAI		1	6H	6.92	6H	6C	0.62	ZPUHF