

AUDIT OF THE RESULTS OF THE PRESIDENTIAL RECALL REFERENDUM IN VENEZUELA

FINAL REPORT

26/AUGUST/2004

1. Objective

The following questions are expected to be answered by this audit of the manual recount of voting receipts (*comprobantes de votación*) in the ballot boxes:

Does the electronic result transmitted by the voting machines (shown on the respective tally sheets) coincide with the manual recount of the receipts deposited in the respective ballot boxes, or not?

Is there a discernable bias in the discrepancies found in favor of either the “Yes” votes or the “No” votes?

To that end, the audit compared the results obtained by a manual recount of the receipts for the YES and NO options with the results that had been generated by the voting machines and then transmitted to the National Electoral Council (CNE) totalization system. In all, 16 observers from The Carter Center and 20 observers from the Organization of American States observed as CNE auditors sorted and counted more than 135,000 voting receipts. International observers contributed 1,700 hours of work over three days and CNE auditors, Comando Maisanta witnesses, and another group of European observers also put in a myriad of hours to complete the task at hand.

Both the Comando Maisanta and Coordinadora Democrática were invited to witness the audit, however, the latter declined participation.

2. Sample

In the CNE meeting room at 7 p.m. on Aug. 18, 2004, a working sample of 150 polling stations (*mesas*) was selected, along with an additional 50 stations, thus producing a total sample of 200 polling stations. The purpose of these 50 additional stations was to make it possible to complete the sample, should the margin of error or reliability be affected by the absence of any of the first 150, due to the inability to find a ballot box or because the respective electoral material needed within any of the boxes was incomplete or damaged.

The polling stations were selected as a simple random sample from 8,141 automated polling stations throughout the country.

The sample was generated by CNE staff using a simple software program with the following characteristics and procedures:

- The program was the same as that used to obtain the sample generated the day of the referendum (to conduct the audit immediately [*en caliente*]), modified to work at the polling station rather than voting machine level.
- The program was a Delphi (Pascal programming language) application. The international observers were given a copy of the executable file, the source code, the input file (i.e. list of 8,141 automated polling stations), and the output file (i.e. the random list of 200 automated polling stations).
- The sample was generated during a public ceremony broadcast live on television by Channel 8 and in the presence of Comando Maisanta representatives and international observers from The Carter Center and the OAS, and another group of European observers. The Coordinadora Democrática did not attend this ceremony.
- There were several test runs of the program conducted prior to the generation of the sample, and observers checked to see that the output file was deleted.

The sample produced the following distribution:

- 150 polling stations and 359 voting machines distributed over 21 states.

STATE	STATIONS	STATE	STATIONS	STATE	STATIONS
CAPITAL	16	ARAGUA	10	CARABOBO	11
ANZOATEGUI	9	BARINAS	5	COJEDES	1
GUARICO	4	LARA	11	MERIDA	6
MIRANDA	18	MONAGAS	5	PORTUGUESA	1
SUCRE	4	TACHIRA	8	TRUJILLO	4
YARACUY	4	ZULIA	18	VARGAS	3
APURE	2	BOLIVAR	6	FALCON	4

The margin of error in this sample was 3 percent, with a level of confidence of 95 percent.

3. Description of the procedures used to audit the boxes containing the voting receipts

3.1 Audit team: The audit team that traveled to each state consisted of one or two international observers from The Carter Center and/or the OAS.

3.2 Installation of the Audit Team: The international observers arrived at the military garrisons of the respective state guarding the electoral material used in the presidential recall referendum of Aug. 15, 2004 during the afternoon of Aug. 18, 2004 and waited to be told what polling stations had been chosen at random. The CUFAN [Armed Forces Joint Command] showed them to a locked room containing the boxes holding the voting receipts. In some states the recall referendum material was kept in several garrisons, not just one. In these cases, the international observers accompanied the military to pick up many, though, not all, of these boxes and received the other boxes at the principal garrison.

3.3 Dissemination of the Sample: Inside the CNE, Carter Center technical staff drew up a list, ordered by state, of the 200 stations in the sample. This list contained the following information: state name, municipality, parish and voting center, voting center code, and polling station number. This information was immediately conveyed to the international observers by cell phone. Later, the international observers were also sent the list of stations corresponding to each state by e-mail or fax.

3.4 Custody and transportation: Plan República [the military operation in charge of security for the referendum] guarded and immediately transported the randomly selected boxes to the Aerocay vault in Fila de Mariches. The OAS and/or Carter Center observers accompanied the boxes in the military helicopters and planes and CUFAN trucks and continued to watch over them throughout the nights of Aug. 18, 19, and 20 (i.e. during the transportation phase and during the actual audit in Fila de Mariches). In cases where the voting receipts from one station had been deposited in more than one box, all the boxes pertaining to that station were sought and transported. Moreover, in some cases in which the boxes were not correctly labeled, all the boxes corresponding to the voting center were transported to ensure all the necessary voting receipts could be found. When boxes of a polling station were not found, this fact was recorded on the audit form.

3.4 Inspection of the boxes: Each box was physically checked to see whether:

1. The material used to seal the box was intact or whether there were signs that it had been taken off and then replaced.
2. There were cracks or holes through which votes might have been extracted or inserted.

If a box was defective in regard to sealing, cracks, or holes, all the boxes of that polling station were excluded from the audit and a note to that effect recorded in the minutes.

3.5 The audit procedure

3.5.1 Formation of teams: The CNE formed 21 audit teams, comprised of two people, a supervisor, one or two international observers, and a “No” vote witness.

3.5.2 Opening of the box: CUFAN personnel opened the top end of each box by cutting the adhesive tape joining the two flaps.

3.5.3 Preparation for sorting: Six baskets were placed on a table, marked as follows:

- a. **Voting machine 1, YES option:** for voting receipts corresponding to the polling station’s No. 1 voting machine, with a YES vote.
- b. **Voting machine 1, NO option:** for voting receipts corresponding to the polling station’s No. 1 voting machine, with a NO vote.
- c. **Voting machine 2, YES option**
- d. **Voting machine 2, NO option**
- e. **Voting machine 3, YES option**
- f. **Voting machine 3, NO option**

3.5.4 Sorting of the votes:

- a. The auditor designated by the CNE took the voting receipts out of the box and placed them on the worktable.
- b. For each voting receipt, the auditor checked the number of the machine and read out loud the station it corresponded to and the vote it contained (i.e. YES or NO).
- c. The witnesses and observers were able to see each voting receipt and if there was any disagreement they requested reconsideration by the auditor designated by the CNE.
- d. The auditor designated by the CNE placed the voting receipt in the appropriate basket. If the witnesses or observers expressed disagreement, discrepancies were noted in the minutes.

- e. Whenever a box contained _____ receipts from three machines, all the receipts were first sorted according to machine, then by YES or NO vote and then were counted. A check then was made to see whether a voter had placed his or her voting receipt in another box. This last exercise cleared up some of the apparently major discrepancies encountered.
- f. Each of the two auditors performed an independent count of all the voting receipts, providing a double check of the process.

3.5.5 Records in the minutes: The CNE auditor recorded the following information in the minutes:

- a. Date and time the minutes were drawn up
- b. Name of the garrison
- c. Name of the state
- d. Name of the municipality
- e. Name of the parish
- f. Code and name of the voting center
- g. Number of the polling station
- h. Number of votes counted in each basket
- i. Observations and discrepancies
- j. All those present signed the minutes, indicating their name, and I.D. (*cédula*) or passport number
- k. The CNE auditor kept the original of the minutes. One photocopy was made for each witness and each international observer.

3.5.6 Closing of boxes: Once the audit of a box was finished, the contents of all the baskets were placed in the original box, along with the electoral material that had been taken out of it. The CUFAN sealed the box with new tape and glued a copy of the audit minutes onto the top of the box.

3.5.7 Breaks and pauses: Members of the audit team were able to leave the room temporarily to eat, go to the lavatory, and to rest. The team members could decide whether to continue or suspend the audit when one member temporarily left the room, but under no circumstances could the audit take place without the presence of the auditor designated by the CNE or of the international observer.

4. The calculation procedure 1

- a) First, discrepancies were calculated for each voting machine between “the number of votes transmitted” and “the manual recount of the paper receipts” (which had previously been sorted) for both the YES and the NO options. We added the positive and negative discrepancies to obtain the direction and magnitude of the final effect of the discrepancy.
- b) A positive discrepancy indicates the result transmitted exceeded the number of receipts counted. These discrepancies may be caused by numerous factors, such as a voter failing to deposit his or her voting receipt in the box, placing it in the wrong box, receipts being lost during transportation, etc.
- c) It was agreed to tolerate a discrepancy of less than five percent between votes transmitted and those counted manually. Any discrepancy more than five percent would indicate major errors in the process.
- d) A calculation then was made of the average discrepancy of votes per voting machine. (This is the ratio of the sum of vote discrepancies for each of the two options and the total number of machines in the sample. 2)
- e) The percentage discrepancy vis-à-vis average votes per machine was also calculated.³ This was done by dividing the average discrepancy of votes per voting machine calculated in point d) by the 406 average of votes.
- f) The average discrepancy of the machines in the sample then was extrapolated to the total number of machines⁴, to obtain the total possible discrepancy of votes for both of the options.
- g) Finally, a calculation was made of the incidence of total discrepancy of votes for each option in relation to the total vote nationwide.
- h) Given the highly stable nature of the results obtained, the polling stations that could not be found or recounted did not affect the degree of reliability or the

¹ For various reasons it was not possible to clarify the cases of three polling stations still showing a “high” discrepancy – unlike other instances in which more in-depth investigation in Mariches revealed that the voting receipts had been placed in the boxes corresponding to adjoining stations. The three polling stations for which explanations are still pending are:

Center	Station	Exercise book (<i>cuaderno</i>)	Comment
13651	3	3	Bolívar, NO1: 31 discrepancies; NO2: 28 discrepancies; NO3: 29 discrepancies
13654	2	1	Bolívar, NO1: 17 discrepancies; SI1: 13 discrepancies
26290	1	3	Guarico, NO1: 28 discrepancies

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- 1 2 The total number of machines in the sample turned out to be 334
- 2 3 The average number of votes per machine is 406
- 3 4 The total number of machines in the country was 19,664

margin of error of the sample. In any event, the 50 additional reserve polling stations were there to deal with any such eventuality.

5. Results of the audit

5.1 Discrepancies and their impact on the national vote

Table 1: Evaluation of the discrepancies and their impact

TOTAL VOTE DISCREPANCIES ("NO" OPTION)	NUMBER OF MACHINES COVERED BY THE SAMPLE	AVERAGE VOTE DISCREPANCIES PER MACHINE ("NO" OPTION)	MAXIMUM VOTE DISCREPANCIES EXTRAPOLATED TO 19,664 MACHINES ("NO" OPTION)	IMPACT ON AUTOMATED NATIONAL VOTE
151	334	0,45 (0,11%)	8.890,01	0,10 %
TOTAL VOTE DISCREPANCIES ("YES" OPTION)	NUMBER OF MACHINES COVERED BY THE SAMPLE	AVERAGE VOTE DISCREPANCIES PER MACHINE ("YES" OPTION)	MAXIMUM VOTE DISCREPANCIES EXTRAPOLATED TO 19,664 MACHINES ("YES" OPTION)	IMPACT ON AUTOMATED NATIONAL VOTE
99	334	0,30 (0,07%)	5.828,55	0,07 %

In the 334 machines audited, the total number of NO votes showing discrepancies between the results transmitted by the voting machine and the manual recount was 151. The total number of YES votes showing discrepancies between the results transmitted by the voting machine and the manual recount in the 334 machines that were audited was 99. All these discrepancies were distributed over 184 voting machines, showing discrepancies in the YES, the NO, or both options. For individual machines there are positive and negative discrepancies. The positive discrepancies in this table indicate the results transmitted exceed the manual recount, which suggests there may have been voters who did not deposit their vote in the box.

In the case of the NO votes, the average discrepancy per machine is 0.45 (151 votes / 334 machines). In other words, in one out of every two machines it is likely that a voter did not deposit his or her voting receipt in the box.

If one applies the average discrepancy of each machine (0.45 votes per machine) to the average number of votes per machine (406), each machine shows on average a discrepancy of 0.11 percent between the total number of voting receipts for the NO option and the total that had been transmitted to the totalization center. Extrapolated to the national electoral result, the NO discrepancy is 0.10 percent.

The same calculation method was applied to the YES votes.

Projection of the impact of the discrepancies is based on the sum of the discrepancies, while the machine count for the absolute value of each discrepancy is used to evaluate the number of machines with a discrepancy.

To extrapolate the impact of the discrepancies on the electoral result, the direction of the discrepancy is taken into account because part of these discrepancies cancel each other out, both in the sample and for the total number of machines.

To explain the accuracy of each machine's electoral result, the calculation is based on the absolute value of the discrepancy since this is the magnitude of the difference between the electronically transmitted result and the manual recount of the voting receipts.

5.2 Distribution of the discrepancies:

Table 2. Distribution of the discrepancies

Number of votes involving a discrepancy (in absolute terms)	Number of machines	Machines for which a discrepancy exists as a % of the 344 machines in the sample
1	112	33.5%
2	43	12.9%
3	11	3.3%
4	4	1.2%
5	1	0.3%
6	3	0.9%
7	1	0.3%
8	3	0.9%
9	0	0.0%
Over 9	6	1.8%

Table 2 shows, for example, that there are 43 machines with a (positive or negative) discrepancy of two votes.

Chart 1: Frequency of discrepancy by machine

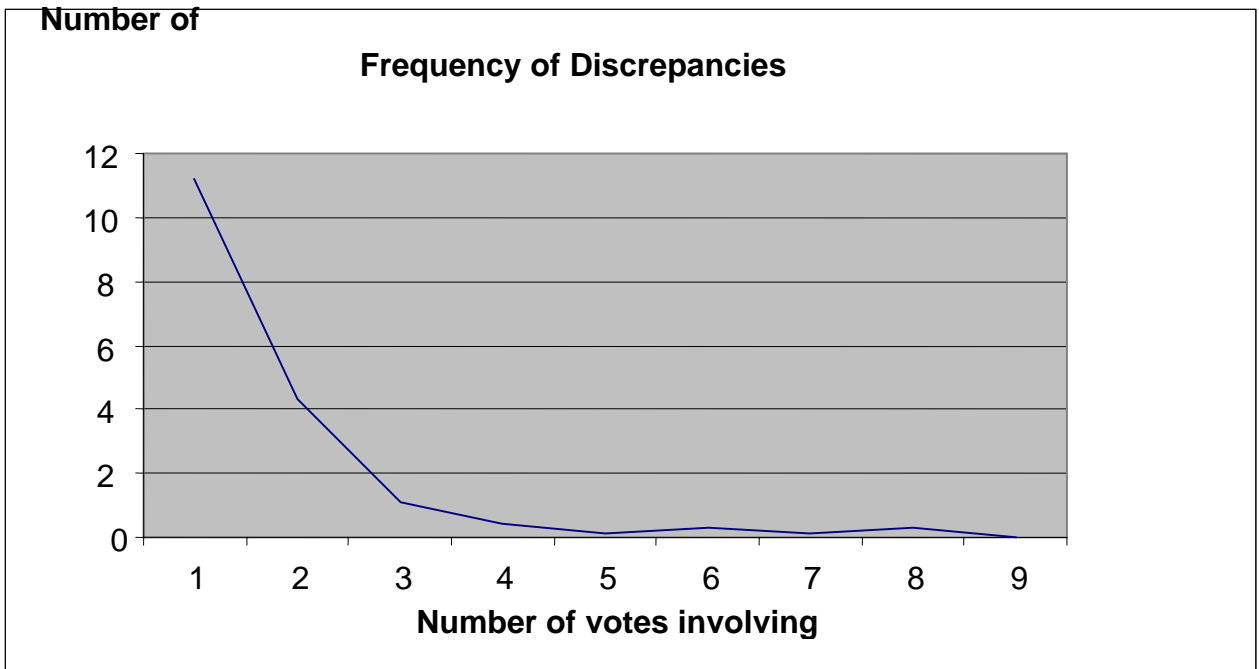


Chart 1 provides a clear indication that discrepancies involving more than four votes are few and far between. It also shows more than 90 percent of the discrepancies occur in machines with an individual discrepancy of three or fewer votes.

Table 3: Cumulative distribution of machines with discrepancies

X	Number of machines with discrepancies of X or more	Percentage of machines with discrepancies
1	184	55.1%
2	72	21.6%
3	29	8.7%
4	18	5.4%
5	14	4.2%
6	13	3.9%
7	10	3.0%
8	9	2.7%
9	6	1.8%

Table 3 shows that for 184 machines (55.1 percent of those audited), there was a discrepancy of at least one vote. It also shows a five-or-more vote discrepancy for 14 machines (4.2 percent of those audited). Consequently, it is estimated that 95.8 percent of the machines have a discrepancy in respect of four or fewer votes.

5. Conclusions

- The average discrepancy per voting machine is approximately 0.45 votes⁵ (i.e. the equivalent of 0.11 percent of the average number of votes per machine⁶) for the NO option and 0,30 votes⁷ (equivalent to 0.07 percent⁸) for YES.
- The incidence of the discrepancies on the national vote is 0.10 percent⁹ and 0.07 percent¹⁰ for the NO and YES options, respectively.

⁵ 151 [discrepancies with respect to the NO votes / 334 [machines in the sample]] = 0.45 [average discrepancies with respect to NO votes per machine]

⁶ 0.45 [NO vote discrepancies/machine] / 406 [average votes/machine] = $0,11$ %.

⁷ 99 [discrepancies with respect to YES votes] / 334 [machines in the sample] = 0.30 [average discrepancies with respect to YES votes per machine]

⁸ 0.30 [YES vote discrepancies /machine] / 406 [average votes/machine] = 0.07 %.

⁹ 0.45 [average NO vote discrepancies per machine] x $19,664$ [total number of machines] = $8,890$ [total NO vote discrepancies]. Hence: $8,890$ [NO vote discrepancies] / $8,502,114$ [total votes] = 0.10 %.

- Five cases were detected in which the discrepancy exceeded five percent. These cases do not suggest a pattern since they affect both the YES and the NO options. The conclusion reached is that these are isolated cases in which electors probably failed to deposit the voting receipt in the correct ballot box.
- Based on the sample analyzed above, it is safe to say that the results transmitted by the voting machines have been fully validated by the results obtained during the manual recount of the voting receipts.
- In the discrepancies encountered, no bias has been detected favoring either one of the options.