Using an Access Database to Increase the Ease and Efficiency of Performing Quality Control for Data Entry

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Identifying the Problem

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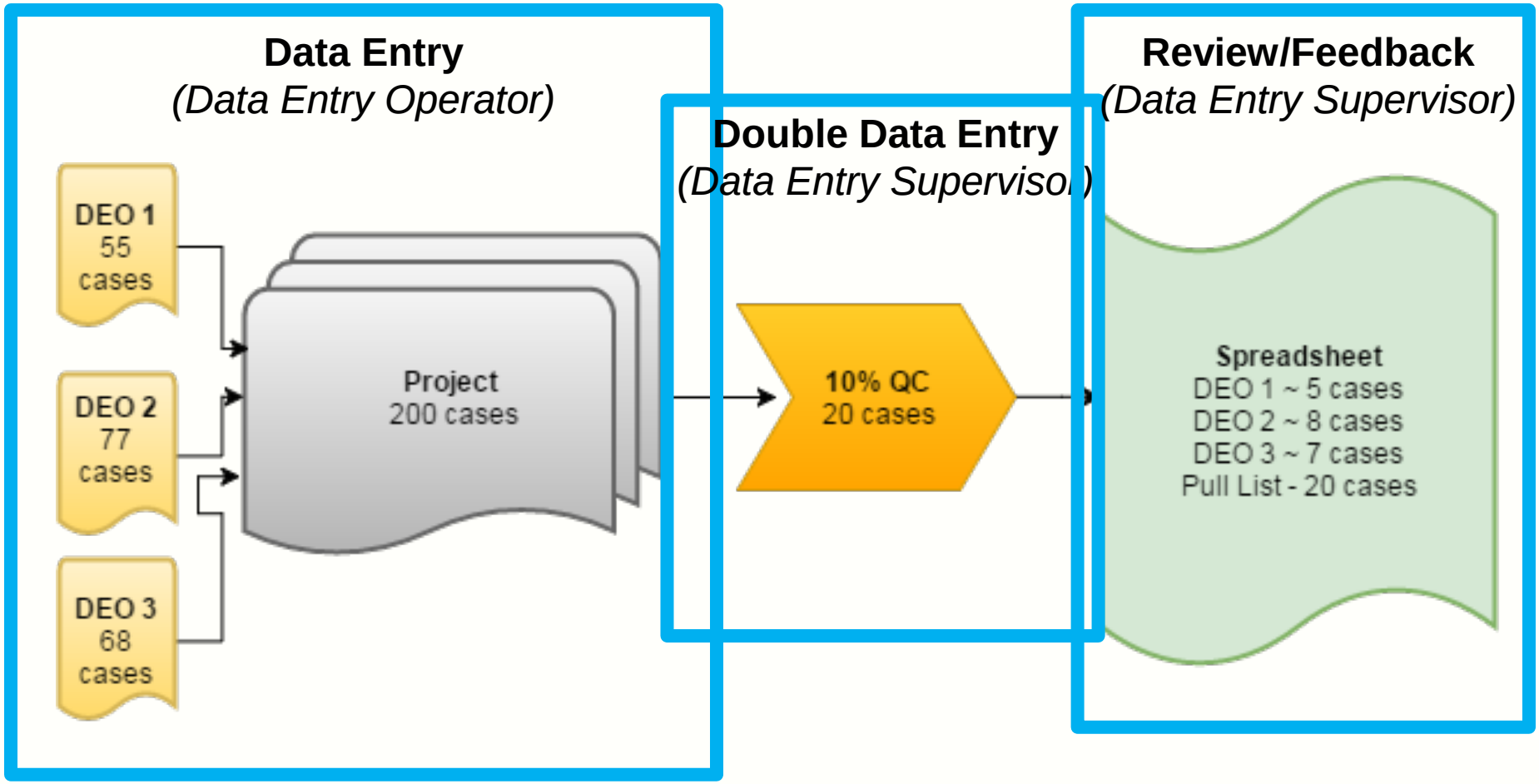
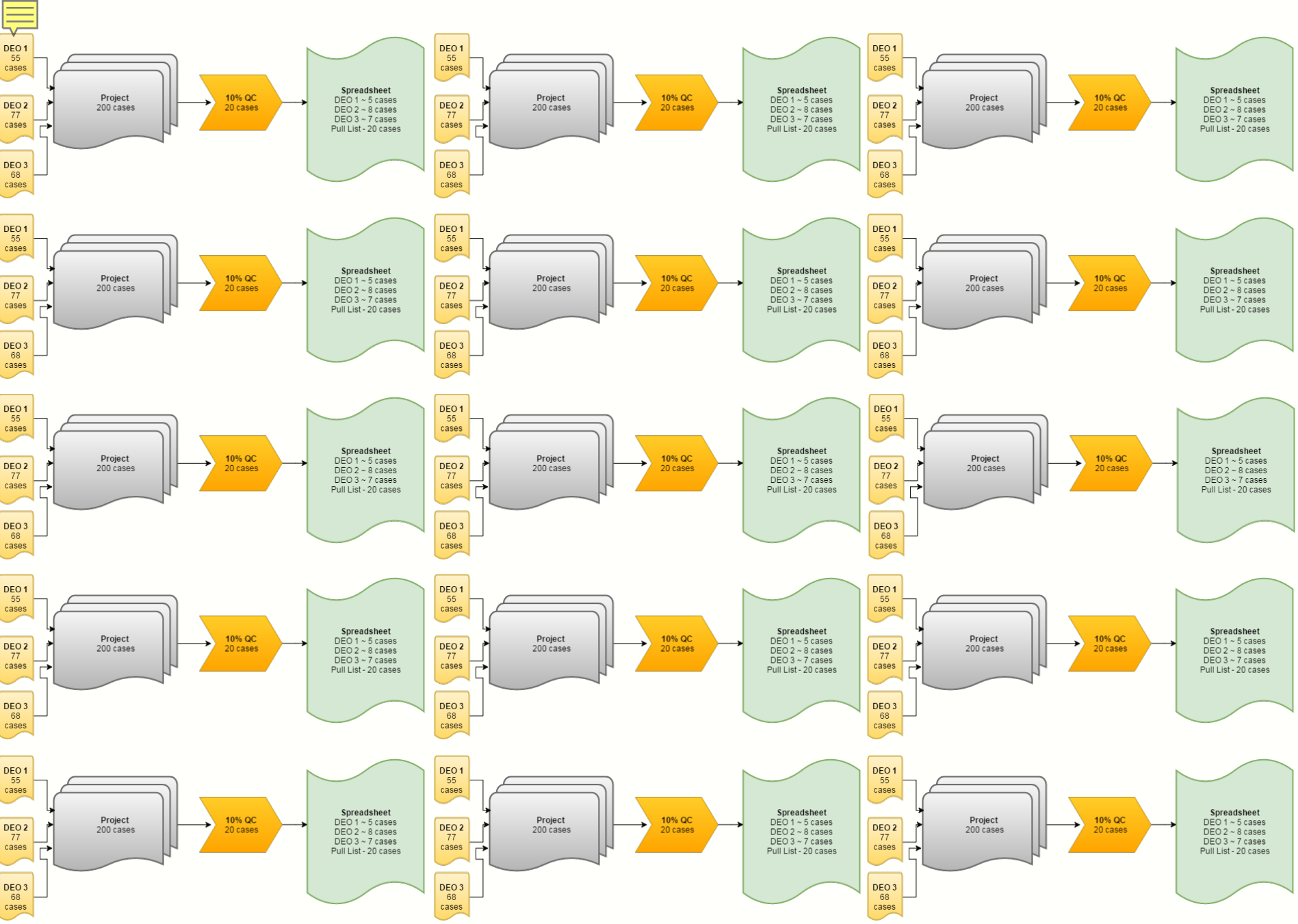
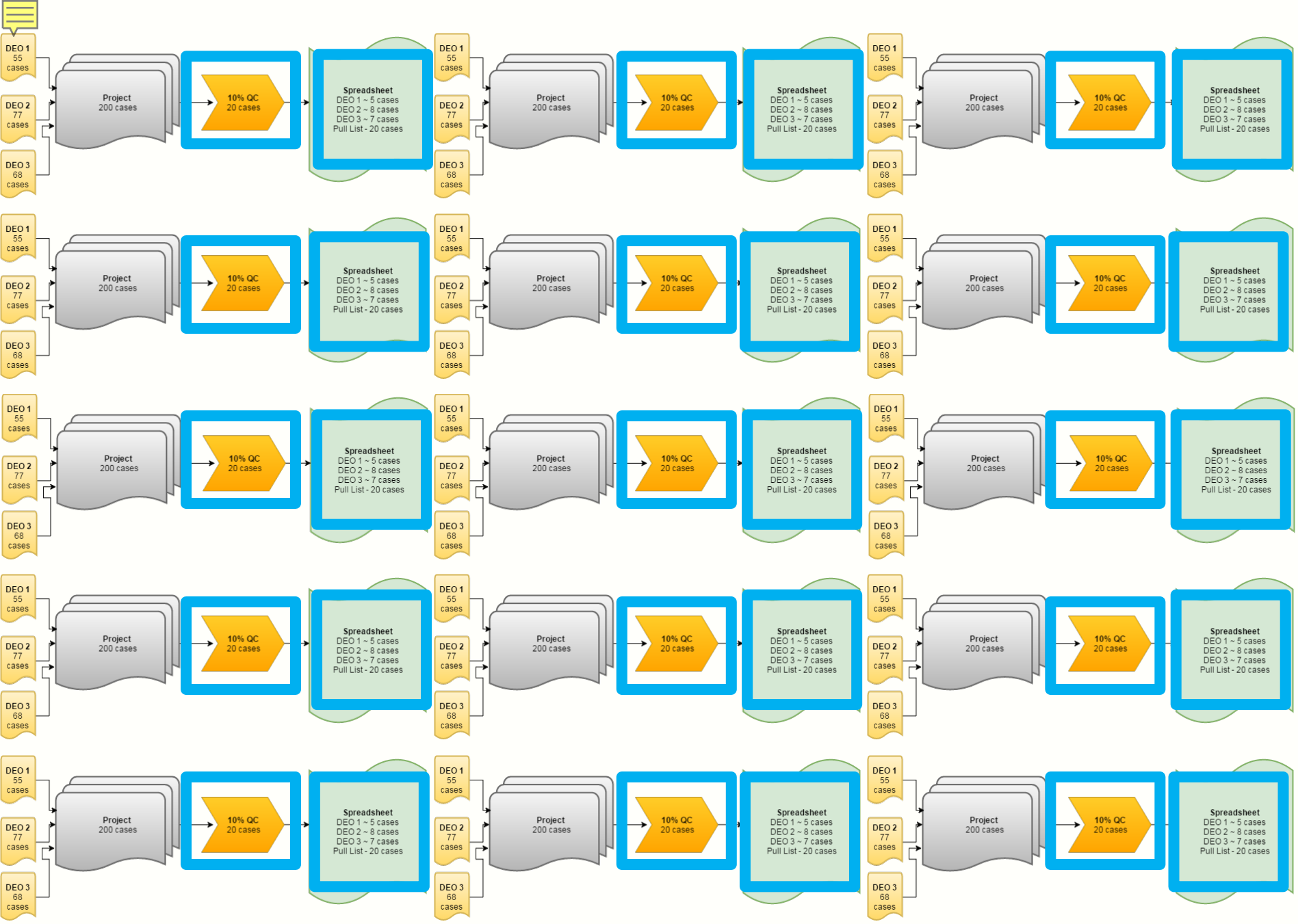
Data Entry Quality Control (QC) Process for a Single Project




DEO 1
55
cases
DEO 2
77
cases
DEO 3
68
cases
Project
200 cases
10% QC
20 cases
Spreadsheet
DEO 1 ~ 5 cases
DEO 2 ~ 8 cases
DEO 3 ~ 7 cases
Pull List - 20 cases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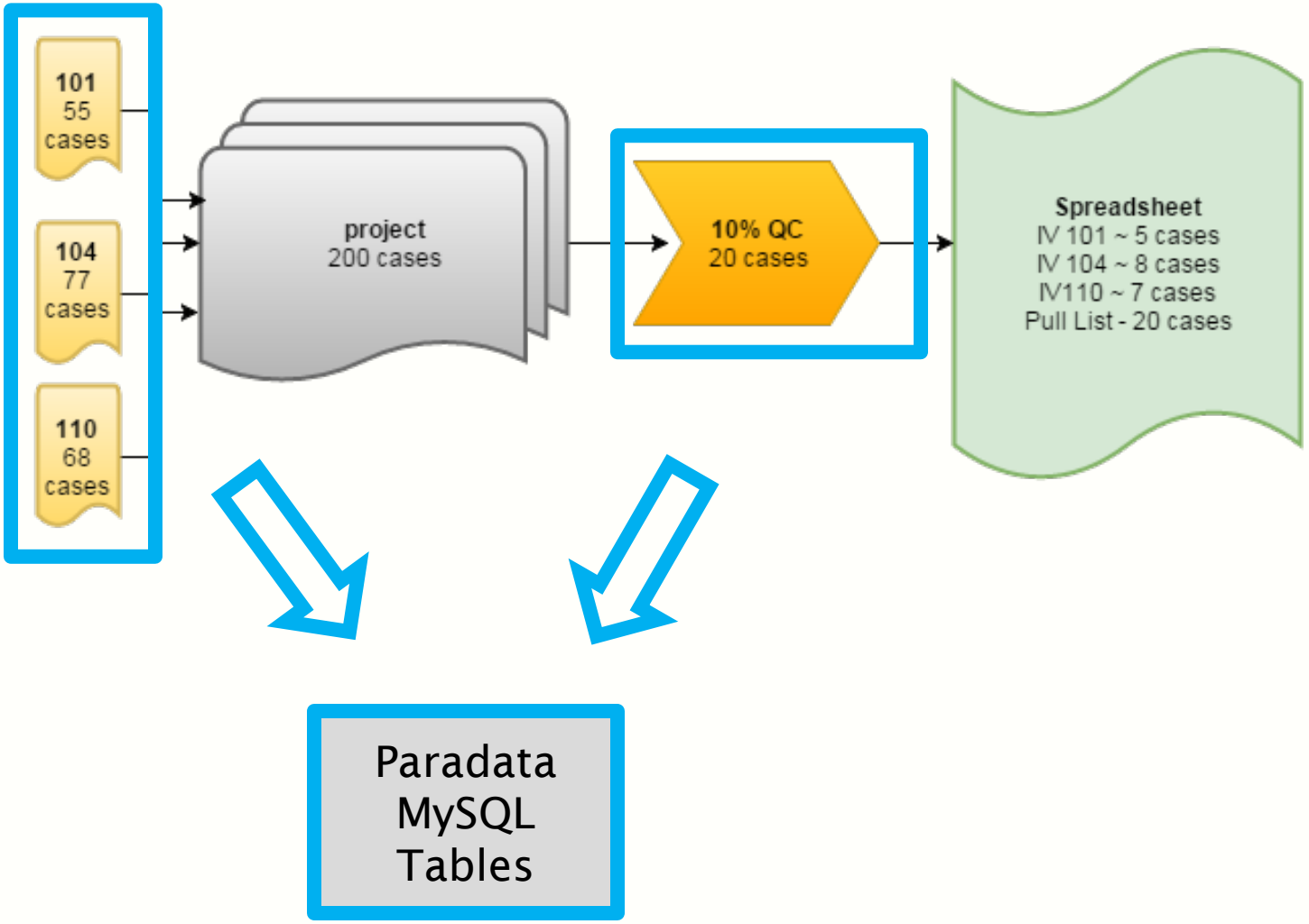
Metadata/Paradata Logging



The Solution: Data Entry QC Database

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The Solution: Data Entry QC Database

- Low tech solution
  - Access Database
  - Dashboard qualities
  - Quick to implement
  - Easy to use/modify

Data Entry QC Database: Tables

- ODBC links
- Paradata Information – MySQL tables
  - *dedata*
    - General information about the case
    - Project number, Start and end times, DEO ID number, etc.
  - *verifylog*
    - Log of discrepancies encountered during 2nd pass of double data entry during QC
    - Caseid, item name, 1st pass response and 2nd pass response, item changed?
- Notes Output – CSV file
  - *All_workednotes*
    - Notes attached to all cases data entered

Navigation Form

Mail and Data Entry Quality Control Tool

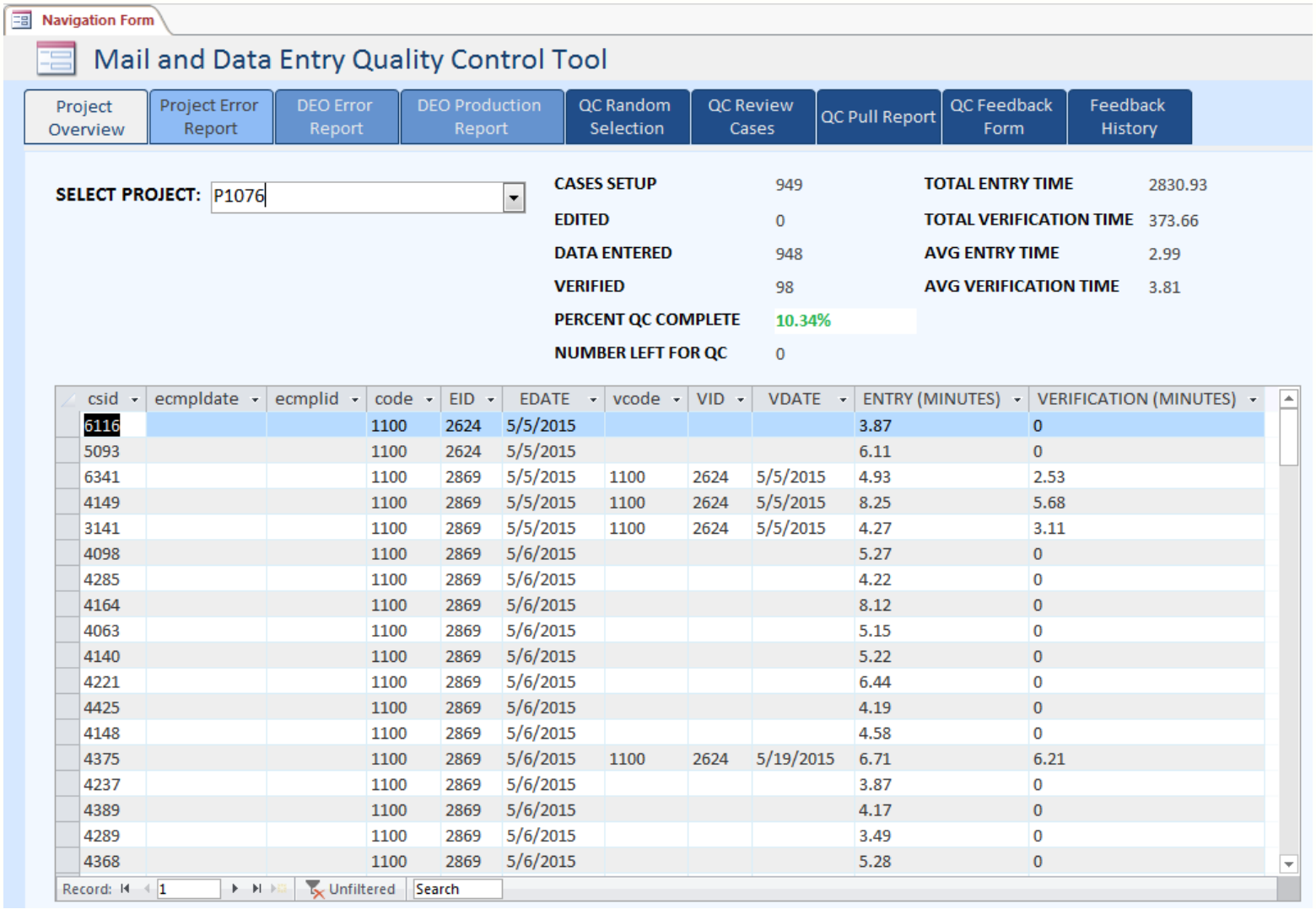
Project Overview | Project Error Report | DEO Error Report | DEO Production Report | QC Random Selection | QC Review Cases | QC Pull Report | QC Feedback Form | Feedback History

SELECT PROJECT:

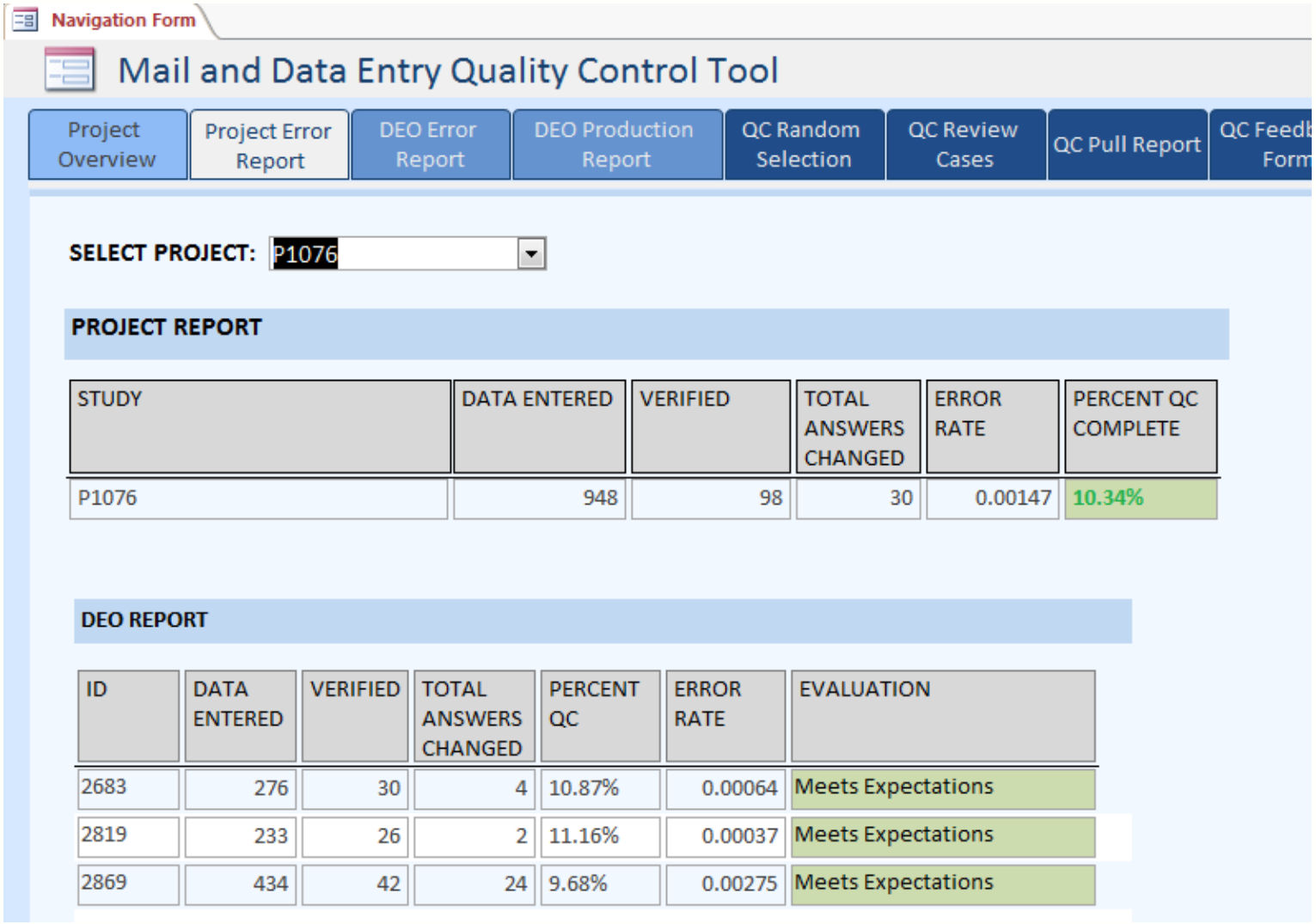
csid	ecmpldate	ecmplid	code	EID	EDATE	vcode	VID	VDATE	ENTRY (MINUTES)	VERIFICATION (MINUTES)

Record: Unfiltered Search

Information Tabs: Project Overview



Information Tabs: Error Report by Project



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Information Tabs: Error Report by DEO

Navigation Form

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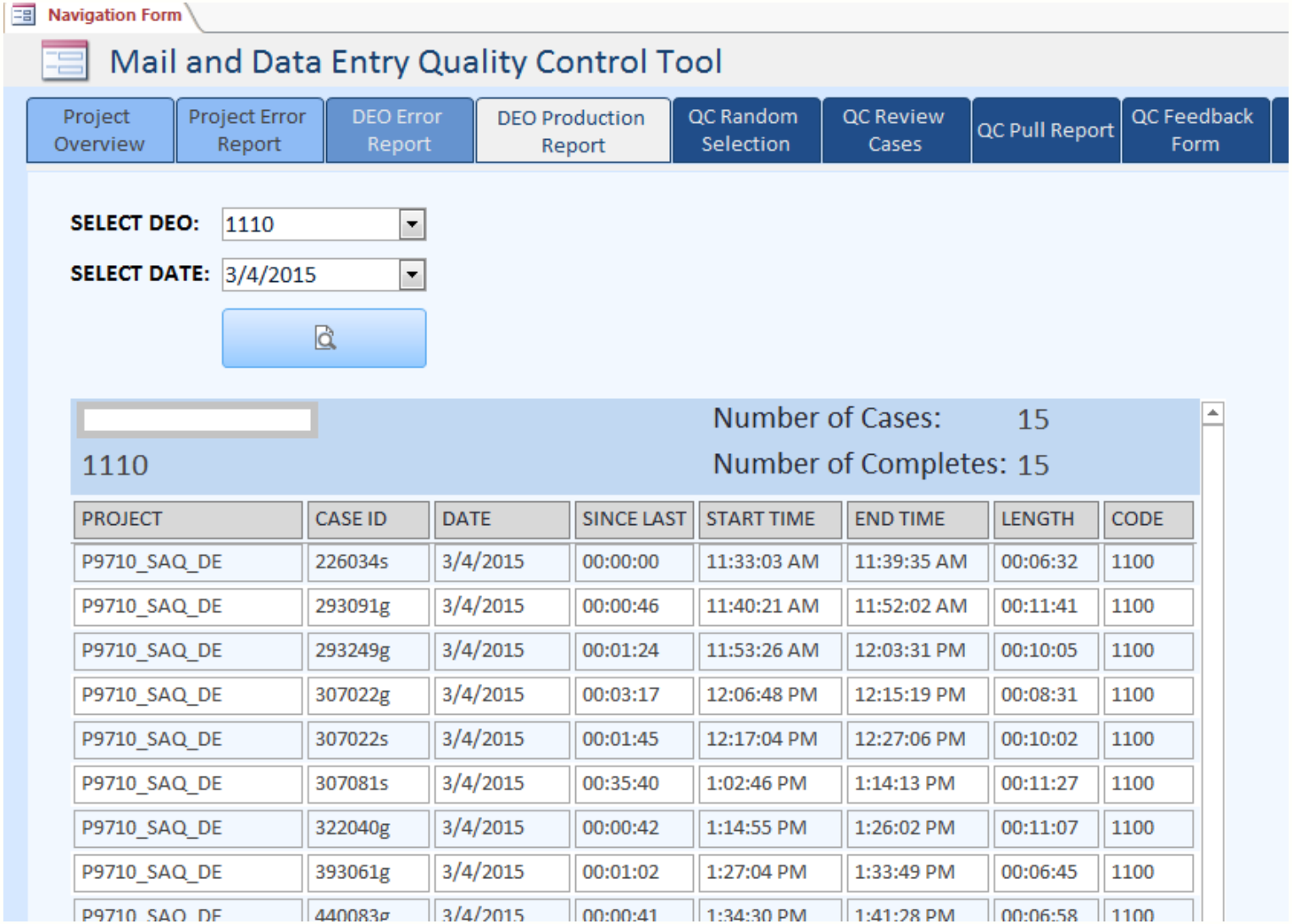
SELECT DEO: 1110

DEO PROJECTS REPORT

STUDY	DATA ENTERED	VERIFIED	TOTAL ANSWERS CHANGED	PERCENT QC	AVG ENTRY TIME	PROJECT AVG ENTRY	DEO ERROR RATE	PROJECT ERROR RATE	EVALUATION
P1004	429	376	736	87.65%	23.62	22.61	0.0012	0.00011	Meets Expectations
P1004_W3_CONTACT	303	39	45	12.87%	1.74	1.77	0.01861	0.00693	Needs Improvement
P1031	95	6	2	6.32%	2.32	2.23	0.00855	0.00488	Meets Expectations
P1040	73	12	7	16.44%	2.25	2.39	0.00566	0.00607	Meets Expectations
P1054_CHILDDE	233	26	1	11.16%	0.68	0.78	0.00065	0.00035	Meets Expectations
P1054_PARENTDE	168	16	5	9.52%	1.36	1.45	0.00651	0.00417	Meets Expectations
P1069_PRE	266	37	13	13.91%	0.88	0.8	0.00764	0.00345	Meets Expectations
P1077	280	33	21	11.79%	1.58	1.59	0.01248	0.00448	Meets Expectations
P9710_SAQ_DE	156	156	78	100.00%	9.13	8.49	0.00216	0.00086	Meets Expectations
P9904_MROSAQ	126	126	285	100.00%	25.96	26.76	0.00134	0.00009	Needs Improvement
P9904_P9904MRO_CON	350	36	23	10.29%	1.33	1.45	0.01521	0.0068	Meets Expectations

Information Tabs: DEO Production Report



PROJECT	CASE ID	DATE	SINCE LAST	START TIME	END TIME	LENGTH	CODE
P9710_SAQ_DE	226034s	3/4/2015	00:00:00	11:33:03 AM	11:39:35 AM	00:06:32	1100
P9710_SAQ_DE	293091g	3/4/2015	00:00:46	11:40:21 AM	11:52:02 AM	00:11:41	1100
P9710_SAQ_DE	293249g	3/4/2015	00:01:24	11:53:26 AM	12:03:31 PM	00:10:05	1100
P9710_SAQ_DE	307022g	3/4/2015	00:03:17	12:06:48 PM	12:15:19 PM	00:08:31	1100
P9710_SAQ_DE	307022s	3/4/2015	00:01:45	12:17:04 PM	12:27:06 PM	00:10:02	1100
P9710_SAQ_DE	307081s	3/4/2015	00:35:40	1:02:46 PM	1:14:13 PM	00:11:27	1100
P9710_SAQ_DE	322040g	3/4/2015	00:00:42	1:14:55 PM	1:26:02 PM	00:11:07	1100
P9710_SAQ_DE	393061g	3/4/2015	00:01:02	1:27:04 PM	1:33:49 PM	00:06:45	1100
P9710_SAQ_DE	440083g	3/4/2015	00:00:41	1:34:30 PM	1:41:28 PM	00:06:58	1100

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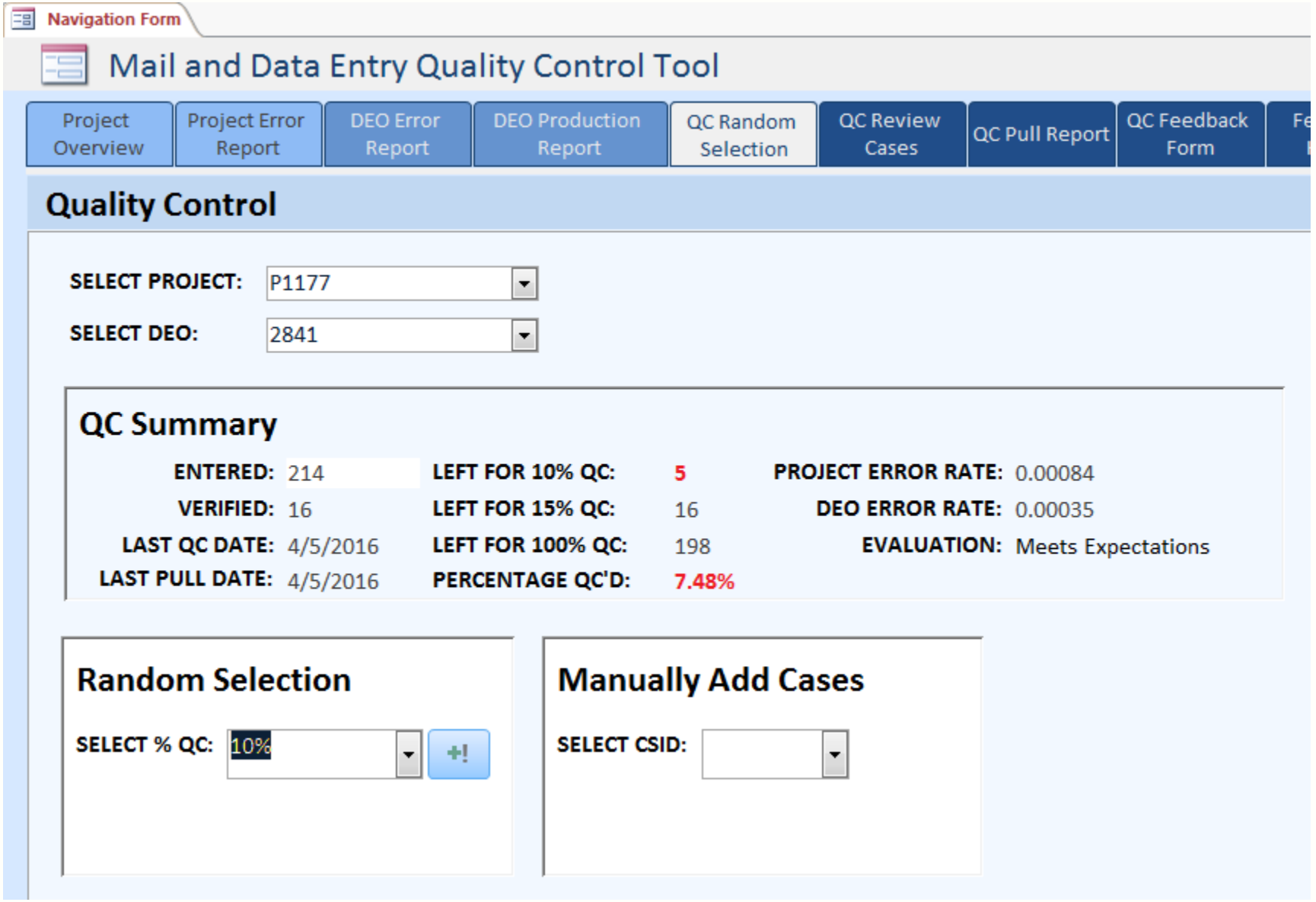
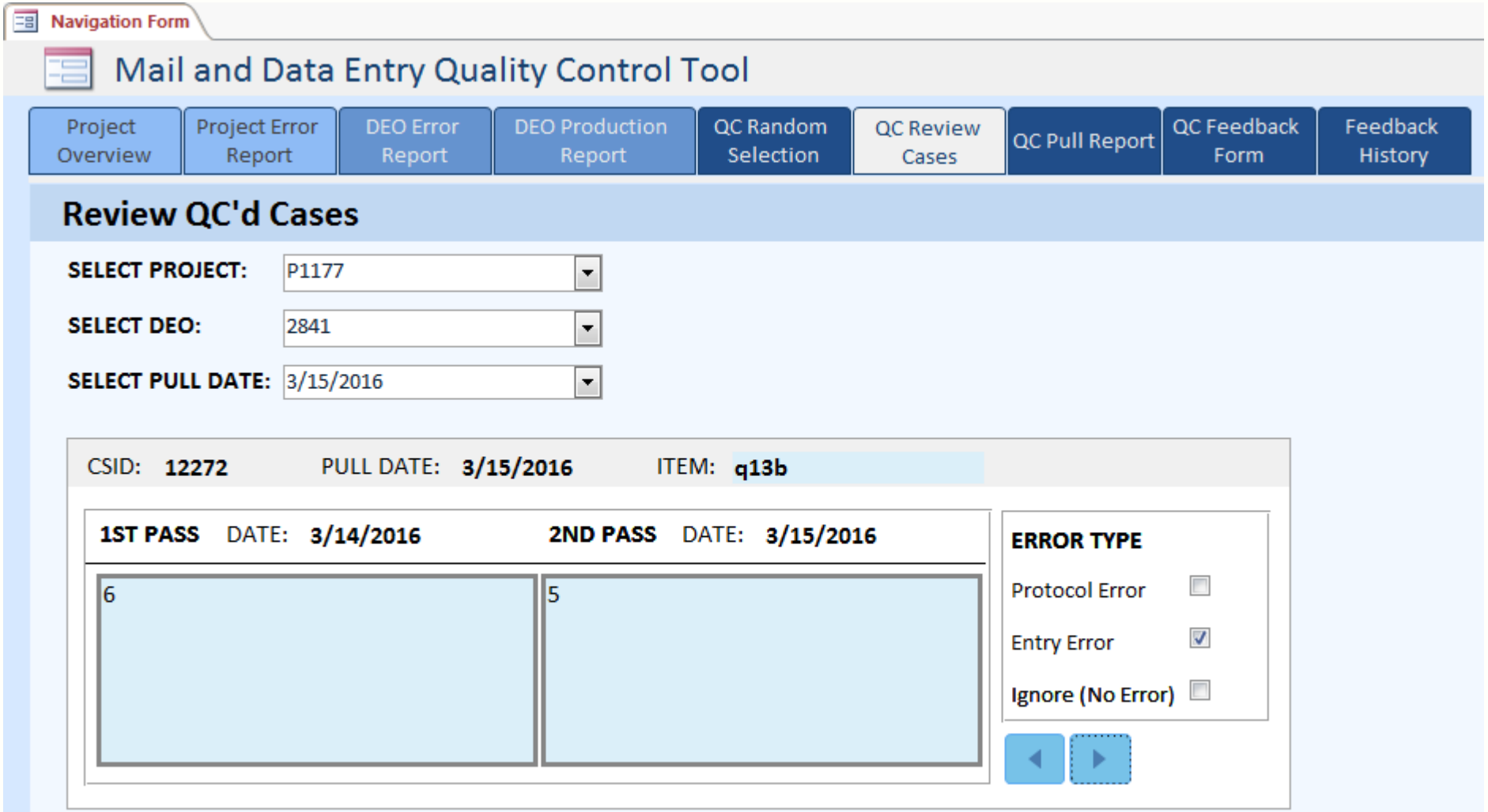
Action Tabs: QC Random Selection



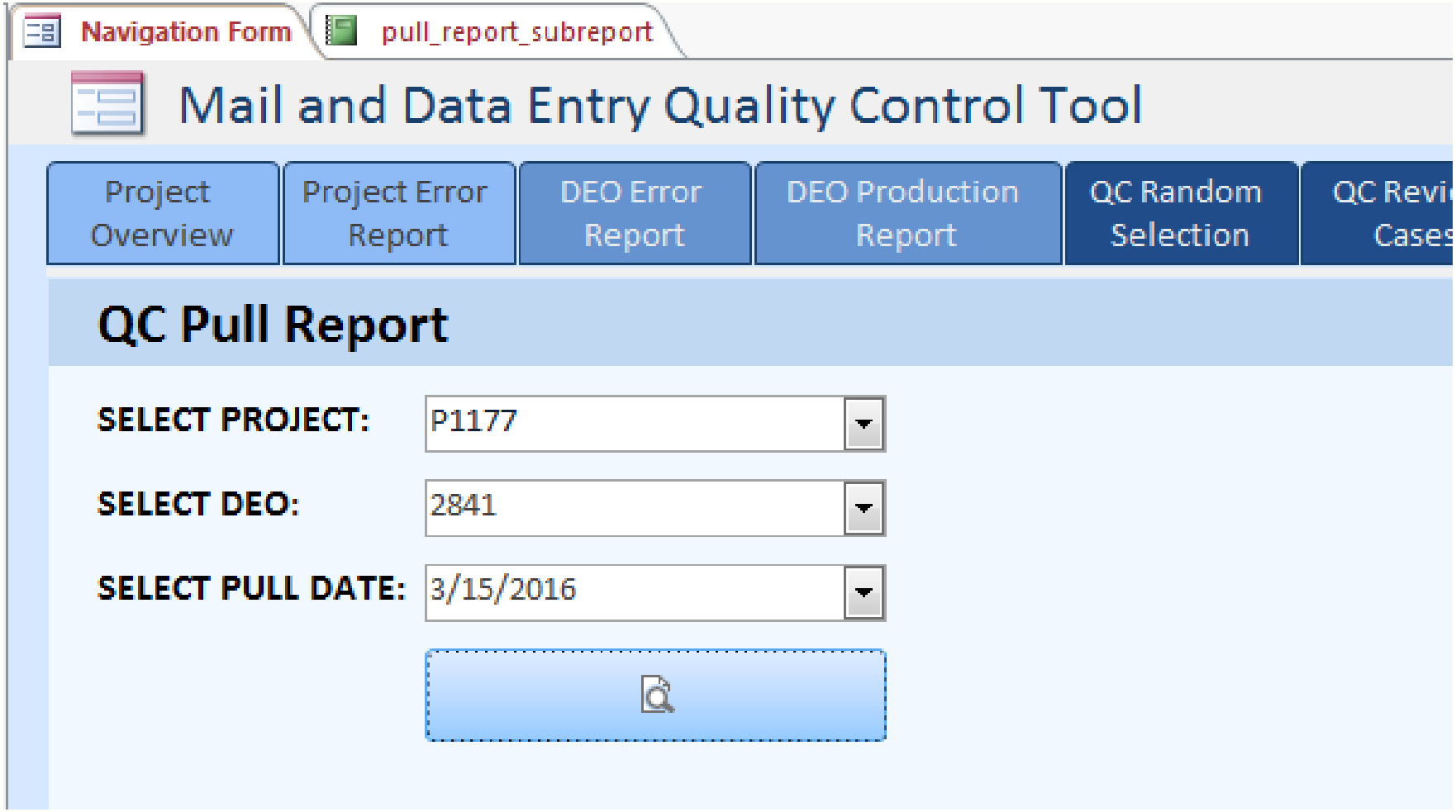
QC Random Selection: Pull List

STUDY	csid	PullDate
P1177	10090	4/5/2016
P1177	10219	4/5/2016
P1177	10396	4/5/2016
P1177	11045	4/5/2016
P1177	11489	4/5/2016
P1177	11864	4/5/2016
P1177	12042	4/5/2016
P1177	12109	4/5/2016
P1177	12159	4/5/2016
P1177	12392	4/5/2016
P1177	12562	4/5/2016
P1177	12619	4/5/2016
P1177	20196	4/5/2016

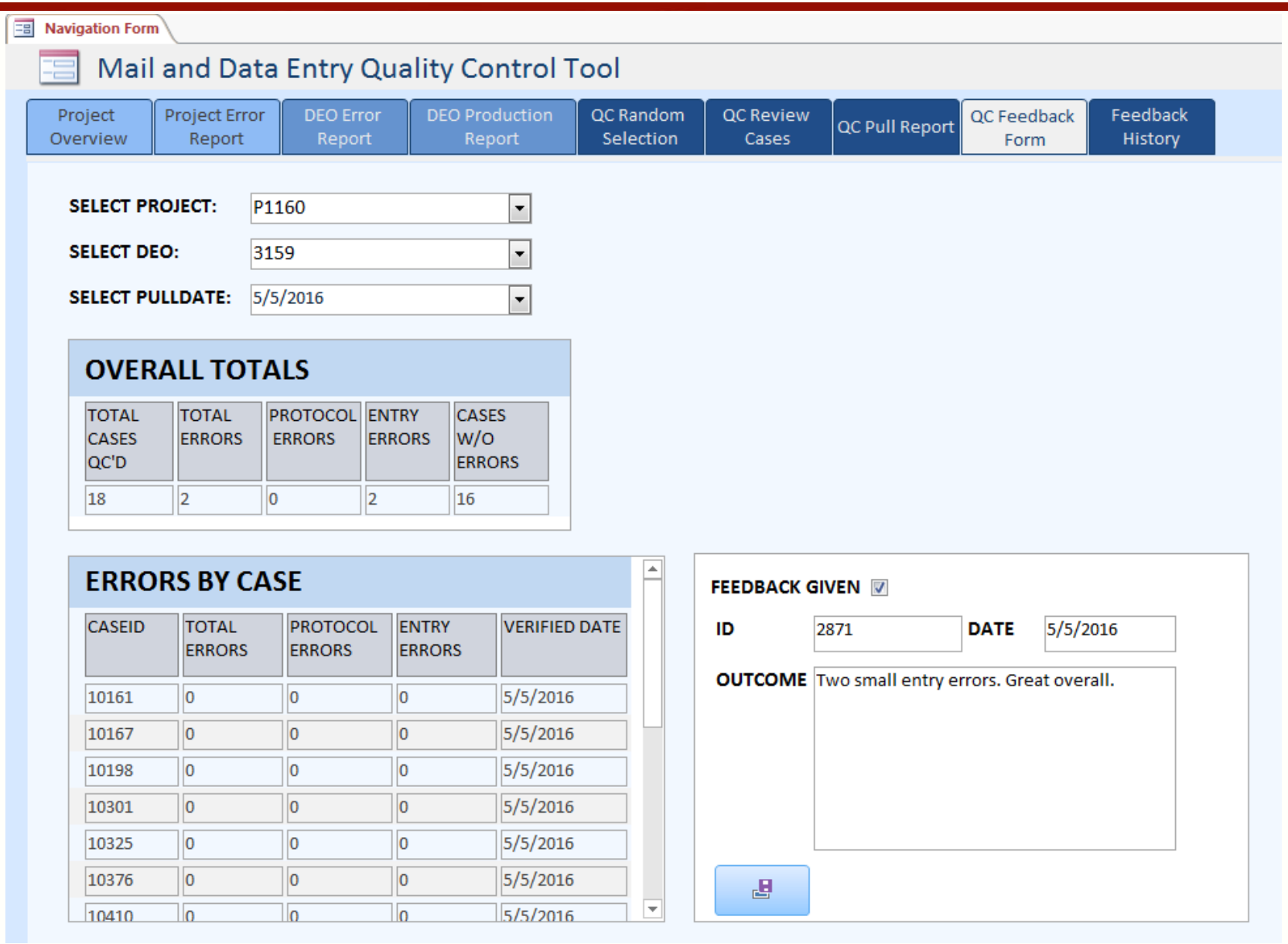
Action Tabs: QC Review Cases



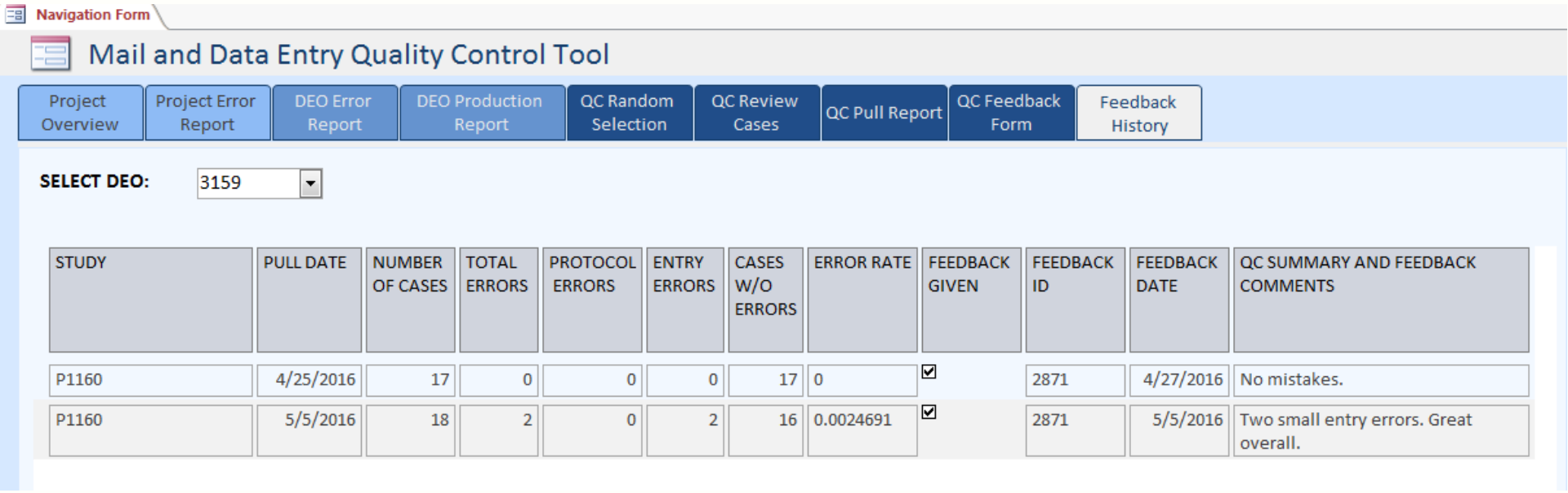
Action Tabs: QC Pull Report



Action Tabs: QC Feedback Form



Information Tabs: Feedback History



Conclusion

- Access database – low tech solution
- Central location
- No more spreadsheets!
- Short development time
- Logging paradata information across projects is key

Acknowledgements

- Data Entry Department
  - Carrie Barrett, *DE Supervisor*
  - Leo Schultz, *DE Shift Leader*
  - Robbie Wuetrich, *DE Shift Leader*
  - Carol Wintheiser, *CAPI Supervisor*

Thank You!

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