



A Case Study On Commercial Undertaking of Govt. of West Bengal



Lack of control on issue of fuel
in
**West Bengal Surface Transport Corporation
Limited (WBSTC)**

Regional Training Institute
Indian Audit and Accounts Department
Kolkata
September 2014

Preface

Regional Training Institute, Kolkata was declared as Knowledge Centre on Compliance Audit in August 2012. In pursuit of excellence in our assigned areas of Knowledge Centre, we attempt to bring out series of interesting cases of frauds/misappropriations / deviation from rules and regulation etc. reported and reflected in the Comptroller and Auditor General of India's Audit Report (Commercial) of different State Governments, as case studies. In preparing the instant case study, the models adopted by INTOSAI and some other business schools have been followed.

The case study "Lack of control on issue of fuel in WBSTC" has been prepared based on the Audit Para 3.15.5 appeared in Audit Report (Commercial) for the year ended 31 March 2009 –Government of West Bengal. The case study provides insight into internal control failure, use of IT enabled systems, applying IDEA in audit and risk assessment.

I hope that the readers would benefit from this .The suggestion, if any, are welcome and would help us in future.

RTI, Kolkata
September 2014

M. Ray Bhattacharyya
Principal Director

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The West Bengal Surface Transport Corporation Limited (WBSTC) could not account for 6.97 lakh litre oil valued at ₹1.75 crore during 2004-09 that were issued against fictitious vehicles. This indicated an absence of control on issue of fuel.

1. Background :

West Bengal Surface Transport Corporation Limited (WBSTC) is a Government of West Bengal owned State Transport Undertaking (STU). It was established in the year 1989. Formerly it was known as West Bengal Inland Water Transport Corporation Ltd. It started with the Ferry Service on the Hooghly and the Muriganga rivers. In the year 1992 it started operating buses with only 8 buses; at the time of audit, it operated 106 buses.

WBSTC was one of the five STU in West Bengal. The others were Calcutta State Transport Corporation (CSTC), North Bengal State Transport Corporation (NBSTC), South Bengal State Transport Corporation (SBSTC) and Calcutta Tramways Company (1978) Company Limited (CTC).

WBSTC had only one depot at Saltlake, Kolkata from which it issued oil to buses. Unlike other transport undertakings in the State, WBSTC did not have an elaborate Management Information System (MIS). It basically maintained two databases. The first recorded operational performance of the buses. This was 'OTMAST' which basically recorded information of each trip of each bus including the revenue that it had earned. This database had provision to record oil consumption of each trip, but that field was never recorded. A snippet of this data base can be seen at **appendix 1**. The other database was 'FUELMASST' which recorded only the fuel issued to the buses. FUELMASST had a field to record distance covered by each vehicle, but this field was not always recorded. A snippet of 'FUELMASST' can be seen at **appendix 2**.

2. Environment:

The maintenance of the database was assigned to one individual at the depot and there were no indication of any exercise of control over his work. This was largely because senior managers were not conversant with database maintenance and it's working. There were a few data entry operators too, but again nothing indicated that Management had supervised their work.

The senior management of WBSTC received two key information that it used to assess performance. These were KMPL i.e. Kilometer per litre run by the buses and EPKM i.e. earnings per kilometer of distance that the buses had run. Although there was no norm as to what would be the ideal KMPL or EPKM, senior management used Company's own trend in KMPL as thumb rule. Only any abnormal variation in KMPL or EPKM required justification.

While the depot issued fuel to its regular buses, it also issued fuel to vehicles that WBSTC did not own or operate for its services. These bus numbers did not exist in the database of WBSTC's buses. In this fashion it issued 6.90 lakh litres fuel worth ₹ 1.73 crore to 188 vehicles during 2004-09 that were not owned by WBSTC. The Company had purchased the fuel for consumption by its own buses only. However, since there was deficient internal controls, issue of fuel to outside vehicles were never discovered.

Also, during 2004-09, 7,677 litres fuel worth ₹ 2.43 lakh were issued to 48 buses even before these buses were operationalized. Finally, 13,460 litres fuel worth ₹ 4.26 lakh was also issued without recording any vehicle number during 2004-09.

Now, because the above issue of fuel would reduce mileage of the vehicles (in terms of KMPL) and because the senior management monitors the mileage from the vehicles, kilometers operated was added by entering into the database 'OTMAST' distance travelled by fictitious bus numbers that were not there in WBSTC's database of buses. Thus, mileage for 5.38 lakh kilometer was entered into the database against 87 fictitious vehicles. There were no issue of fuel against these 87 vehicles and since buses cannot run without fuel, it could be concluded that these buses never ran. By adding these fictitious distances the depot was able to report better mileage i.e. KMPL.

Obviously, the 5.38 lakh kilometer in mileages were added without any recording of revenue. Therefore, it appeared that there was a great degree of distance travelled by WBSTC's buses but there was no revenue against these operations. Consequently, EPKM remained lower than all India average.

A robust internal check may have ensured that the database OTMAST also recorded fuel consumption of each trip and the database FUELMASST recorded distance covered by buses between each issue of fuel. This would have ensures KMPL being reported from two different

database and discrepancies could have been investigated. Absence of internal check further encouraged the irregularity.

3. Opportunity to Prevent Irregularity:

The audit opines that WBSTC could avoid the loss if:-

- i) It had maintained a comprehensive MIS like other STUs.
- ii) If the Management ensured that OTMAST recorded fuel consumption and then compared fuel issue from FUELMAST with fuel consumption data from OTMAST.
- iii) Similarly, if FUELMAST recorded distance covered, and compared that distance covered from FUELMAST with the same data recorded at OTMAST.
- iv) If it had codified/issued orders as to how these database were to be maintained and had not relinquished all control.
- v) If basic principles of internal check were adhered and data for fuel consumption and mileage were recorded by different individuals in two separate databases.

4. Act of Irregularity:

- i) The depot issued fuel to fictitious buses. These buses were neither owned nor operated by WBSTC.
- ii) There was no justification as to why fuel was issued to buses even before their bodies were build and they were put to operation.
- iii) Management contended that it had issued fuel to its franchise operators, but could not substantiate that fact with records. The franchisee agreement did not provide for supply of fuel.
- iv) Management, on its own, exercised no control on issue of fuel or maintenance of proper record in either FUELMAST or OTMAST.
- v) Follow-up action though assured to Audit was not initiated and may indicate complicity of WBSTC's officials.

5. Opportunity to Detect and Proving Irregularity:

(i) Red Flag Indicators:

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During test check of the records of the Company it was revealed that:-

- a) WBSTC did not have a robust MIS.

- b) WBSTC did not have internal check on issue of fuel.
- c) WBSTC did not have an internal audit that was commensurate with the nature of its operation and size.
- d) OTMAST did not record trip-wise fuel consumption.
- e) Visual examination of the database FUELMASST showed irregular entry that could not possibly be bus number.
- f) The performance of WBSTC vis-a-vis other transport operators in the State and All India performance during 2004-09 was as follows:

Sl no.	Particulars	STU	2004-05	2005-06	2006-07	2007-08	2008-09
A.	Gross Kilometers (in lakh)	CSTC	585.64	546.33	538.21	504.16	458.91
		SBSTC	378.92	391.88	369.28	362.47	384.25
		NBSTC	388.90	390.65	386.43	473.39	476.79
		CTC	165.77	182.58	190.83	203.68	153.79
		WBSTC	21.45	17.38	16.46	37.32	45.08
B.	Actual fuel consumption (in lakh litres)	CSTC	157.30	137.55	143.92	142.23	131.22
		SBSTC	93.23	93.58	89.92	89.43	95.13
		NBSTC	101.81	100.10	98.60	120.34	115.72
		CTC	51.01	52.17	53.64	53.64	44.50
		WBSTC	7.09	7.29	9.41	10.55	15.04
C.	Mileage per Kilometer(KMPL) (C=A/B)	CSTC	3.72	3.97	3.74	3.54	3.50
		SBSTC	4.06	4.19	4.11	4.05	4.04
		NBSTC	3.82	3.90	3.92	3.93	4.12
		CTC	3.25	3.50	3.56	3.80	3.46
		WBSTC	3.03	2.38	1.75	3.54	3.00
D.	All india Average (KMPL)		4.77	4.85	4.94	4.94	4.95

Source: Page 72 of Audit Report (Commercial) for the year ended 31 March 2009 –Government of West Bengal.

Clearly, WBSTC had higher fuel consumption amongst its peers.

(ii) Follow up of Red flag:

Audit Examination and evidence collection.

Acting on these red flag indicators, the Audit party conducted the scrutiny of the information and records available with the audited entity, interviewed the staff and Officers of the audited entity and obtained collateral records/ information from other sources to ensure reliability of entity's records. Both the data base OTMAST and FUELMASST were imported to IDEA and analysed in the following manner:

- a) Both data bases were imported to IDEA. (**appendix 3**)

- b) Data was segregated into year-wise data for the period under audit.
- c) From FUELMAS, bus wise oil issued was obtained (**appendix 4**). From OTMAST, bus wise distance operated was obtained (**appendix 5**).
- d) Using bus's registration number as the common identifier on both the database, bus wise mileage from OTMAST and bus wise fuel issued FUELMAS were joined so that against each bus registration number, both fuel issued and the distance operated were obtained (**appendix 6**).
- e) The joining of the database as mentioned in (d), revealed that:
- Some buses were issued fuel but they never operated on the road.
 - Some buses were operated on the road but never received any fuel.
- f) Finally, when buses who were issued fuel but had revealed no mileage/operation were looked up against the vehicles owned by WBSTC, it was found that these buses did not figure in the list of buses owned by WBSTC (**appendix 7**) indicating that fuel was either issued against fictitious registration numbers, or to some outsiders.
- g) Upon detail examination of buses that recorded mileage in OTMAST but did not consume fuel, it was observed that they did not report any revenue either. It may be concluded that these dummy mileages were added to mask excessive issue of fuel by bringing down KMPL to a level acceptable by Management, since it was one of the statistic that Management monitored. It is also the reason WBSTC's EPKM remained lower than average EPKM of other STUs.

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Earnings per Kilometer (₹)					
CSTC	27.01	36.33	34.71	33.91	38.24
SBSTC	16.85	20.10	22.70	23.56	25.00
NBSTC	24.60	35.48	34.31	29.69	30.99
CTC	14.25	14.68	16.04	16.39	17.19
WBSTC	16.52	22.47	23.38	20.97	24.14
Average	22.38	29.17	29.11	27.69	30.01

Source: Page 165 of Audit Report (Commercial) for the year ended 31 March 2009 –Government of West Bengal

6. Lessons Learnt:

- a) Timely and correct preparation of MIS is essential for control.
- b) Principles of internal check should not be short-circuited.

- c) Regular internal audit commensurate with the nature and of business is essential.
- d) Senior management need to exercise greater control over valuable resource such as fuel.
- e) Senior management should develop necessary technical skills to supervise subordinate staff before introduction of new technology (eg database management).

7. Additional facts:

The peer review of SAI India was undertaken during 2011-2012. Amongst the reports selected by the peer review team was the Audit Report (Commercial) (Chapter-III Performance audits relating to Government Corporations) for the year ended 31 March 2009 of Comptroller and Auditor General of India–Government of West Bengal. The report was examined by Mr. Eric Hellsten of SAI, Canada. Amongst the section of the report that he had selected for detailed study was the section at paragraph 3.15.5.

The Peer Review report is available at the CAGI's Website.

8. Enclosure for reference:

Audit Para appeared as paragraph 3.15.5 in Audit Report (Commercial) (Chapter-III Performance audits relating to Government Corporations) for the year ended 31 March 2009 of Comptroller and Auditor General of India–Government of West Bengal.

Lack of control on issue of fuel in WBSTC

3.15.5 The sole depot of WBSTC at Saltlake (Kolkata) issues fuel to its buses. Scrutiny in Audit of the databases maintained by the STU revealed that during 2006-09, WBSTC issued 7,677 litres of fuel valued at Rs. 2.43 lakh to 48 buses before these were actually put to commercial operation. Further, Audit observed that during 2004-09, 6.90 lakh litres of fuel valued at Rs. 1.73 crore were issued to 188 vehicles, which were not owned and operated by the STU. Such instances led to conclude that there was lack of management control over issue and consumption of fuel in WBSTC. Besides, it was also noticed that during the review period 13,460 litres of fuel was issued without recording the vehicle number, in the absence of which the same could not be vouchsafed in Audit. Moreover, database scrutiny also revealed that without issue of fuel, 87 vehicles operated 5.38 lakh kilometres, which favourably increased the KMPL. These highlighted incomplete maintenance of records.

While accepting the audit findings in the exit conference, the Government informed (November 2009) that 6.90 lakh litres of fuel was issued to franchisee bus operators and the value of the same has been recovered.

However, no records were made available to substantiate the reply. The Government further assured that the matter regarding issue of fuel before actual commercial operation would be investigated.

The initial Audit Query issued to the Management:



*Office of the Principal Accountant General (Audit) West Bengal
(Commercial Audit Wing)
2, Government place (West) Treasury Building Kolkata 700001*

AQ No. : OA (Com)/PAP/ WBSTCLtd/PA/2008-09/4

dated: 28-4-2009

FUEL UTILISATION

The details of fuel consumption of the Company in five years ending 31st March 2009 are given below:

TABLE I

		2004-5	2005-6	2006-7	2007-8	2008-9
Fuel issued at depot for bus services	litre	708664	728728	941402	1054690	1503634
Cost of fuel per litre	Rs.	27.39	29.35	21.68	32.04	35.81
Fuel issued to vehicles prior to commissioning.	litre	0	0	781	27802	1286
No. of vehicles involved to which fuel was issued prior to commissioning		0	0	2	38	11
Fuel issued without mentioning vehicle no.	litre	162	433	2209	2373	8283
Fuel issued to vehicles against which no operating data is available.	litre	20337	229722	403185	17807.15	18487
No. of vehicles against which fuel was issued but no operations data is available		11	55	64	32	26
Fuel issued to operating vehicle	litre	688165.49	498573.04	535227.05	1006707.40	1475578.00
Total kilometers operated	Km	2144602.5	1738281	1646413	3731662	4507894
Kilometers operated by vehicles that did not draw oil from depot	Km	262267	166686	68076	5080	36313
No. Of vehicles that operated but did not draw oil from depot.		11	8	3	8	57
Effective KMPL of vehicles operated.	Km/l	2.74	3.15	2.95	3.70	3.03
All India average		4.73	4.85	4.94		

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1

The above table reveals the following:

- The effective KMPL of the vehicles operated by the Company was between 2.27 to 3.70 during the last five years. This was below the all India average of comparative years. The Company had not fixed any target/ norms.
- During the three years 2006-09 the Company had issued 29,869 litres of HSD to 51 buses prior to their commercial operation at cost of Rs. 9.54 lakh. The Company had not fixed any norms for standard consumption under similar circumstances. The average consumption of such fuel was 391, 732 and 117 litre per bus respectively in each of the three years.
- Again, during the five years under consideration, the Company had issued 13,460 litre of HSD to vehicles without any record of the vehicle numbers. The total cost to Company on this account was Rs. 4.38 lakh.
- Also, during these five years the Company had issued 6,89,538 litre HSD to 118 vehicles at cost of Rs. 1.73 crore against which no operations data were on record.
- 5.38 lakh kilometers were operated by 87 vehicles against which issue of fuel was not on record.

While confirming the above facts and figures, Management's reply, if any may please be made available to Audit within 3 days.

Section Officer (Com)

To
The Managing Director.
West Bengal Surface Transport Corporation Ltd.
Kolkata 7000040.

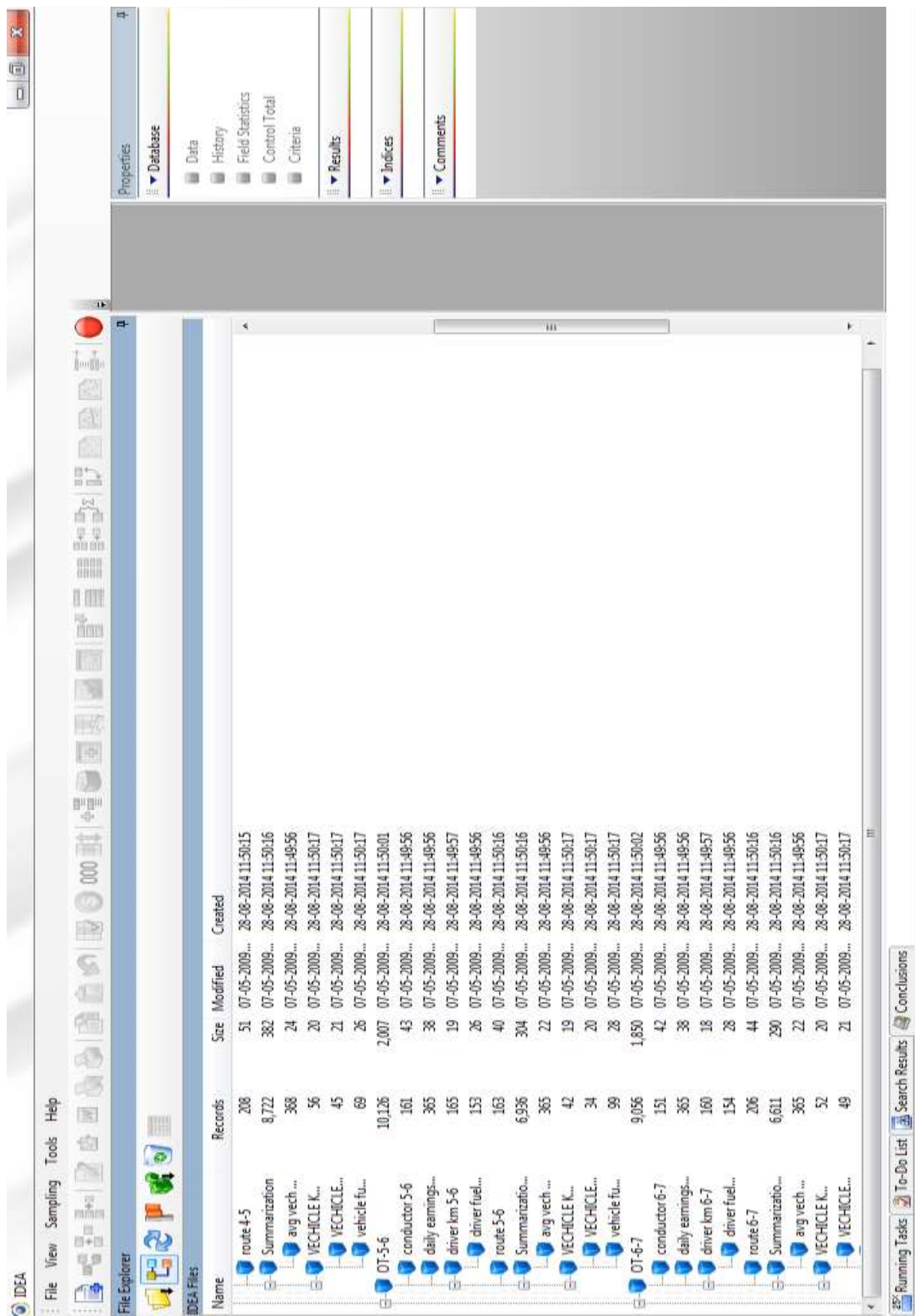
Appendix 1: Screenshot of 'OTMAST'

SER_NO	SER_DT	DR	CR	AMOUNT	DAY	KM	TRIP	TLGBL	BUS	OIL	GAR_DT	DEPOT	A_SALE	O_SALE	FLAG	TYPE
GR06	29-11-2003	281	550	1001	1	120	3	F	WB04A1364	0	29-11-2003	S	0	0	C	LO
GR07	29-11-2003	472	544	636	1	80	2	F	WB04A3971	0	29-11-2003	S	0	0	C	LO
B001	29-11-2003	433	496	832.5	1	124	1	F	WB0401956	0	29-11-2003	S	0	0	L	LO
B002	29-11-2003	117	530	982	1	124	2	F	WB0405467	0	29-11-2003	S	0	0	L	LO
B007	29-11-2003	116	391	789.5	1	70	1	F	WB0405462	0	29-11-2003	S	0	0	L	LO
B004	29-11-2003	302	617	1166	1	124	2	F	WB0402163	0	29-11-2003	S	0	0	L	LO
B005	29-11-2003	303	393	1220.5	1	124	2	F	WB0401956	0	29-11-2003	S	0	0	L	LO
B003	29-11-2003	470	378	1525	1	313	3	F	WB0405467	0	29-11-2003	S	0	0	L	LO
B006	29-11-2003	581	713	916	1	124	2	F	WB0402160	0	29-11-2003	S	0	0	L	LO
K206	29-11-2003	113	368	1895.5	1	212	2	F	WB0402159	0	29-11-2003	S	0	0		LO
S006	29-11-2003	478	633	1332	2	322	2	F	WB04A3965	0	30-11-2003	S	1119.5	0	L	LO
S047	29-11-2003	585	696	2670	2	370	2	F	WB04A3966	0	30-11-2003	S	1609	0	L	LO
GRP1	29-11-2003	481	506	972.5	2	80	2	F	WB04A3969	0	30-11-2003	S	0	0	C	LO
K201	29-11-2003	395	318	3658	2	318	3	F	WB04A3868	0	30-11-2003	S	0	0		TO
K202	29-11-2003	385	643	2379.5	2	212	2	F	WB0402158	0	30-11-2003	S	0	0		LO
K203	29-11-2003	114	542	2848.75	2	272	2.5	F	WB04A3864	0	30-11-2003	S	0	0		TO
K204	29-11-2003	453	370	2024	2	212	2	F	WB0401955	0	30-11-2003	S	0	0		LO
K205	29-11-2003	356	414	2051.5	2	212	2	F	WB04A3866	0	30-11-2003	S	0	0		TO
S046	29-11-2003	488	365	1650.5	2	296	1.5	F	WB04A3861	0	30-11-2003	S	1297.5	0		TO
G001	29-11-2003	358	495	1241	2	206	1.5	F	WB0402118	0	30-11-2003	S	147	0	C	LO
GA01	30-11-2003	539	516	1847.5	1	157	3	F	WB04C1977	0	30-11-2003	S	0	0	C	TO
GA02	30-11-2003	459	639	1701	1	157	3	F	WB04C1978	0	30-11-2003	S	0	0	C	TO
GR01	30-11-2003	735	701	1518	1	120	3	F	WB04A3971	0	30-11-2003	S	0	0	C	LO
GR02	30-11-2003	712	708	1163.5	1	120	3	F	WB04A1364	0	30-11-2003	S	0	0	C	LO
GR03	30-11-2003	751	644	1510.5	1	120	3	F	WB04A3965	0	30-11-2003	S	0	0	C	LO
GR04	30-11-2003	737	544	920.5	1	100	2.5	F	WB04A3296	0	30-11-2003	S	0	0	C	LO
GA03	30-11-2003	655	553	1635	1	157	3	F	WB04C1977	0	30-11-2003	S	0	0	C	TO

Appendix 2: Screen shot of 'FUELMAST'

VHNO	FDATE	FUEL	KM	DRNO	ISSCD	TYPE	PUMP	DEPOT	SHIFT	FL_ORG	REMARKS
WB04C1977	18-02-2009	126	0	581	623	T	SALT LAK SLD		A	IOC	
WB23B3023	18-02-2009	128	64795	361	623	L	SALT LAK SLD		A	IOC	
WB23B1862	18-02-2009	123	170123	712	623	T	SALT LAK SLD		A	IOC	
WB23B5252	18-02-2009	109	266995	95	623	L	SALT LAK SLD		A	IOC	
WB23B3610	18-02-2009	122	76123	673	623	T	SALT LAK SLD		A	IOC	
WB04C1978	18-02-2009	135	425647	608	468	T	SALT LAK SLD		A	IOC	
WB23B4351	18-02-2009	118	73397	678	468	L	SALT LAK SLD		A	IOC	
WB04C1979	18-02-2009	98	0	663	468	T	SALT LAK SLD		A	IOC	
WB23B5349	18-02-2009	131	41058	690	468	L	SALT LAK SLD		A	IOC	
WB23B3501	18-02-2009	90	108888	460	468	T	SALT LAK SLD		A	IOC	
WB04C1982	18-02-2009	111	0	352	468	T	SALT LAK SLD		A	IOC	
WB23B4808	18-02-2009	61	0	605	468	L	SALT LAK SLD		A	IOC	
WB23B4807	18-02-2009	69	27409	363	468	L	SALT LAK SLD		A	IOC	
WB04C1980	18-02-2009	151	349475	674	468	T	SALT LAK SLD		A	IOC	
WB23B4868	18-02-2009	69	42684	360	468	L	SALT LAK SLD		A	IOC	
WB23B5006	18-02-2009	112	37435	111	468	L	SALT LAK SLD		A	IOC	
WB23B4806	18-02-2009	84	0	569	468	L	SALT LAK SLD		A	IOC	
WB23B1861	18-02-2009	96	145583	312	468	T	SALT LAK SLD		A	IOC	
WB23B4862	18-02-2009	48	41471	583	468	L	SALT LAK SLD		A	IOC	
WB23B5249	18-02-2009	88	39768	475	468	L	SALT LAK SLD		A	IOC	
WB23B0637	18-02-2009	123	182763	112	256	T	SALT LAK SLD		A	BP	
WB23B4867	18-02-2009	43	44305	665	256	L	SALT LAK SLD		A	BP	
WB23B4657	18-02-2009	45	46581	466	256	L	SALT LAK SLD		A	BP	
WB23B4810	18-02-2009	74	0	738	256	L	SALT LAK SLD		A	BP	
WB23B5350	18-02-2009	73	44101	571	256	L	SALT LAK SLD		A	BP	
WB23B5253	18-02-2009	54	32975	658	256	L	SALT LAK SLD		A	BP	
WB04C2637	18-02-2009	90	39025	112	256	T	SALT LAK SLD		A	BP	

Appendix 3: Screen shot of the IDEA analysis files



Appendix 4: IDEA screenshot showing vehicle wise fuel issued during 2008-09

The screenshot displays the IDEA software interface. On the left, a File Explorer window shows the project structure with folders for 'FUEL for idea-4-5' through 'FUEL for idea-8-9', 'driver fuel 8-9', 'vehicle fuel 8-9', 'OT-4-5' through 'OT-8-9', 'daily earnings...', 'OTMAST', 'OTMAST 4-9', 'bus wise k...', 'VECHICLE...', and 'services-Sheet2'. The main window shows a table titled 'vehicle fuel 8-9' with the following data:

V/HNO	NO_OF_RECS	FUEL_SUM
1	153	8,283.00
2	1	84.00
3	1	21.00
4	1	28.00
5	1	28.00
6	1	33.00
7	1	41.00
8	1	80.00
9	1	3.00
10	49	918.00
11	1	50.00
12	1	23.00
13	14	162.00
14	1	22.00
15	1	88.00
16	5	467.00
17	26	1,936.00
18	31	2,596.00
19	37	3,090.00
20	44	3,348.00
21	29	2,243.00
22	35	3,071.00
23	32	2,361.00
24	15	1,294.00
25	25	1,769.00
26	21	887.00
27	28	1,871.00
28	2	72.00
29	49	1,731.00
30	104	3,487.00
31	10	421.00
32	55	1,675.00
33	150	15,529.00
34	172	18,057.00
35	167	15,438.00

At the bottom right, the status bar indicates: Working Folder: F:\CASE STUDY\OT and FUEL, Number of Records: 155, Disk Space: 73.69 G. The bottom left corner shows '28: Running Tasks', 'To-Do List', 'Search Results', and 'Conclusions'. A note at the bottom left says 'For Help, press F1'.

Appendix 5: IDEA screenshot showing bus wise Km operated during 2004-09

The screenshot displays the IDEA software interface. On the left, a File Explorer shows a tree view of folders: 'IDEA Files' containing sub-folders for 'FUEL for idea-4-5' through 'FUEL for idea-8-9', 'driver fuel 8-9', 'vehicle fuel 8-9', 'OT-4-5' through 'OT-8-9', 'daily earnings...', 'OTMAST', 'OTMAST 4-9', 'bus wise k...', 'VECHICLE...', and 'services-Sheet2'. Each folder has a 'Records' count listed next to it.

The main window shows a table titled 'bus wise km operated 4-9'. The table has three columns: 'BUS', 'NO_OF_RECS', and 'KM_SUM'. The data is as follows:

BUS	NO_OF_RECS	KM_SUM
1	6	770.00
2	4	296.00
3	4	450.00
4	1	144.00
5	5	393.00
6	148	29,693.00
7	96	13,368.00
8	632	125,483.00
9	322	60,854.00
10	1	120.00
11	747	152,442.00
12	534	97,207.00
13	82	15,090.00
14	1	190.00
15	45	11,903.00
16	45	6,425.00
17	1	157.00
18	236	36,389.00
19	867	134,263.50
20	337	83,127.00
21	559	68,836.00
22	1	52.00
23	1	182.00
24	8	1,790.00
25	1	248.00
26	1	105.00
27	1	81.00
28	926	120,714.50
29	72	14,381.00
30	254	52,857.50
31	205	36,826.00
32	375	84,326.00
33	237	44,214.00
34	1170	201,181.00
35	730	140,205.00

At the bottom of the window, a status bar shows: 'Running Tasks', 'To-Do List', 'Search Results', 'Conclusions', 'Working Folder: F:\CASE STUDY\OT and FUEL', 'Number of Records: 229', and 'Disk Space: 73.69'. A note at the bottom left says 'For Help, press F1'.

Appendix 6: IDEA screenshot showing vehicle /bus no wise matching two databases for 2007-08

(Kindly observe there were buses that never operated but was issued fuel as also there were buses that operated but was issued no fuel)

The screenshot displays the IDEA software interface with a data table titled 'vehicle fuel-km 7-8'. The table has the following columns: BUS, NO_OF_RECS, KM_SUM, V/HNO, NO_OF_RECS1, and FUEL_SUM. The data is as follows:

BUS	NO_OF_RECS	KM_SUM	V/HNO	NO_OF_RECS1	FUEL_SUM
94 WB04C9660	454	58,885.00	WB04C9660	218	12,501.00
95 WB04C9661	435	55,698.00	WB04C9661	247	11,669.10
96 WB04C9662	596	65,207.00	WB04C9662	269	12,531.64
97 WB04C9663	415	54,625.50	WB04C9663	198	11,476.00
98	0	0.00	WB04C9665	1	39.00
99	0	0.00	WB04D0085	59	2,017.00
100	0	0.00	WB11A0139	60	2,062.50
101	0	0.00	WB12A4953	3	106.00
102	0	0.00	WB23-0512	125	3,863.00
103	0	0.00	WB23-7551	4	139.00
104	0	0.00	WB23A0512	1	29.00
105 WB23B0630	425	54,705.00	WB23B0630	232	14,304.00
106 WB23B0632	363	75,054.00	WB23B0632	221	20,193.00
107 WB23B0633	390	83,683.00	WB23B0633	240	22,955.00
108 WB23B0634	300	80,617.00	WB23B0634	238	24,067.00
109 WB23B0635	473	51,800.50	WB23B0635	230	12,876.00
110 WB23B0636	550	61,717.00	WB23B0636	258	16,029.00
111 WB23B0637	381	72,359.00	WB23B0637	250	23,809.00
112 WB23B0638	399	43,545.00	WB23B0638	224	13,514.00
113 WB23B1858	335	75,965.00	WB23B1858	289	28,135.45
114 WB23B1859	301	67,909.00	WB23B1859	251	24,318.00
115 WB23B1861	252	67,332.50	WB23B1861	198	20,569.00
116 WB23B1862	300	68,656.50	WB23B1862	259	25,496.00
117	0	0.00	WB23B1977	1	47.00
118	0	0.00	WB23B1978	1	71.00
119 WB23B1979	2	329.00	WB23B1979	2	155.00
120 WB23B1982	3	438.00		0	0.00
121 WB23B2158	299	71,365.00	WB23B2158	263	26,458.35
122 WB23B2160	277	72,533.00	WB23B2160	255	23,900.00
123 WB23B2161	244	67,674.00	WB23B2161	231	21,164.00
124	0	0.00	WB23B2251	1	121.00

Appendix 7: Screenshot of database of buses owned and operated by WBSTC from inception to March 2009

	BREGNNO	DT_COMM	BRGDT	BNAME	DEPOT	SEAT_HOLD	TYPE	
4	4	WB04C1977	18-11-2003	13-01-2004	TATA BS-II	S	50+1	TO
5	5	WB04C1979	20-11-2003	13-01-2004	TATA BS-II	S	50+1	TO
6	6	WB04C2638	13-01-2004	13-01-2004	TATA BS-II	S	52+1	TO
7	7	WB04C2637	13-01-2004	23-04-2004	TATA BS-II	S	52+1	TO
8	8	WB04C2639	13-01-2004	23-04-2004	TATA BS-II	S	52+1	TO
9	1	WB23B0634	11-09-2006	21-09-2006	TATA BS-II	S	51+1	TN
10	2	WB23B0633	16-09-2006	21-09-2006	TATA BS-II	S	51+1	TN
11	3	WB23B0632	22-09-2006	21-09-2006	TATA BS-II	S	51+1	TN
12	4	WB23B0636	22-09-2006	21-09-2006	LEYLAND VOLVO TYPE	S	36+1	V
13	5	WB23B0637	22-09-2006	21-09-2006	TATA BS-II	S	51+1	V
14	6	WB23B0630	23-09-2006	21-09-2006	LEYLAND VOLVO TYPE	S	36+1	V
15	7	WB23B0635	23-09-2006	21-09-2006	LEYLAND VOLVO TYPE	S	36+1	V
16	8	WB23B0638	23-09-2006	21-09-2006	LEYLAND VOLVO TYPE	S	36+1	V
17	9	WB23B1859	23-11-2006	19-02-2007	TATA BS-II	S	51+1	TN
18	10	WB23B1858	20-02-2007	19-02-2007	TATA BS-II	S	51+1	TN
19	11	WB23B1862	20-02-2007	19-02-2007	TATA BS-II	S	51+1	TN
20	12	WB04C9649	14-03-2007	17-03-2007	TATA STARBUS	S	32+1	S
21	13	WB04C9651	14-03-2007	17-03-2007	TATA STARBUS	S	32+1	S
22	14	WB04C9655	14-03-2007	17-03-2007	TATA STARBUS	S	32+1	S
23	15	WB04C9656	14-03-2007	17-03-2007	TATA STARBUS	S	32+1	S
24	16	WB04C9657	14-03-2007	17-03-2007	TATA STARBUS	S	32+1	S
25	17	WB04C9658	14-03-2007	17-03-2007	TATA STARBUS	S	32+1	S
26	18	WB04C9662	14-03-2007	17-03-2007	TATA STARBUS	S	32+1	S
27	19	WB04C9659	15-03-2007	17-03-2007	TATA STARBUS	S	32+1	S
28	20	WB04C9650	18-03-2007	17-03-2007	TATA STARBUS	S	32+1	S
29	21	WB04C9652	18-03-2007	17-03-2007	TATA STARBUS	S	32+1	S
30	22	WB04C9653	18-03-2007	17-03-2007	TATA STARBUS	S	32+1	S