Examples of SQL Queries on CC4 Phase 1 Data

1. Select all peak responses from EG-U-N1-1B for Event 1:

   Select Peak1, Peak2, Peak3 from Dynamic_data where EventNo=1 and SensorID=43200

   Result:

Peak1	Peak2	Peak3
6.77025	-12.13762	0

2. Return a list of all embedded strain gages in Test Item 1-North:

   Select * from SPU where SensorType = 'Embedded Strain Gage' and TestItemID = 'North1'

   Result:

SensorID	SensorName	SensorType	Unit	TestItemID	LocationX_FT	LocationY_FT	LocationZ_Inches	SPU	Card	Channel	CalFactorA	CalFactorB	Comment
43200	EG-U-N1-1 B	Embedded Strain Gage	microStrain	North1	338.75	-17.5	-16.61	3	2	0	0.787	0	
43202	EG-U-N1-1 T	Embedded Strain Gage	microStrain	North1	338.75	-17.5	-10.94	3	2	2	0.79	0	
43204	EG-U-N1-2 B	Embedded Strain Gage	microStrain	North1	365.25	-17.083	-16.41	3	2	4	0.804	0	
43206	EG-U-N1-2 T	Embedded Strain Gage	microStrain	North1	365.25	-17.083	-11.34	3	2	6	0.786	0	
43208	EG-U-N1-3 B	Embedded Strain Gage	microStrain	North1	369.667	-17.75	-16.27	3	2	8	0.782	0	
43210	EG-U-N1-3 T	Embedded Strain Gage	microStrain	North1	369.667	-17.75	-11	3	2	10	0.808	0	
43224	EG-O-N1-1 B	Embedded Strain Gage	microStrain	North1	338.75	-17.25		3	2	24	0.818	0	
43226	EG-O-N1-1 T	Embedded Strain Gage	microStrain	North1	338.75	-17.25		3	2	26	0.812	0	
43228	EG-O-N1-2 B	Embedded Strain Gage	microStrain	North1	364.5	-17.167	-9.3	3	2	28	0.806	0	
43230	EG-O-N1-2 T	Embedded Strain Gage	microStrain	North1	364.5	-17.167	-0.5	3	2	30	0.808	0	
43232	EG-O-N1-3 B	Embedded Strain Gage	microStrain	North1	376.5	-17.167	-9.42	3	2	32	0.817	0	
43234	EG-O-N1-3 T	Embedded Strain Gage	microStrain	North1	376.5	-17.167	-0.5	3	2	34	0.81	0	

3. Return the peak values and the dynamic sensor record for embedded strain gages in Test Item 1-North, for the first 66 passes of the vehicle, but only for events for which the wander position is Track 0. Order by event number, then by sensor number.

```
SELECT Traffic.EventNo,SPU.SensorName,Peak1,Peak2,SensorRecord
FROM Dynamic_data,SPU,Traffic,Wander
WHERE Traffic.EventNo<67
AND SPU.TestItemID='North1'
AND SPU.SensorType = 'Embedded Strain Gage'
AND Wander.TrackNo=0
AND Dynamic_data.SensorID=SPU.SensorID
AND Dynamic_data.EventNo=Traffic.EventNo
AND Traffic.SequenceNo=Wander.SequenceNo
ORDER BY Traffic.EventNo,SPU.SensorID
```

   Result:

EventNo	SensorName	Peak1	Peak2	SensorRecord
5	EG-U-N1-1 B	5.777583	-15.04801	0.5293,0.5546,0.6284,0.6783,0.7351,0.8188,0.9532,1.1959,1.4
5	EG-U-N1-1 T	18.49324	-7.453161	-1.0661,-1.3152,-2.0321,-2.4262,-2.0528,-1.3981,-1.0440,-1.12
5	EG-U-N1-2 B	6.04361	-14.3277	-0.1181,0.0259,0.2179,0.0369,-0.5661,-0.8739,-0.5058,-0.0591
5	EG-U-N1-2 T	9.583582	-5.499886	-0.0669,-0.0707,0.0869,0.0668,-0.1064,-0.1321,0.0103,0.0768,
5	EG-U-N1-3 B	6.235595	-18.93066	0.0326,-0.1858,-0.4020,-0.1806,0.2875,0.4127,0.0964,-0.1659,
5	EG-U-N1-3 T	24.62807	-8.868573	0.3968,0.1346,0.1112,0.2471,0.1948,0.0339,0.1245,0.4223,0.5
5	EG-O-N1-1 B	9.623236	-37.29768	1.6693,1.5462,1.4938,1.5126,1.6022,1.7790,2.0537,2.3021,2.3
5	EG-O-N1-1 T	40.35829	-11.04348	-1.4275,-1.2291,-1.1927,-1.3603,-1.5848,-1.7169,-1.8164,-2.02
5	EG-O-N1-2 B	14.20964	-20.5263	-0.0973,-0.3632,-0.5752,-0.3670,0.0775,0.1470,-0.2642,-0.625
5	EG-O-N1-2 T	35.79833	-10.3125	0.9281,0.1211,-0.8196,-0.8032,0.1011,0.9013,0.9671,0.6674,0

1 2 3 4 5 6 7 8 9 10 ...

Export to Excel

4. Return temperature readings from temperature sensors 1A, 1B and 1C in the overlay for the week of July 16 – 22, 2006. Order by date/time, then by sensor number.

```
SELECT mux.[SensorName] AS 'Sensor Name'
,static_data.[date_time] AS 'Date/Time'
,static_data.[reading] AS 'Temperature, degrees F' from static_data, mux
WHERE static_data.SensorID = mux.SensorID
AND mux.SensorID BETWEEN 4009 and 4011
AND static_data.date_time BETWEEN '7/17/2006' and '7/22/2006'
ORDER BY static_data.date_time, static_data.SensorID
```

Result:

Sensor Name	Date/Time	Temperature, degrees F
Th_O_1B	7/17/2006 1:30:00 AM	77.96
Th_O_1C	7/17/2006 1:30:00 AM	77.605
Th_O_1A	7/17/2006 2:30:00 AM	77.666
Th_O_1B	7/17/2006 2:30:00 AM	77.726
Th_O_1C	7/17/2006 2:30:00 AM	77.371
Th_O_1A	7/17/2006 3:00:00 AM	77.492
Th_O_1B	7/17/2006 3:00:00 AM	77.61
Th_O_1C	7/17/2006 3:00:00 AM	77.257
Th_O_1A	7/17/2006 3:30:00 AM	77.388
Th_O_1B	7/17/2006 3:30:00 AM	77.565

1 2 3 4 5 6 7 8 9 10 ...