Recommendations

Recommendations	Max RR	Place(s) Used	Comment
1. Include step in beginning of procedure to prepare Ethylization Report document for HO signature	7	Consequences: 1.1.1.1	
2. Add step in procedure to start mixer or confirm that the mixer is running.	6	Consequences: 2.9.1.1	
3. Consider adding a step to have the HO verify that the railcar is properly grounded, secured and properly isolated for off loading	6	Consequences: 8.1.1.1, 8.9.1.1, 9.9.1.1	
4. Add a step to inspect the ramp for damage before lowering onto rail car	10	Consequences: 11.9.1.1	
5. Add a step to bring tools and bucket of kerosene to the top of the railcar	8	Consequences: 12.9.1.1	
6. Add sub-step to this one with details for shutting down P-7	9	Consequences: 24.9.1.1	

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3

Section Listing

Sections	Description
1. Preparation	
2. Step 1	Ensure T-3214 is set to circulate via T-3214 fill and the 1 lead
3. Step 2	Ensure Ethyl Plant Loop is set for circulation 1 Circ to 1 Lead
4. Step 3	Establish T-3214 circulation on the 1 circ through Lead Skid Eductor
5. Step 4	Verify Tank Car number is either ECDX950 or ECDX954
6. Step 5	Ensure car is spotted correctly
7. Step 6	Inspect Lead Car for leaks or damage
8. Step 7	If lead car is ok, secure it for offloading
9. Step 8	Isolate 50 Track from switch engine
10. Step 9	Gather and inspect PPE
11. Step 10	Inspect Ramp for safe operation
12. Step 11	Inspect interior of dome to confirm that car can be offloaded
13. Step 12	Install Combination gauge
14. Step 13	Verify car has at least 3" of vacuum
15. Step 14	Connect offloading arm to car
16. Step 15	Check offloading arm for leakage
17. Step 16	Establish flow from car to Lead Skid
18. Step 17	Vent car
19. Step 18	Gas wash Lead skid
20. Step 19	Disconnect offloading arm
21. Step 20	Shutdown P-1 Lead Plant circulation
22. Step 21	Release Rail car
23. Step 22	Record closing TEL figures on TBRR 8340; Aviation Fuel Ethylization Report
24. Step 23	After 2 hours shutdown T-3214 on P- 7 through the Ethyl Plant
25. Step 24	Sample T-3214 for TEL

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3

3

Worksheets

Section: 1. Preparation
Description:
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. In a hurry	1. Serious personnel injury or death from exposure to TEL If hazardous waste drum not available, possiblity of improper disposal of waste If kerosene not on hand, possible spreading of TEL contamination	1. Refinery Tenets "Do it safely or not at all" Level of hazard is well understood by operators Checklist, with signoff on each step, is required Proper PPE is readily available and normally used. Head operator involved in preparatation to perform procedure. Head operator must sign off on Ethylization Report prior to beginning ethylization procedure Release of TEL to atmosphere must occur to incur injury	S	3 - Major	5 - Remote	7	1. Include step in beginning of procedure to prepare Ethylization Report document for HO signature

Section: 1. Preparation
Description:
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1.	1. No negative consequences						

Section: 1. Preparation
Description:
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

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Section: 1. Preparation
Description:
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A for the preparation step							

Section: 1. Preparation
Description:
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. No new consequences						

Section: 1. Preparation
Description:
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. No sequence for preparation step						

Section: 1. Preparation
Description:
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A for the preparation step							

Section: 1. Preparation
Description:
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. No sequence for preparation step						

Section: 1. Preparation
Description:
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A for the preparation step							

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Section: 2. Step 1
Description: Ensure T-3214 is set to circulate via T-3214 fill and the 1 lead
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. Blend cannot proceed if the valve is not opened						

Section: 2. Step 1
Description: Ensure T-3214 is set to circulate via T-3214 fill and the 1 lead
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No causes found							

Section: 2. Step 1
Description: Ensure T-3214 is set to circulate via T-3214 fill and the 1 lead
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 2. Step 1
Description: Ensure T-3214 is set to circulate via T-3214 fill and the 1 lead
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 2. Step 1
Description: Ensure T-3214 is set to circulate via T-3214 fill and the 1 lead
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Valve not locked open	1. Possibility of stopping a blend in progress. Possible damage to pump seal resulting in a seal leak and fire Possible personnel injury Potential line rupture and fire in the weigh tank	1. Procedure requires sign off that valve has been tagged and locked open Proper turnover between SPH opeators	S	2 - Severe	6 - Rare		

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Section: 2. Step 1
Description: Ensure T-3214 is set to circulate via T-3214 fill and the 1 lead
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
2. Valve not tagged "Blend in Progress"	1. Possibility of stopping a blend in progress. Possible damage to pump seal resulting in a seal leak and fire. Possible personnel injury Potential line rupture and fire in the weigh tank	1. Procedure requires sign off that valve has been tagged and locked open Proper turnover between SPH opeators	S	2 - Severe	6 - Rare	7	

Section: 2. Step 1
Description: Ensure T-3214 is set to circulate via T-3214 fill and the 1 lead
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Operator closes valve instead of opening it	1. Blend cannot proceed if the valve is not opened Blend delayed	1. MTF operator following standard practice for starting centrifugal pump will see low suction pressure, high discharge pressure and hear cavitation	A	6 - Incidental	3 - Seldom	8	

Section: 2. Step 1
Description: Ensure T-3214 is set to circulate via T-3214 fill and the 1 lead
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. No causes found							

Section: 2. Step 1
Description: Ensure T-3214 is set to circulate via T-3214 fill and the 1 lead
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A - This is the first step							

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Section: 2. Step 1
Description: Ensure T-3214 is set to circulate via T-3214 fill and the 1 lead
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Mixer needs to be running during blend	1. Stratification of the tank Delay completion of the blend	1. Operator runs final samples for correct specifications prior to sales	A	6 - Incidental	1 - Likely	6	2. Add step in procedure to start mixer or confirm that the mixer is running

Section: 3. Step 2
Description: Ensure Ethyl Plant Loop is set for circulation 1 Circ to 1 Lead
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Valves not set, pump not started	1. Delayed start of blend	1. Procedure in place and used by operators	A	6 - Incidental	6 - Rare	10	

Section: 3. Step 2
Description: Ensure Ethyl Plant Loop is set for circulation 1 Circ to 1 Lead
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Possible to open gas wash to A-drum or return from A-drum eductor, opening valves 17 or 18	1. No negative consequences						

Section: 3. Step 2
Description: Ensure Ethyl Plant Loop is set for circulation 1 Circ to 1 Lead
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Not all valves opened	1. Delayed start of blend No circulation in the loop Possible pump damage resulting in a seal fire and personnel injury	1. Checklist followed by operators Operators are trained on this procedure	S	4 - Moderate	5 - Remote	8	
2. Pump not started	1. Delayed start of blend No circulation in the loop	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	5 - Remote	10	

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Section: 3. Step 2
Description: Ensure Ethyl Plant Loop is set for circulation 1 Circ to 1 Lead
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. See "More" deviation							

Section: 3. Step 2
Description: Ensure Ethyl Plant Loop is set for circulation 1 Circ to 1 Lead
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. See "Less" deviation							

Section: 3. Step 2
Description: Ensure Ethyl Plant Loop is set for circulation 1 Circ to 1 Lead
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Not all valves in correct position	1. Delayed start of blend No circulation in the loop Possible pump damage resulting in a seal fire and personnel injury	1. Checklist followed by operators Operators are trained on this procedure	S	4 - Moderate	5 - Remote	8	

Section: 3. Step 2
Description: Ensure Ethyl Plant Loop is set for circulation 1 Circ to 1 Lead
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Not all valves opened	1. Delayed start of blend No circulation in the loop Possible pump damage resulting in a seal fire and personnel injury	1. Checklist followed by operators Operators are trained on this procedure All valves will be labeled with numbers used in procedure	S	4 - Moderate	5 - Remote	8	
2. Pump not started	1. Delayed start of blend No circulation in the loop	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	6 - Rare	10	
3. Wrong pump started	1. Delayed start of blend No circulation in the loop	1. Checklist followed by operators Operators are trained on this	S	4 - Moderate	5 - Remote	8	

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Section: 3. Step 2
Description: Ensure Ethyl Plant Loop is set for circulation 1 Circ to 1 Lead
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
	Possible pump damage resulting in a seal fire and personnel injury	procedure					

Section: 3. Step 2
Description: Ensure Ethyl Plant Loop is set for circulation 1 Circ to 1 Lead
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. See "Less" deviation							

Section: 3. Step 2
Description: Ensure Ethyl Plant Loop is set for circulation 1 Circ to 1 Lead
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. No missing step at this point							

Section: 4. Step 3
Description: Establish T-3214 circulation on the 1 circ through Lead Skid Eductor
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1.	1. No circulation through the lead skid Delayed blend	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	6 - Rare	10	

Section: 4. Step 3
Description: Establish T-3214 circulation on the 1 circ through Lead Skid Eductor
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Valve 18 is opened in addition to the correct valves	1. Reduced circulation rate Inability to pull vacuum on lead skid Delayed blend	1. Checklist followed by operators Operators are trained on this procedure Valves will be numbered with the number used in the procedure	A	6 - Incidental	6 - Rare	10	

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Section: 4. Step 3
Description: Establish T-3214 circulation on the 1 circ through Lead Skid Eductor
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Not all valves opened	1. Delayed start of blend No circulation in the loop Inability to pull vacuum on lead skid No reading on gages G1, G2 and /or G3 Possible pump damage resulting in a seal fire and personnel injury	1. Checklist followed by operators Operators are trained on this procedure	S	4 - Moderate	5 - Remote	8	
2. Pump not started	1. Delayed start of blend Inability to pull vacuum on lead skid No circulation in the loop	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	5 - Remote	10	

Section: 4. Step 3
Description: Establish T-3214 circulation on the 1 circ through Lead Skid Eductor
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. See "More" deviation							

Section: 4. Step 3
Description: Establish T-3214 circulation on the 1 circ through Lead Skid Eductor
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. See "Less" deviation							

Section: 4. Step 3
Description: Establish T-3214 circulation on the 1 circ through Lead Skid Eductor
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Not all valves in correct position	1. Delayed start of blend No circulation in the loop	1. Checklist followed by operators Operators are trained on this procedure	S	4 - Moderate	5 - Remote	8	

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Section: 4. Step 3
Description: Establish T-3214 circulation on the 1 circ through Lead Skid Eductor
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
	Inability to pull vacuum on lead skid No reading on gages G1, G2 and /or G3 Possible pump damage resulting in a seal fire and personnel injury						

Section: 4. Step 3
Description: Establish T-3214 circulation on the 1 circ through Lead Skid Eductor
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Operator opens valves 23 and 24 instead of valves 9 and 10	1. No circulation in the loop Delayed start of blend Inability to pull vacuum on lead skid No reading on gages G1, G2 and /or G3 Possible pump damage resulting in a seal fire and personnel injury	1. Checklist followed by operators Operators are trained on this procedure All valves will be labeled with numbers used in procedure	S	4 - Moderate	4 - Unlikely	7	
2. Operator opens valve 18 instead of vlve 17	1. No circulation in the loop Delayed start of blend Inability to pull vacuum on lead skid No reading on gages G1, G2 and /or G3 Possible pump damage resulting in a seal fire and personnel injury	1. Checklist followed by operators Operators are trained on this procedure All valves will be labeled with numbers used in procedure	S	4 - Moderate	4 - Unlikely	7	

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Section: 4. Step 3
Description: Establish T-3214 circulation on the 1 circ through Lead Skid Eductor
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. P1 circulation loop started prior to startup of P7	1. No circulation in the loop Delayed start of blend Inability to pull vacuum on lead skid No reading on gages G1, G2 and /or G3 Possible pump damage resulting in a seal fire and personnel injury	1. Checklist followed by operators Operators are trained on this procedure All valves will be labeled with numbers used in procedure	S	4 - Moderate	4 - Unlikely	7	

Section: 4. Step 3
Description: Establish T-3214 circulation on the 1 circ through Lead Skid Eductor
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. No missing step at this point							

Section: 5. Step 4
Description: Verify Tank Car number is either ECDX950 or ECDX954
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Wrong car spotted on track	1. Unknown consequences depending on contents of railcar Delay of blend	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	4 - Unlikely	9	

Section: 5. Step 4
Description: Verify Tank Car number is either ECDX950 or ECDX954
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

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Section: 5. Step 4
Description: Verify Tank Car number is either ECDX950 or ECDX954
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Same as No, don't							

Section: 5. Step 4
Description: Verify Tank Car number is either ECDX950 or ECDX954
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 5. Step 4
Description: Verify Tank Car number is either ECDX950 or ECDX954
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 5. Step 4
Description: Verify Tank Car number is either ECDX950 or ECDX954
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 5. Step 4
Description: Verify Tank Car number is either ECDX950 or ECDX954
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 5. Step 4
Description: Verify Tank Car number is either ECDX950 or ECDX954
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No negative consequences							

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Section: 5. Step 4
Description: Verify Tank Car number is either ECDX950 or ECDX954
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

Section: 6. Step 5
Description: Ensure car is spotted correctly
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Can't hook up car	1. Delayed start of blend	1. Switching procedures for spotting cars in the refinery	A	6 - Incidental	3 - Seldom	8 [illegible]	

Section: 6. Step 5
Description: Ensure car is spotted correctly
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 6. Step 5
Description: Ensure car is spotted correctly
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Same as No, don't							

Section: 6. Step 5
Description: Ensure car is spotted correctly
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 6. Step 5
Description: Ensure car is spotted correctly
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

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Section: 6. Step 5
Description: Ensure car is spotted correctly
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 6. Step 5
Description: Ensure car is spotted correctly
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 6. Step 5
Description: Ensure car is spotted correctly
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 6. Step 5
Description: Ensure car is spotted correctly
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

Section: 7. Step 6
Description: Inspect Lead Car for leaks or damage
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Un-noticed damaged rail	1. Continuing loss of containment of TEL Personnel injury	1. Checklist followed by operators Operators are trained on this procedure	S	4 - Moderate	5 - Remote	8	

Section: 7. Step 6
Description: Inspect Lead Car for leaks or damage
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

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Section: 7. Step 6
Description: Inspect Lead Car for leaks or damage
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 7. Step 6
Description: Inspect Lead Car for leaks or damage
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 7. Step 6
Description: Inspect Lead Car for leaks or damage
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 7. Step 6
Description: Inspect Lead Car for leaks or damage
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 7. Step 6
Description: Inspect Lead Car for leaks or damage
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 7. Step 6
Description: Inspect Lead Car for leaks or damage
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

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Section: 7. Step 6
Description: Inspect Lead Car for leaks or damage
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 8. Step 7
Description: If lead car is ok, secure it for offloading
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Inattention, hurried	1. Rail car can move during offloading resulting in TEL release Possibility of static charge buildup resulting in a fire	1. Checklist followed by operators Operators are trained on this procedure	S	2 - Severe	5 - Remote	6	3. Consider adding a step to have the HO verify that the railcar is properly grounded, secured and properly isolated for off loading

Section: 8. Step 7
Description: If lead car is ok, secure it for offloading
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 8. Step 7
Description: If lead car is ok, secure it for offloading
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Same as No, don't							

Section: 8. Step 7
Description: If lead car is ok, secure it for offloading
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

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Section: 8. Step 7
Description: If lead car is ok, secure it for offloading
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Same as No, don't							

Section: 8. Step 7
Description: If lead car is ok, secure it for offloading
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 8. Step 7
Description: If lead car is ok, secure it for offloading
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 8. Step 7
Description: If lead car is ok, secure it for offloading
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 8. Step 7
Description: If lead car is ok, secure it for offloading
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Inattention, hurried	1. Rail car can move during offloading resulting in TEL release Possibility of static charge buildup resulting in a fire	1. Checklist followed by operators Operators are trained on this procedure	S	2 - Severe	5 - Remote	6	3. Consider adding a step to have the HO verify that the railcar is properly grounded, secured and properly isolated for off loading

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Section: 9. Step 8
Description: Isolate 50 Track from switch engine
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1.	1. Possible to accidently move another rail car to the track. Potential to disrupt offloading operation with opotential for release of TEL to atmosphere and personnel injury or death	1. Checklist followed by operators Operators are trained on this procedure The track is not used for anything other TEL railcars		3 - Major	4 - Unlikely	6	

Section: 9. Step 8
Description: Isolate 50 Track from switch engine
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. No causes found							

Section: 9. Step 8
Description: Isolate 50 Track from switch engine
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 9. Step 8
Description: Isolate 50 Track from switch engine
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 9. Step 8
Description: Isolate 50 Track from switch engine
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Same as No, don't							

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Section: 9. Step 8
Description: Isolate 50 Track from switch engine
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. If railcar has been spotted and isolated, an operator could possibly open the track to switching when preparing to start a blend	1. Possible to accidently move another rail car to the track. Potential to disrupt offloading operation with opotential for release of TEL to atmosphere and personnel injury or death	1. Checklist followed by operators Operators are trained on this procedure The track is not used for anything other TEL railcars	S	3 - Major	4 - Unlikely	6	

Section: 9. Step 8
Description: Isolate 50 Track from switch engine
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 9. Step 8
Description: Isolate 50 Track from switch engine
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. No negative consequences							

Section: 9. Step 8
Description: Isolate 50 Track from switch engine
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1.	1. Possible to accidently move another rail car to the track. Potential to disrupt offloading operation with opotential for release of TEL to atmosphere and personnel injury or death	1. Checklist followed by operators Operators are trained on this procedure The track is not used for anything other TEL railcars	S	3 - Major	4 - Unlikely	6	3. Consider adding a step to have the HO verify that the railcar is properly grounded, secured and properly isolated for off loading

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Section: 10. Step 9
Description: Gather and inspect PPE
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1.	1. Personnel exposure to TEL resulting injury or death	1. Checklist followed by operators Operators are trained on this procedure PPE is readily accessible	S	3 - Major	4 - Unlikely	6	

Section: 10. Step 9
Description: Gather and inspect PPE
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 10. Step 9
Description: Gather and inspect PPE
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 10. Step 9
Description: Gather and inspect PPE
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. No causes found							

Section: 10. Step 9
Description: Gather and inspect PPE
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Not all PPE is donned for some reason	1. Personnel exposure to TEL resulting injury or death	1. Checklist followed by operators Operators are trained on this procedure PPE is readily accessible	S	3 - Major	4 - Unlikely	6	

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Section: 10. Step 9
Description: Gather and inspect PPE
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 10. Step 9
Description: Gather and inspect PPE
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Not Likely							

Section: 10. Step 9
Description: Gather and inspect PPE
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No negative consequences							

Section: 10. Step 9
Description: Gather and inspect PPE
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

Section: 11. Step 10
Description: Inspect Ramp for safe operation
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. Operator unable to get on railcar Blend delayed	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	6 - Rare	10	

Section: 11. Step 10
Description: Inspect Ramp for safe operation
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No negative consequences							

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Section: 11. Step 10
Description: Inspect Ramp for safe operation
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 11. Step 10
Description: Inspect Ramp for safe operation
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 11. Step 10
Description: Inspect Ramp for safe operation
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. Operator unable to get on railcar Blend delayed	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	6 - Rare	10	

Section: 11. Step 10
Description: Inspect Ramp for safe operation
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 11. Step 10
Description: Inspect Ramp for safe operation
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 11. Step 10
Description: Inspect Ramp for safe operation
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No negative consequences							

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Section: 11. Step 10
Description: Inspect Ramp for safe operation
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Ramp could be damaged	1. Can't access the top of the railcar Delayed blend	1.	A	6 - Incidental	6 - Rare	10	4. Add a step to inspect the ramp for damage before lowering onto rail car

Section: 12. Step 11
Description: Inspect interior of dome to confirm that car can be offloaded
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1.	1. Delayed blend	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	6 - Rare	10	

Section: 12. Step 11
Description: Inspect interior of dome to confirm that car can be offloaded
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 12. Step 11
Description: Inspect interior of dome to confirm that car can be offloaded
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 12. Step 11
Description: Inspect interior of dome to confirm that car can be offloaded
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Not Likely							

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Section: 12. Step 11
Description: Inspect interior of dome to confirm that car can be offloaded
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Does not retain information card	1. Unable to confirm that the correct material was beinded Unable to confirm the quantity of material blended Potential to contaminate a full tank of avgas	1. Checklist followed by operators Operators are trained on this procedure Avgas is tested prior to shipment to public	A	4 - Moderate	4 - Unlikely	7	

Section: 12. Step 11
Description: Inspect interior of dome to confirm that car can be offloaded
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 12. Step 11
Description: Inspect interior of dome to confirm that car can be offloaded
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 12. Step 11
Description: Inspect interior of dome to confirm that car can be offloaded
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 12. Step 11
Description: Inspect interior of dome to confirm that car can be offloaded
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Tools and Kerosene not brought to top of railcar	1. Potential personnel injury	1. Checklist followed by operators Operators are trained on this procedure	S	5 - Minor	4 - Unlikely	8	5. Add a step to bring tools and bucket of kerosene to the top of the railcar

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Section: 13. Step 12
Description: Install Combination gauge
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. Gage not installed	1. Potential for connecting to railcar and venting a car under pressure Potential personnel injury or death Potential environmental release	1. Checklist followed by operators Operators are trained on this procedure	S	3 - Major	4 - Unlikely	6	

Section: 13. Step 12
Description: Install Combination gauge
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 13. Step 12
Description: Install Combination gauge
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 13. Step 12
Description: Install Combination gauge
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

Section: 13. Step 12
Description: Install Combination gauge
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix S	Risk Matrix L	Risk Matrix RR	Recommendations
1. N/A							

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Section: 13. Step 12
Description: Install Combination gauge
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 13. Step 12
Description: Install Combination gauge
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 13. Step 12
Description: Install Combination gauge
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 13. Step 12
Description: Install Combination gauge
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

Section: 14. Step 13
Description: Verify car has at least 3" of vacuum
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Vacuum not verified	1. Potential for connecting to railcar and venting a car under pressure Potential personnel injury or death Potential environmental release	1. Checklist followed by operators Operators are trained on this procedure	S	3 - Major	4 - Unlikely	6	

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Section: 14. Step 13
Description: Verify car has at least 3" of vacuum
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 14. Step 13
Description: Verify car has at least 3" of vacuum
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Vacuum less than 3"	1. Car is returned to supplier Delayed blend	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	6 - Rare	10	

Section: 14. Step 13
Description: Verify car has at least 3" of vacuum
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 14. Step 13
Description: Verify car has at least 3" of vacuum
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Operator does not close vent valve on combination gage before opening the railcar vent	1. Potential for connecting to railcar and venting a car under pressure Potential personnel injury or death Potential environmental release	1. Checklist followed by operators Operators are trained on this procedure	S	3 - Major	4 - Unlikely	6	

Section: 14. Step 13
Description: Verify car has at least 3" of vacuum
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Same as No, don't							

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Section: 14. Step 13
Description: Verify car has at least 3" of vacuum
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 14. Step 13
Description: Verify car has at least 3" of vacuum
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Not possible to do prior to previous step							

Section: 14. Step 13
Description: Verify car has at least 3" of vacuum
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

Section: 15. Step 14
Description: Connect offloading arm to car
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. Delayed blend	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	6 - Rare	10	

Section: 15. Step 14
Description: Connect offloading arm to car
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

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Section: 15. Step 14
Description: Connect offloading arm to car
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Operator does not wait for a full minute before removing cover plate from offloading arm or cover plate on railcar liquid line valve	1. Potential for minor release and personnel exposure to TEL	1. Checklist followed by operators Operators are trained on this procedure	S	5 - Minor	3 - Seldom	7	

Section: 15. Step 14
Description: Connect offloading arm to car
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 15. Step 14
Description: Connect offloading arm to car
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Kerosene bucket not in place	1. Personnel exposure to TEL	1. Checklist followed by operators Operators are trained on this procedure	S	5 - Minor	3 - Seldom	7	
2. Gasket not replaced or bolts not properly tightened	1. Personnel exposure to TEL Loss of vacuum Delayed blend	1. Checklist followed by operators Operators are trained on this procedure	S	5 - Minor	3 - Seldom	7	

Section: 15. Step 14
Description: Connect offloading arm to car
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

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Section: 15. Step 14
Description: Connect offloading arm to car
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 15. Step 14
Description: Connect offloading arm to car
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Operator could connect the offloading arm before installing the combination gage	1. Potential personnel injury or death Potential environmental release	1. Checklist followed by operators Operators are trained on this procedure	S	3 - Major	4 - Unlikely	6	

Section: 15. Step 14
Description: Connect offloading arm to car
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

Section: 16. Step 15
Description: Check offloading arm for leakage
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Arm not checked for leakage	1. Loss of vacuum in system Potential personnel exposure when line is gas wahed later and environmental release Delayed blend	1. Checklist followed by operators Operators are trained on this procedure	S	5 - Minor	6 - Rare	10	

Section: 16. Step 15
Description: Check offloading arm for leakage
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

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Section: 16. Step 15
Description: Check offloading arm for leakage
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 16. Step 15
Description: Check offloading arm for leakage
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 16. Step 15
Description: Check offloading arm for leakage
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Same as No, don't							

Section: 16. Step 15
Description: Check offloading arm for leakage
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Same as No, don't							

Section: 16. Step 15
Description: Check offloading arm for leakage
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 16. Step 15
Description: Check offloading arm for leakage
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. The check for vacuum is done prior to connecting the offloading arm to the railcar	1. The connection of the arm the railcar will not be tested for tight seal	1. Checklist followed by operators Operators are trained on this procedure	S	5 - Minor	4 - Unlikely	8	

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Section: 16. Step 15
Description: Check offloading arm for leakage
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

Section: 17. Step 16
Description: Establish flow from car to Lead Skid
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Flow not established	1. Delayed blend	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	6 - Rare	10	

Section: 17. Step 16
Description: Establish flow from car to Lead Skid
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Valve 2 could be opened and bypass the flow volume meter	1. Unknown quantity of TEL received in the blend	1. Railcar is ordered with the correct amount of TEL for one blend	A	6 - Incidental	4 - Unlikely	9	

Section: 17. Step 16
Description: Establish flow from car to Lead Skid
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 17. Step 16
Description: Establish flow from car to Lead Skid
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

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Section: 17. Step 16
Description: Establish flow from car to Lead Skid
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Same as No, don't							

Section: 17. Step 16
Description: Establish flow from car to Lead Skid
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 17. Step 16
Description: Establish flow from car to Lead Skid
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Gas wash could be opened to railcar if valve 8 and 45 are opened	1. Pressurize the railcar and the offloading arm with avgas Potential to overfill the railcar and release avgas and TEL to atmosphere an result in personnel injury	1. Checklist followed by operators Operators are trained on this procedure	S	4 - Moderate	3 - Seldom	6	

Section: 17. Step 16
Description: Establish flow from car to Lead Skid
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Flow established before arm checked for leakage	1. Loss of vacuum in system Potential personnel exposure when gas washing system later and environmental release Delayed blend	1. Checklist followed by operators Operators are trained on this procedure	S	5 - Minor	6 - Rare	10	

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Section: 17. Step 16
Description: Establish flow from car to Lead Skid
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

Section: 18. Step 17
Description: Vent car
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. Transfer will stop at some point Delayed blend	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	6 - Rare	10	

Section: 18. Step 17
Description: Vent car
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 18. Step 17
Description: Vent car
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 18. Step 17
Description: Vent car
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 18. Step 17
Description: Vent car
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Same as No, don't							

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Section: 18. Step 17
Description: Vent car
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 18. Step 17
Description: Vent car
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 18. Step 17
Description: Vent car
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No negative consequences							

Section: 18. Step 17
Description: Vent car
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

Section: 19. Step 18
Description: Gas wash Lead skid
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. TEL remains in the piping loop Risk of corrosion Risk of personnel exposure if there is a leak	1. Checklist followed by operators Operators are trained on this procedure	S	5 - Minor	5 - Remote	9	

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Section: 19. Step 18
Description: Gas wash Lead skid
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. May gas wash the railcar	1. No negative consequences						

Section: 19. Step 18
Description: Gas wash Lead skid
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 19. Step 18
Description: Gas wash Lead skid
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 19. Step 18
Description: Gas wash Lead skid
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 19. Step 18
Description: Gas wash Lead skid
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 19. Step 18
Description: Gas wash Lead skid
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Not Likely							

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Section: 19. Step 18
Description: Gas wash Lead skid
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No negative consequences							

Section: 19. Step 18
Description: Gas wash Lead skid
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

Section: 20. Step 19
Description: Disconnect offloading arm
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. Rail car could not be released back to Ethyl Corp	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	6 - Rare	10	

Section: 20. Step 19
Description: Disconnect offloading arm
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 20. Step 19
Description: Disconnect offloading arm
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 20. Step 19
Description: Disconnect offloading arm
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

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Section: 20. Step 19
Description: Disconnect offloading arm
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Operator disconnects offloading arm without establishing vacuum	1. Potential release of avgas and TEL to atmosphere and personnel injury	1. Checklist followed by operators Operators are trained on this procedure	S	5 - Minor	3 - Seldom	7	

Section: 20. Step 19
Description: Disconnect offloading arm
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 20. Step 19
Description: Disconnect offloading arm
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 20. Step 19
Description: Disconnect offloading arm
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. TEL remains in the piping loop Risk of corrosion Risk of personnel exposure if there is a leak	1. Checklist followed by operators Operators are trained on this procedure	S	5 - Minor	5 - Remote	9	

Section: 20. Step 19
Description: Disconnect offloading arm
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

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EPA

Section: 21. Step 20
Description: Shutdown P-1 Lead Plant circulation
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. Circulation continues with no negative consequences	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	2- Occasional	7	

Section: 21. Step 20
Description: Shutdown P-1 Lead Plant circulation
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 21. Step 20
Description: Shutdown P-1 Lead Plant circulation
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 21. Step 20
Description: Shutdown P-1 Lead Plant circulation
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 21. Step 20
Description: Shutdown P-1 Lead Plant circulation
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Pump blocked in	1. Possible pump damage resulting in a seal fire and personnel injury	1. Checklist followed by operators Operators are trained on this procedure	S	4 - Moderate	5 - Remote	8	

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Section: 21. Step 20
Description: Shutdown P-1 Lead Plant circulation
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 21. Step 20
Description: Shutdown P-1 Lead Plant circulation
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Inconceivable							

Section: 21. Step 20
Description: Shutdown P-1 Lead Plant circulation
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. If pump shutdown prior to disconnecting offloading arm, loss of vacuum. Could result in a small leak of TEL	1. Possible personnel exposure	1. Checklist followed by operators Operators are trained on this procedure	S	5 - Minor	4 - Unlikely	8	

Section: 21. Step 20
Description: Shutdown P-1 Lead Plant circulation
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

Section: 22. Step 21
Description: Release Rail car
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. No new blends can be started	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	6 - Rare	10	

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Section: 22. Step 21
Description: Release Rail car
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. None							

Section: 22. Step 21
Description: Release Rail car
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 22. Step 21
Description: Release Rail car
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 22. Step 21
Description: Release Rail car
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Any of sub-steps not completed	1. could result in damage to railcar, platform or switch engine	1. Checklist followed by operators Operators are trained on this procedure	A	5 - Minor	3 - Seldom	7	

Section: 22. Step 21
Description: Release Rail car
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Inconceivable							

Section: 22. Step 21
Description: Release Rail car
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Not Likely							

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Section: 22. Step 21
Description: Release Rail car
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 22. Step 21
Description: Release Rail car
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No negative consequences							

Section: 23. Step 22
Description: Record closing TEL figures on TBRR 8340; Aviation Fuel Ethylization Report
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. Loss of accounting data and payment information	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	2- Occasional	7	

Section: 23. Step 22
Description: Record closing TEL figures on TBRR 8340; Aviation Fuel Ethylization Report
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No negative consequences							

Section: 23. Step 22
Description: Record closing TEL figures on TBRR 8340; Aviation Fuel Ethylization Report
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 23. Step 22
Description: Record closing TEL figures on TBRR 8340; Aviation Fuel Ethylization Report
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

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EPA

Section: 23. Step 22
Description: Record closing TEL figures on TBRR 8340; Aviation Fuel Ethylization Report
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No negative consequences							

Section: 23. Step 22
Description: Record closing TEL figures on TBRR 8340; Aviation Fuel Ethylization Report
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 23. Step 22
Description: Record closing TEL figures on TBRR 8340; Aviation Fuel Ethylization Report
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 23. Step 22
Description: Record closing TEL figures on TBRR 8340; Aviation Fuel Ethylization Report
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Inconceivable							

Section: 23. Step 22
Description: Record closing TEL figures on TBRR 8340; Aviation Fuel Ethylization Report
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No missing step at this point							

Section: 24. Step 23
Description: After 2 hours shutdown T-3214 on P- 7 through the Ethyl Plant
Deviation: 1. NO, DONT

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. T-3214 would continue to circulate Would not be able to transfer from T-3214 to T-3191 wharf losding tank	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	4 - Unlikely	9	

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Section: 24. Step 23
Description: After 2 hours shutdown T-3214 on P- 7 through the Ethyl Plant
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 24. Step 23
Description: After 2 hours shutdown T-3214 on P- 7 through the Ethyl Plant
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 24. Step 23
Description: After 2 hours shutdown T-3214 on P- 7 through the Ethyl Plant
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 24. Step 23
Description: After 2 hours shutdown T-3214 on P- 7 through the Ethyl Plant
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 24. Step 23
Description: After 2 hours shutdown T-3214 on P- 7 through the Ethyl Plant
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 24. Step 23
Description: After 2 hours shutdown T-3214 on P- 7 through the Ethyl Plant
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

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Section: 24. Step 23
Description: After 2 hours shutdown T-3214 on P- 7 through the Ethyl Plant
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 24. Step 23
Description: After 2 hours shutdown T-3214 on P- 7 through the Ethyl Plant
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. No details on shutting down P-7	1. Potential to deadhead P-7	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	4 - Unlikely	9	6. Add sub-step to this one with details for shutting down P-7

Section: 25. Step 24
Description: Sample T-3214 for TEL
Deviation: 1. NO, DON'T

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1.	1. T-3214 can't be sold	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	6 - Rare	10	

Section: 25. Step 24
Description: Sample T-3214 for TEL
Deviation: 2. MORE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 25. Step 24
Description: Sample T-3214 for TEL
Deviation: 3. LESS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

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Section: 25. Step 24
Description: Sample T-3214 for TEL
Deviation: 4. AS WELL AS

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

Section: 25. Step 24
Description: Sample T-3214 for TEL
Deviation: 5. PART OF

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 25. Step 24
Description: Sample T-3214 for TEL
Deviation: 6. REVERSE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. N/A							

Section: 25. Step 24
Description: Sample T-3214 for TEL
Deviation: 7. OTHER THAN

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Not Likely							

Section: 25. Step 24
Description: Sample T-3214 for TEL
Deviation: 8. OUT OF SEQUENCE

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	
1. Tank sampled before 2 hours of circulation completed	1. Tank sample results would be inaccurate	1. Checklist followed by operators Operators are trained on this procedure	A	6 - Incidental	4 - Unlikely		

Section: 25. Step 24
Description: Sample T-3214 for TEL
Deviation: 9. MISSING

Causes	Consequences	Safeguards	CC	Risk Matrix			Recommendations
				S	L	RR	

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Section 1 **MANAGEMENT OF CHANGE (MOC)**

ABU:	Plant:	Year:
B&S	T&B	2007

MOC No:	Originator:	Date Issued:	Passport No:	EWO No:
17470	Young, John S.	9/5/2007		2383

Section 2 Reviewer:	MOC Category:	PSM:	MOC Type:	Expiration Date:	Other Temporary Reason
Miller, Marshall G.	Project		Permanent		

Project/Equipment Title: T&B / Ethyl Plant /Tetra Ethyl Lead Injection System

Description of Change:

Restore aviation gasoline production at the Richmond Refinery.

MOC will be required if the change will:

- ☐ Cause the use of different feed, chemicals or catalysts?
- ☐ Cause the use of different process conditions, instrumentation, process control or affect upsteam/downsteam plants?
- ☑ Cause the use of new or modified equipment [which is other than inkind]?
- ☐ Alter equipment siting, building, trailer locations, roads or fire protection?
- ☐ Require modifying existing and/or developing new procedures?

Section 2 ☐ Simultaneously Begin Construction and Start-up

Stage 1	Pre-Implementation	Dept./Person Responsible	Date Complete	Completed By	References
	Design Review	Young, John S.	9/17/2007	Young, John S.	
	Process Engineering Review				
	Instrumentation Review				
	Control System Review				
	Utilities Review				
	Environmental/Regulatory Review	Tarter, Donald J.	9/6/2007	Tarter, Donald J.	
	Safety/Regulatory Review	Sarmicanic, Peter N.	10/26/2007	Sarmicanic, Peter N.	
	Building Permits Review	Tuma, Dennis A.	10/10/2007	Tuma, Dennis A.	
	Mechanical Review				
	Inspection Review				
	Metallurgy Review				
	Contruction Review	Corn, William E.	9/27/2007	Corn, William E.	
	Leak Seal Review				
	Relief System Review				
	Infrastructure Review	Bosworth, Gregory A.	10/25/2007	Bosworth, Gregory A.	
	PHA/HSE Review	Edlinger, Donald L.	9/27/2007	Reynolds, Stacey A.	

Authorization to Implement Change (Begin Construction): Approver: Edlinger, Donald L. Date: 10/15/2007

Stage 2	Pre-Startup	Dept./Person Responsible	Date Complete	Completed By	References
	Procedures Review	Prather, Seth A.	10/25/2007	Prather, Seth A.	
	Communication/Training 2	Prather, Seth A.	10/25/2007	Prather, Seth A.	
	Pre Start-up Safety Review	Young, John S.	10/25/2007	Singleton, Daryl D.	

Authorization to Start-Up Change: Approver: Edlinger, Donald L. Date: 10/26/2007

Extension of Temporary Change Approved By:	Approver:	Expiration Date:	Extention Reason

Stage 3	Post-Startup	Dept./Person Responsible	Date Complete	Completed By	References
	Communication/Training 3	Prather, Seth A.			
	Process Safety Information	Reynolds, Stacey A.	4/10/2008	Reynolds, Stacey A.	

Change in Place - Reviews, Documentation & Testing Complete	Approver: Miller, Marshall G.	Date: 4/10/2008

MOC Cancelled:	Approver:	Date:
	Cancellation Reason:	

Note 1: Emergency request for change should be routed by the Approver on the next working day	Retain Original in Division for five Years

4

EWO

8/4/2008 3:45:43 PM

EWO #	2383	**Revision:**	0	**Created On:**	6/25/2007
Originator:	Young, John S.	**ABU:**	B&S	**Plant:**	T&B
MOC #:	17470	**Section Two Reviewer:**	Miller, Marshall G.	**Equipmen#:**	A-Drum
Passport W/O:		**Project Number:**	DWRRI-BT129	**EWO Type:**	Standard
Item:		**SAP Cost Center:**		**Status:**	Active
S/D EWO #:					

Title: T&B / Ethyl Plant /Tetra Ethyl Lead Injection System

Scope: Tetraethyl lead is stored in 'A' Drum located in the ethyl plant, behind the D&R offices. This vessel is approaching end of life, and will no longer be used to store TEL for the purpose of blending aviation gasoline. A new TEL injection system has been designed to bypass 'A' drum and inject TEL from a railcar directly into the avgas blend circulation stream. The scope of this project includes: fabrication & instalation ofl a new vacuum eductor system, identification of tie-in locations, and guidance for required structuaral steel.

- ☐ **Cause the use of different feeds, chemicals, or catalysts?**
- ☐ **Cause the use of different process conditions, instrumentation, process control, or affect upstream/downstream plants?**
- ☑ **Cause the use of new or modified equipment (which is other than in-kind)?**
- ☑ **Alter equipment siting, building, trailer locations, roads, or fire protection?**
- ☐ **Require modifying existing and/or developing new procedures?**

Technical Basis For Change: Restore aviation gasoline production at the Richmond Refinery.

Safety Operator Required? Yes **In VOC Service?** Yes **In Plant Welding?** Yes

	Person Responsible	Notified On	Completed By	Completed On
Design Review	Young, John S.	9/5/2007	Young, John S.	Young, John S.
Process Engineering Review				
Instrumentation Review				
Control System Review				
Utilities Review				
Environmental/Regulatory Review	Tarter, Donald J.	9/5/2007	Tarter, Donald J.	9/6/2007
Safety/Regulatory Review	Sarmicanic, Peter N.	10/26/2007	Sarmicanic, Peter N.	10/26/2007
Building Permits Review	Tuma, Dennis A.	9/5/2007	Tuma, Dennis A.	10/10/2007
Mechanical Review				
Inspection Review				
Metallurgy Review				
Contruction Review	Corn, William E.	9/27/2007	Corn, William E.	9/27/2007
Relief System Review				
Infrastructure Review	Bosworth, Gregory A.	10/25/2007	Bosworth, Gregory A.	10/25/2007
PHA/HSE Review	Edlinger, Donald L.	9/5/2007	Reynolds, Stacey A.	9/27/2007

Approvers Section

Facilities Coordinator:	Tuma, Dennis A.	10/10/2007	Edlinger, Donald L.	10/15/2007
Operations:	Edlinger, Donald L.	9/11/2007	Edlinger, Donald L.	9/12/2007

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EPA

EWO

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Lead Engineer:	Post, Ronald W.	10/10/2007	Post, Ronald W.	10/11/2007
Maintenance:	Corn, William E.	9/20/2007	Corn, William E.	9/27/2007

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EPA

EWO

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EWO #	2383	Revision:	0	Created On:	6/25/2007
Originator:	Young, John S.	ABU:	B&S	Plant:	T&B
MOC #:	17470	Section Two Reviewer:	Miller, Marshall G.	Equipmen#:	A-Drum
Passport W/O:		Project Number:	DWRRI-BT129	EWO Type:	Standard
Item:		SAP Cost Center:		Status:	Active
S/D EWO #:					

Title: T&B / Ethyl Plant /Tetra Ethyl Lead Injection System

Scope: Tetraethyl lead is stored in 'A' Drum located in the ethyl plant, behind the D&R offices. This vessel is approaching end of life, and will no longer be used to store TEL for the purpose of blending aviation gasoline. A new TEL injection system has been designed to bypass 'A' drum and inject TEL from a railcar directly into the avgas blend circulation stream. The scope of this project includes: fabrication & instalation off a new vacuum eductor system, identification of tie-in locations, and guidance for required structuaral steel.

- [ ] Cause the use of different feeds, chemicals, or catalysts?
- [ ] Cause the use of different process conditions, instrumentation, process control, or affect upstream/downstream plants?
- [x] Cause the use of new or modified equipment (which is other than in-kind)?
- [x] Alter equipment siting, building, trailer locations, roads, or fire protection?
- [ ] Require modifying existing and/or developing new procedures?

Technical Basis For Change: Restore aviation gasoline production at the Richmond Refinery.

Safety Operator Required? Yes | In VOC Service? Yes | In Plant Welding? Yes

	Person Responsible	Notified On	Completed By	Completed On
Design Review	Young, John S.	9/5/2007	Young, John S.	Young, John S.
Process Engineering Review				
Instrumentation Review				
Control System Review				
Utilities Review				
Environmental/Regulatory Review	Tarter, Donald J.	9/5/2007	Tarter, Donald J.	9/6/2007
Safety/Regulatory Review	Sarmicanic, Peter N.	10/26/2007	Sarmicanic, Peter N.	10/26/2007
Building Permits Review	Tuma, Dennis A.	9/5/2007	Tuma, Dennis A.	10/10/2007
Mechanical Review				
Inspection Review				
Metallurgy Review				
Contruction Review	Corn, William E.	9/27/2007	Corn, William E.	9/27/2007
Relief System Review				
Infrastructure Review	Bosworth, Gregory A.	10/25/2007	Bosworth, Gregory A.	10/25/2007
PHA/HSE Review	Edlinger, Donald L.	9/5/2007	Reynolds, Stacey A.	9/27/2007

Approvers Section

Facilities Coordinator:	Tuma, Dennis A.	10/10/2007	Edlinger, Donald L.	10/15/2007
Operations:	Edlinger, Donald L.	9/11/2007	Edlinger, Donald L.	9/12/2007

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EPA

EWO

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Lead Engineer:	Post, Ronald W.	10/10/2007	Post, Ronald W.	10/11/2007
Maintenance:	Corn, William E.	9/20/2007	Corn, William E.	9/27/2007

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EPA

Chevron **B&S-07 EWO No:**	**2383**	**Rev 0**
PLANT	T&B: Ethyl Plant	**SAP COST CENTER:**
PROJECT #:	DWRRI-BT129	**ITEM:**
PASSPORT WORK ORDER #:	26233011	**OUTAGE #:**
DESCRIPTION:	Tetra Ethyl Lead Injection System	
MOC #:	17470	

Level 1 – Management of Change Review

Will This Change:

- ☐ Yes Cause the use of different feeds, chemicals or catalysts?
- ☐ Yes Cause the use of different process conditions, process control or affect upstream/downstream plants?
- ☒ Yes Cause the use of new or modified equipment (which is other than in-kind)
- ☐ Yes Equipment siting, building, trailer locations, roads or fire protection?
- ☐ Yes Require modifying existing and/or developing new procedures?
- ☐ Yes Is this an organizational change that will affect employee emergency response?

A Level 2 review is required for any "YES" answer.

Safety Operator	In VOC Service?	In Plant Welding?
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

ENGINEER:	John S. Young	**DATE:**	9-5-07	**PHONE:**	2-2968

APPROVALS

LEAD ENGINEER:	Ron Post	**DATE:**		**PHONE:**	2-5170
OPERATIONS:	Don Edlinger	**DATE:**		**PHONE:**	2-2395
MAINTENANCE:	Mike Kinnard	**DATE:**		**PHONE:**	2-4804

1.0 SCOPE

Tetraethyl lead is stored in 'A' Drum located in the ethyl plant, behind the D&R offices. This vessel has reached end of life, and it can no longer be used to store TEL for the purpose of blending aviation gasoline. A new TEL injection system has been designed to bypass 'A' drum and inject TEL from a railcar directly into the avgas circulation stream. The scope of this project will be to fabricate and install a new vacuum eductor system that will withdraw TEL from a railcar, specify the necessary tie-ins to integrate the new piping with the existing, and the installation of structural steel.

2.0 MATERIALS

2.1 AMT Metals will procure materials and provide contracted labor under MR# 249396 for fabrication of structural members, pipe supports, grating, and guard railing.

2.2 Chevron will procure all piping materials that are shown in the piping isometric drawing attached to this package.

3.0 WORK DESCRIPTION

3.1 Civil/Structural Fabrication

3.1.1 AMT Metal Fabricators will provide material and construct platform and pipe supports according to drawings D-361588, and D-361589.

3.1.2 AMT Metal Fabricators will provide shop drawings prior to fabrication. Drawings included in EWO package.

3.1.3 Richmond City Permit requires special inspection. Contact Rhett Lari (501.715.2384) for special inspection. Hold points will include the following:

3.1.3.1 Positive Material Identification. AMT responsible for contacting inspector.

3.1.3.2 Shop fabricated items pre-painted/pre-coated. AMT responsible for contacting inspector.

3.1.4 All structural welds shall be WPS-17 or contractor equivalent.

3.1.5 Platform shall be painted according to Chevron Standard 3.1.

3.1.6 Chevron RTD will pick up platform and pipe supports at ATM shop and deliver items to job site.

3.2 Civil/Structural Steel Installation

3.2.1 JV Industrial shall be responsible for the installation of the structural platform and pipe supports.

3.2.2 Richmond City Permit requires special inspection. Contact Rhett Lari (501.715.2384) for special inspection. Hold points will include the following:
3.2.2.1 Field fit-up and bolt hole inspection. Chevron maintenance responsible for contacting inspector.

3.2.3 Refer to drawing D-361588 and D-361589 for installation instructions.

3.3 Piping Drawings
Fabrication and installation shall be performed per the following drawings:

P&ID(s):	D-361552 D-338903-3A D-338942-1A
Plan Section and Detail(s):	D-361580
Piping Isometric Detail(s):	D-361581 D-361582 D-361583 D-361584 D-361585 D-361586 D-361587

3.4 General Piping Work Requirements

3.4.1 Work shall be in accordance with the "Richmond Refinery Metals Craft Quality Assurance Procedures".

3.4.2 Field measure and verify piping dimensions prior to making any modifications.

3.2 Piping Tie-in Connection

3.2.1 JV Industrial shall perform tasks associated with tie-in connections.

3.2.2 Tie-in connections are to be made on the 1-Lead/1-Circ lines to feed avgas to the vacuum eductor, and the TEL railcar offloading line. See attached drawings.

3.2.3 Prior to any cutting, lead paint must be abated. Contact Redwood Painting to perform work.

SAFETY MOMENT

3.2.4 All demo'd piping material will be considered hazardous. Material must be cold-cut, wrapped and placed into drums provided by the Chevron Hazardous Waste Group. Contact Kerry Olson (2.3293). Confer with Operations for proper PPE.

3.3 Piping Fabrication

3.3.1 JV Industrial shall perform tasks associated with fabricating and installing the process piping for the TEL injection system.

3.3.2 All piping and fittings will be pre-painted prior to fabrication. Material is to be deliver to Redwood Painting for coating prior to being received By JVI.

3.3.3 Refer to attached drawings for piping fit up.

3.4 NDE Requirements

3.4.1 Perform necessary NDE per the Richmond Refinery "Quality Control Inspection/Repair Manual" and the Piping Classification.

3.4.2 The first pass of all welds from new to old pipe shall be ground smooth and dye checked.

3.5 Hydrotesting Requirements

3.5.1 All AB0 piping spools shall be hydro-tested at 450 psig per class instruction using fresh water medium.

3.5.2 All AF1 piping spools shall be hydro-tested at 1125 psig per class instruction using fresh water medium.

3.5.3 Use an isolation tool to test the new flange added to the existing piping.

3.5.4 Minimum duration of test is 10 minutes.

3.5.5 Company Equipment inspector or welding inspector shall witness and approve the hydrotest.

3.4 Welding Requirements

3.4.1 Use any of the following Chevron Weld Procedure Specifications or a Chevron approved contractor equivalent WPS for welding work:

For all structural welds use:

WPS 17	SMAW

For all piping welds use either:

WPS 10	SMAW
WPS 33A	GTAW/SMAW

3.5 Painting

3.5.1 All structural and piping components are to be painted according to Chevron painting specification 3.1

3.5.2 All material shall be painted tan.

4.0 ATTACHMENTS

Civil Structural Details(s):	D-361588 D-361589 2263SK-004
P&ID(s):	D-361552 D-338903-3A D-338942-1A
Plan Section and Detail(s):	D-361580
Piping Isometric Detail(s):	D-361581 D-361582 D-361583 D-361584 D-361585 D-361586 D-361587

Welding Procedure(s):	WPS-10 WPS-33A WPS-17
Chevron Standard Drawing(s):	
Standard Pipe Shoes	D-604531
Standard Pipe Leg Extensions	D-604532
Standard Valve Extensions	GB-L13963
Chevron Pipe Classification Sheet(s):	AB0 AF1

DESIGNS REVIEW CHECKLIST

You have been assigned a Design Engineering Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number	17470
Filing Reference	
Person Responsible	Young, John S.
Completed by	Young, John S.
Date Completed	9/17/2007

Project/Equipment Description:

Restore aviation gasoline production at the Richmond Refinery.

*When possible include copies of documents referenced in the summary.

CUSA-CSB-0082764
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DESIGNS REVIEW CHECKLIST

You have been assigned a Design Engineering Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number 17470
Filing Reference
Person Responsible Young, John S.
Completed by Young, John S.
Date Completed 9/17/2007

Project/Equipment Description:

Restore aviation gasoline production at the Richmond Refinery.

ENGINEERING REVIEW

- ☐ Civil & Structural
- ☐ Equipment Data Sheet
- ☐ Equipment Specification
- ☐ Fire Protection
- ☐ Hot Tap
- ☑ P&ID's Chande due to New / Modified equipment
- ☐ P&ID's Change - Field condition not matching existing P&ID
- ☐ Plot Plan
- ☐ Seismic
- ☐ SIS Updat
- ☐ Temporary Leak Repair

EQUIPMENT REVIEW

- ☐ Columns & Pressure Vessels
- ☐ Compressor, Blowers & Mechanical Equipment
- ☐ Concrete & Steel Structure, Walks and Stair
- ☐ Control Rooms & Building
- ☐ Exchangers, Condensers, Heaters & Cooling Tower
- ☐ Facilities & Siting
- ☐ Foundation
- ☐ Furances & Boilers
- ☐ Honeywell
- ☐ Honeywell Process Simulator
- ☐ HVAC
- ☐ Instrumentation
- ☐ Insulation
- ☐ Noise
- ☐ Piping
- ☐ Pumps & Drivers
- ☐ Relief & Venting Syste
- ☐ Sewers, Roads & Miscellaneous
- ☐ Tanks
- ☐ Update Refinery Relief Study
- ☐ Utility Systems

SUMMARY OF REVIEW*

The scope of this project is to implement piping modifications within the ethyl plant area of the Richmond refinery. Tie-ins will be made to the 1-lead, and 1-circ lines and a new TEL railcar off-loading eductor system will be install in lorder to by-pass the exsiting system. All piping will be of appropriate pipe class. Refer to EWO 2383 for specifics.

*When possible include copies of documents referenced in the summary.

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ENVIRONMENTAL REGULATORY REVIEW CHECKLIST

You have been assigned a Regulatory Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number	17470
Filing Reference	
Person Responsible	Tarter, Donald J.
Completed By	Tarter, Donald J.
Date Completed	9/6/2007

Project/Equipment Title:

T&B / Ethyl Plant /Tetra Ethyl Lead Injection System

CHEVRON:

Yes	No	
☐	☐	Environmental Reference Manual
☐	☐	Yellow Book

REGULATORY:

Yes	No	
☐	☐	Army Corp Permit
☐	☐	BAAQMD Air Regulations & Permits
☐	☐	Bay Conservation & Development Commission (BCDC)
☐	☐	CEQA (EIR's, etc.)
☐	☐	City of Richmond Conditional Use Permits (Land use and Hazardous Materials)
☐	☐	City of Richmond Design Review Board
☐	☐	Permit to Build and Remove Wells, County Permit Required
☐	☐	Department of Transportation (DOT)
☐	☐	EPA Benzene Neshap
☐	☐	EPA Benzene Waste (BW) NESHAP
☐	☐	EPA MACT Requirements
☐	☐	EPA New Source Performance Standards (NSPS)
☐	☐	Risk Management & Prevention Plan (RMPP)
☐	☐	RWQCB Waste Discharge Orders, EPA Consent Agreement Sites
☐	☐	RWQCB NPDES Regulations & Permits
☐	☐	RWQCB SB-1050, Waste Discharge Requirements (WDR)
☐	☐	Spill Prevention & Counter Measure Plan (SPCC)
☐	☐	Waste Regulations and Permits
☐	☐	Wharf-related agencies (SLC, USCG, OSPR, EPA)
☐	☐	Regulation 8 Organic Compounds Rule 8 Wastewater Collection and Separation Systems

SUMMARY OF REVIEW*

As previously discussed, the modification of the existing piping system does not require an air permit. New components may require monitoring by ACIG.

Review containment systems and Spill Response Plan. Upgrade/update as needed. Any releases of TEL will be a serious matter.

*When possible include copies of documents referenced in the summary.

Monday, August 04, 2008

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SAFETY/ENVIRONMEMTAL REVIEW CHECKLIST

You have been assigned a Regulatory Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number	17470
Filing Reference	
Person Responsible	Sarmicanic, Peter N.
Completed By	Sarmicanic, Peter N.
Date Completed	10/26/2007

Project/Equipment Title:

T&B / Ethyl Plant /Tetra Ethyl Lead Injection System

Yes	No	Health & Safety Regulatory Review:
☐	☑	Changes to Refinery Instructions
☐	☑	Cal OHSA Construction Activity Permits
☐	☐	Meets Legal and SID Requirements
☐	☑	Hazardous Materials Business Plan Changes
☐	☑	Special OSHA Notifications Required
☐	☑	Impacts RMP
☐	☑	Additional Record Keeping Requirements

SUMMARY OF REVIEW*

Install all new equipment in compliance with the 2007 Safety In Designs (SID) Manual.

Link to SID Manual (copy & paste into Internet Explorer Address Bar):

http://www.rlc841.chevrontexaco.net/safety/Marla%20TEST%20-%20New_Folder/ManualsGuides/SID-SU-5106.pdf

All affected employees will be trained on procedure changes as they come on shift. Health and safety hazards of the new Tetraethyl Lead (TEL) injection system will also be reviewed during this training.

*When possible include copies of documents referenced in the summary.

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BUILDING PERMITS REVIEW CHECKLIST

You have been assigned a Regulatory Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number	17470
Filing Reference	
Person Responsible	Tuma, Dennis A.
Completed By	Tuma, Dennis A.
Date Completed	10/10/2007

Project/Equipment Title:

T&B / Ethyl Plant /Tetra Ethyl Lead Injection System

Yes	No	Building Permits/Certification/Design Review
☐	☑	City of Richmond Certificate of Compliance
☑	☐	City of Richmond Building Permit
☐	☑	City of Richmond Design Review Board
☐	☑	State Department of Housing & Community Development Permit

SUMMARY OF REVIEW*

City of Richmond permit #22018331

*When possible include copies of documents referenced in the summary.

Monday, August 04, 2008

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CONSTRUCTION REVIEW CHECKLIST

You have been assigned a Construction Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number 17470
Filing Reference
Person Responsible Corn, William E.
Completed By Corn, William E.
Date Completed 9/27/2007

Project/Equipment Description:

Restore aviation gasoline production at the Richmond Refinery.

CONSTRUCTION:

- ☐ Building Permits
- ☐ Construction Limitations
- ☐ Coordination with Multiple Plant
- ☐ Coordination with Plant Protection
- ☐ Cranes
- ☐ Equipment Drawings
- ☐ Fire Protection Access/Requirement
- ☐ Honeywell
- ☐ Honeywell Process Simulator
- ☐ Hot Work
- ☐ Lay Down
- ☐ Personnel Qualification/Training
- ☐ Piles
- ☐ Plot Plan
- ☐ Restricted Area Classifications
- ☐ Schedules
- ☐ Site Specific Hazards
- ☐ Site Limitations
- ☐ Soil Removal
- ☐ Traffic Control
- ☐ Weather

SUMMARY OF REVIEW*

Went over the ewo, safety plan with op's and contractor doing the work and see no reason not to continue with project.

*When possible include copies of documents referenced in the summary.

CUSA-CSB-0082769
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INFRASTRUCTURE REVIEW CHECKLIST

You have been assigned a Utilities/Infrastructure System Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number	17470
Filing Reference	
Person Responsible	Bosworth, Gregory A.
Completed By	Bosworth, Gregory A.
Date Completed	10/25/2007

Project/Equipment Description:

Restore aviation gasoline production at the Richmond Refinery.

INFRASTRUCTURE SYSTEMS AFFECTED:

- ☐ Acid Gas
- ☐ Ammonia
- ☐ Electrical
- ☐ Flares
- ☐ Garbage
- ☐ High Pressure Firewater
- ☐ H2SO4 (Fresh/Spent) Daily I
- ☐ H2SO4 (Fresh/Spent) Daily Issues Contract Issues
- ☐ Hydrog
- ☐ Insert Gas - CO2 D
- ☐ Inert Gas - N2 D
- ☐ Information Syst
- ☐ LPG Contract Iss
- ☐ Recovered
- ☐ Roads, Bridges, Parking Areas, Weed, Buildings
- ☐ Sour Gas/Ami
- ☐ Sour Wat
- ☐ Spent Caust

Other:

SUMMARY OF REVIEW*

Extinguisher relocation specifications have been discussed as well as adding need for signage on the access path off of Standard Ave that illustrates the health hazards in the area. No additional in-plant fire fighting equipment is needed at this time.

*When possible include copies of documents referenced in the summary.

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HEALTH & SAFETY EVALUATION

Date Issued:	9/5/2007	Passport No:		MOC Number	17470
ABU:	B&S	EWO No:	2383	Filing Reference	
Plant:	T&B			Person Responsible	Edlinger, Donald L.
Section 2 Reviewer:	Miller, Marshall G.			Completed By	Reynolds, Stacey A.
Project/Equipment Title:	T&B / Ethyl Plant /Tetra Ethyl Lead Injection System			Date Completed	9/27/2007
Description:	Restore aviation gasoline production at the Richmond Refinery.				

Step 1: ☐ Notify PACE ☐ PACE Representation Present PACE Representative:

Worker's Committee Member/Steward's comments if unable to attend:

☐ Notify Trainer ☐ TrainerRepresentation Present Training Representative:

Step 2: Involve: Operations, Maintenance, Technical and others with appropriate expertise relevant to the change (CRTC, Contractors, etc)

Attendees: R.White, B.Godon, W.Wrischnik, A.Standford, M.Miller, D.Phillips, N.Ibrahim, S.Reynolds, R.Moreno

Step 3: Think about the task at hand. Discuss the existing situation. Discuss the change. Discuss the impact of the change on the existing situation. Determine the training requirements for this change.

Step 4: Training Type: 2

Develop a list of concerns, consider your options, consider your following:

*H2S *NH3 *Acid *Caustic *Benzene *Fall Protection *Staging *Scott Air *PPE *Hot Work *Confined Space Entry *Evacuation Plan *Safety Operator

Tempory system, will replace entire plant with ConnYxs Capital project. Ethyl Corp has been involved all the way. New plant will also not use a drum, off load from rail cars to blend tank using new eductor and Brody meter.

HSE Action Items

Additional Comments

CUSA-CSB-0082771
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PROCEDURE REVIEW CHECKLIST

You have been assigned a Procedure Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number	17470
Filing Reference	
Person Responsible	Prather, Seth A.
Completed By	Prather, Seth A.
Date Completed	10/25/2007

Project/Equipment Description:

Restore aviation gasoline production at the Richmond Refinery.

- ☐ Alarm Procedures
- ☐ Any Special or unique hazards
- ☐ COD/Ops Monitor
- ☐ Consequences of deviation
- ☐ Control measure to be taken if physical contact or airborne exposure occurs.
- ☐ Precautions necessay to prevent exposure, including administrative controls, engineering controls, and personnel protective equipment.
- ☐ properties of, and hazards presented by, the chemicals and operation of the process.
- ☐ References to additional procedures, such as Safe Work Practices
- ☐ Routine Duties
- ☐ Safety system and their functions
- ☐ Steps required to correct and/or avoid deviation

Steps fo each operatong Phase

- ☐ Emergency
- ☐ Normal
- ☐ Start-Up/Shutdown
- ☐ Temporary

SUMMARY OF REVIEW*

All normal procedures, checklists, routine duties and drawings affected by the changes in this system have been updated on this date.

*When possible include copies of documents referenced in the summary.

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Stage Two Training and Communication Review

8/4/2008 3:53:49 PM

- ☐ Identify the affected employees.
  - * Maintenance and Technical affected?
  - * Employee who will require training to start up the change based on the level of training.
  - * Employees who will receive training after the start up BUT before they can perform work affected by the change
- ☐ Procedures have been modified/written (Ops/SSO/Trainer)
- ☐ Identify the affected employees..
  - * Lesson plan cover sheet (includes training objective statement and list of affected employees)
  - * Procedural changes (Standing Orders, mark-ups)
  - * Flow daigrams (final or mark-ups)
- ☐ Determine level of training
- ☐ Training has been scheduled
- ☐ Affected employees have been trained in order to start up the change.

MOC No: 17470

Date Completed: 10/25/2007

Completed By: Prather, Seth A.

Person Responsible: Prather, Seth A.

Project/Equipment Title:

T&B / Ethyl Plant /Tetra Ethyl Lead Injection System

Summary of Review:

Tetraethyl lead is stored in 'A' Drum located in the ethyl plant, behind the D&R offices. This vessel is approaching end of life, and will no longer be used to store TEL for the purpose of blending aviation gasoline. A new TEL injection system has been designed to bypass 'A' drum and inject TEL from a railcar directly into the avgas blend circulation stream. The scope of this project includes: fabrication & installation of a new vacuum eductor system, identification of tie-in locations, and guidance for required structural steel. Please review the EOM for new procedures, checklists, routine duties and drawings. Operation of the Lead skid constitutes a fundamental change in the way Tetraethyl lead is introduced into the blend tank by removing the need for a weigh tank. All qualified MTF personnel will receive training on setup and operation prior to being released to operate the new facility.

APPENDIX III

PRE-START-UP SAFETY REVIEW CHECKLIST

You have been assigned a Pre Start-Up Safety Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

Passport No:	
EWO No.:	2383
MOC PSSR.:	17470.001

MOC Number	17470
Filing Reference	
Person Responsible	Young, John S.
Completed By	Singleton, Daryl D.
Date Completed	10/25/2007

Project/Equipment Description:

T&B / Ethyl Plant /Tetra Ethyl Lead Injection System

Subsystem:

NOT The PSSR facilitator shall involve employees with expertise in process operations, maintenance, and engineering, based upon their experience and understanding of the process system being evaluated.

The following requirements for PSSR shall be addressed:	Approved by:	Date
1. Has the equipment and construction been completed in accordance with the critical design specifications? Some examples of how this may be accomplished are: * Review of equipment quality assurance and inspection records. * Review of construction inspection records. * P & ID "check" after mechanical completion, and facility "walk-through" inspection. **Justification:** OK	Edlinger, Donald L.	10/25/2007
2. Are Safety, operating, manintenance, and emergency procedures in place and adequate? * The phrase "in place and adequate" means: written, reviewed, approved, and accessible to employees requiring the procedures in their work. * This does not prevent the use of "mark-up" procedures to satisfy the requirement, but these must undergo the same review and approval and training interaction as would "the final version" of the same procedure and would require rigorous control. **Justification:** OK	Edlinger, Donald L.	10/25/2007
3. Has the communication or training of affected operating, maintenance, or contract workers been completed? * Maintenace employees, contractors, and other employees whose work is affected by the change must be informed of the change and training in the impact on their job tasks before the changed equipment is started up. **Justification:** OK	Edlinger, Donald L.	10/25/2007
4. Have the quality assurance goals of mechanical integrity been met? * Ensure that changes are suitable for the intended service. * Ensure that the quality of the work is acceptable. * Ensure that the quality of the Leak Seal is acceptable. **Justification:** OK	Edlinger, Donald L.	10/25/2007
5. Have all recommendations resulting from PHA's or HSE's been addressed of resolved * Ensure tall Recommendations have been documented as addressed or resolved		

*When possible include copies of documents referenced in the summary.

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APPENDIX III

PRE-START-UP SAFETY REVIEW CHECKLIST

You have been assigned a Pre Start-Up Safety Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

Passport No:	
EWO No.:	2383
MOC PSSR.:	17470.001

MOC Number	17470
Filing Reference	
Person Responsible	Young, John S.
Completed By	Singleton, Daryl D.
Date Completed	10/25/2007

Project/Equipment Description:

T&B / Ethyl Plant /Tetra Ethyl Lead Injection System

Subsystem:

Justification:

Are there any safety-related exceptions encountered during the PSSR that require follow-up after started up? ☐ Yes

Miscellaneous Comments:

See level II PSSR # 2190

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Approval: Daryl Singleton	**Date: 7/23/2007**

Duty: **AvGas System**

Task: **Educting Blue Dye & EC5205A into an AvGas Blend**

1. Verify there is sufficient EC5205A for the blend by reading gauge glass on Tote Bin.
2. Verify there is sufficient Blue Dye for the blend by reading gauge glass on Tote Bin.

   NOTE: If there isn't enough EC5205A or Blue Dye for the mix, inform the Refine Head Operator. Do not proceed with a partial ethylization without approval.

3. Ensure that T-3214 Is set to circulate:
   - 3.1 Ensure the fill-side tank valve is open.
   - 3.2 Ensure the suction-side tank valve is open.
   - 3.3 Ensure the #1 Lead is set to the 3214 Suction Line.
   - 3.4 Ensure the 3214 Suction Line straightaway valve is blocked (at the tank).
4. Ensure the Ethyl Plant loop (1 Circ- 1 Lead) is set for circulation, (see Figure 1 – Overview of Ethyl Plant Loops):
   - 4.1 Verify that valve #14 is open.
   - 4.2 Verify that the #1 Lead straightaway valve #19 (next to Standard Rd.) is open.
5. Establish circulation through the Ethyl Plant (MTF Operator):
   - 5.1 Open boundary valve on 3214 Fill Line.
   - 5.2 Ensure boundary valve on #1 Circ Line is open.
   - 5.3 Open 3214 Suction Line to P-7 Suction Header.
   - 5.4 Open #1 Circ Line to P-7 Discharge Header.
   - 5.5 Open P-7 discharge valve and start pump.
6. Set Dye Shed eductor loop (see Figure 1 – Overview of the Ethyl Plant Loops):
   - 6.1 Open Valve #18
   - 6.2 Ensure Valve # 17 is closed.
   - 6.3 Ensure that the Dye Shed eductor inlet valve #15 is open.
   - 6.4 Ensure that the Dye Shed eductor outlet valve #16 is open.

Figure 1 – Overview of the Ethyl Plant Loops

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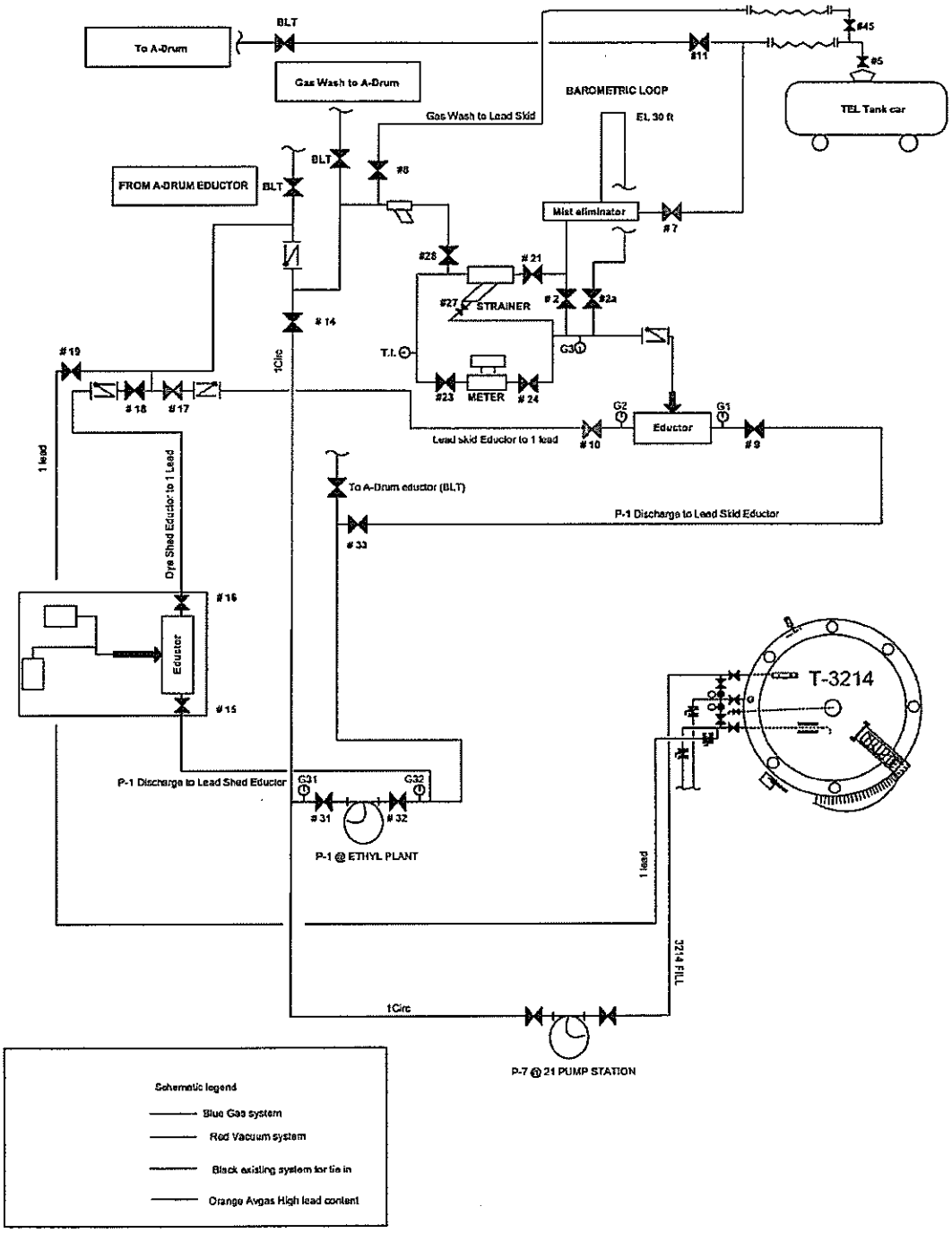
Ethyl system overview



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7. Establish Dye Shed circulation:

   7.1 Verify that the suction and discharge valves # 31 and #32 are open on P-1.

   7.2 Start P-1.

> **WARNING**
>
> **Hearing protection is required when adding Dye and Antioxidant to the AvGas blends. Performing this task repeatedly without hearing protection can result in diminished or loss of hearing.**

8. Educt the EC5205A into the blend:

> **WARNING**
>
> **EC5205A and Blue Dye are corrosive chemicals. Wear goggles and chemical gloves when using system. Contact with skin and eyes will cause irritation and burns.**

   8.1 Open Day Tank Eductor Valve.

   8.2 Set valves of the EC5205A Eduction System per Figure 2 – Valve Configuration for Filling Day Tank.

   NOTE: The numbered increments on the gauge glass equal number of pounds. The required amount of antioxidant may be greater than the capacity of the Day Tank. If this is the case then the Day Tank will have to be filled twice.

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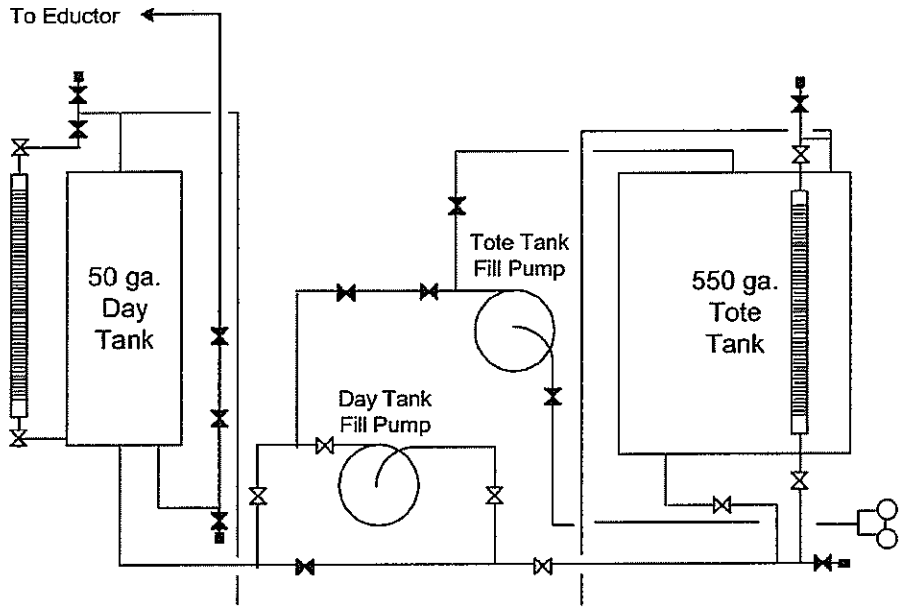
Figure 2 – Valve Configuration for Filling Day Tank



EC5205A EDUCTION SYSTEM

KEY: OPEN ⋈ CLOSED ⋈

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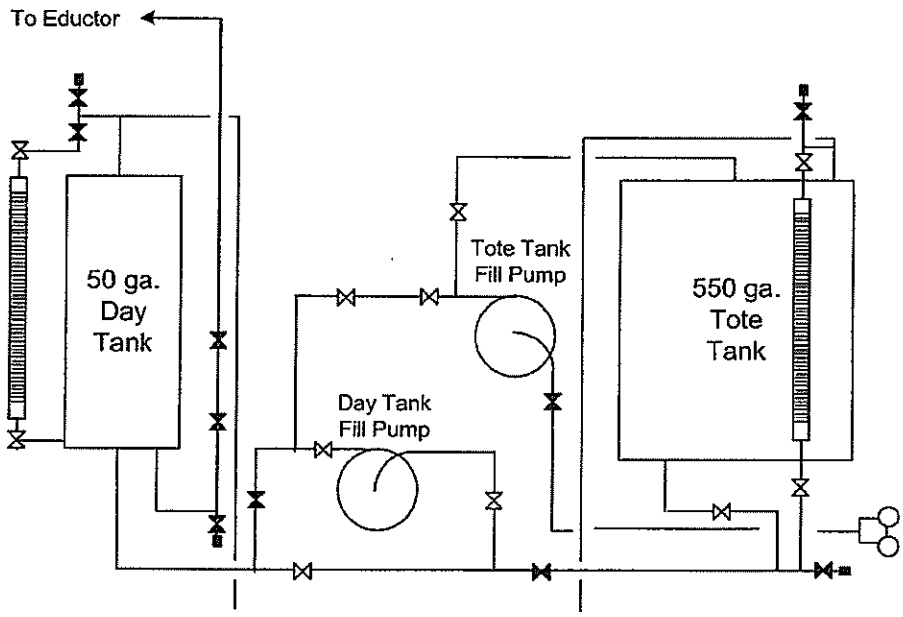
8.3 Start Day Tank Pump and fill tank with the calculated amount of EC5205A.

8.4 If too much has been transferred into Day Tank, then pump the excess back by setting valves per Figure 3 – Valve Configuration for Pumping Excess Back.

Figure 3 – Valve Configuration for Pumping Excess Back



EC5205A EDUCTION SYSTEM

KEY: OPEN ⋈ CLOSED ⋈

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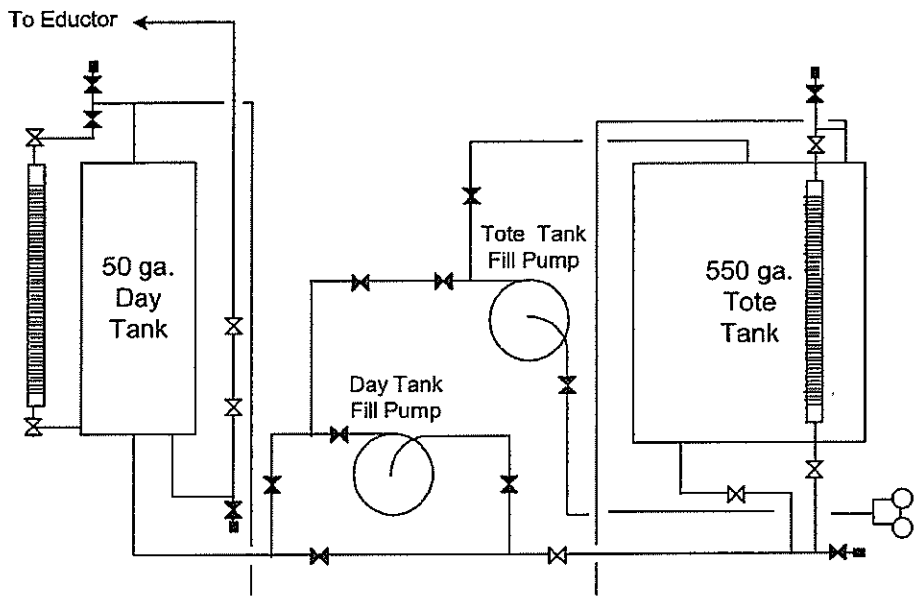
8.5 Educt EC5205A into the blend by setting valves per Figure 4 – Valve Configuration for Educting into Blend.

Figure 4 – Valve Configuration for Educting into Blend



EC5205A EDUCTION SYSTEM

KEY: OPEN ⋈ CLOSED ⋈

9. Educt Blue Dye into the blend:

9.1 Set valves of the Blue Dye Eduction System per Figure 5 – Valve configuration for Filling Day Tank.

NOTE: The numbered increments on the Blue Dye gauge glass equal number of pounds. The small increments on the gauge glass equals ¼ (.25) pound.

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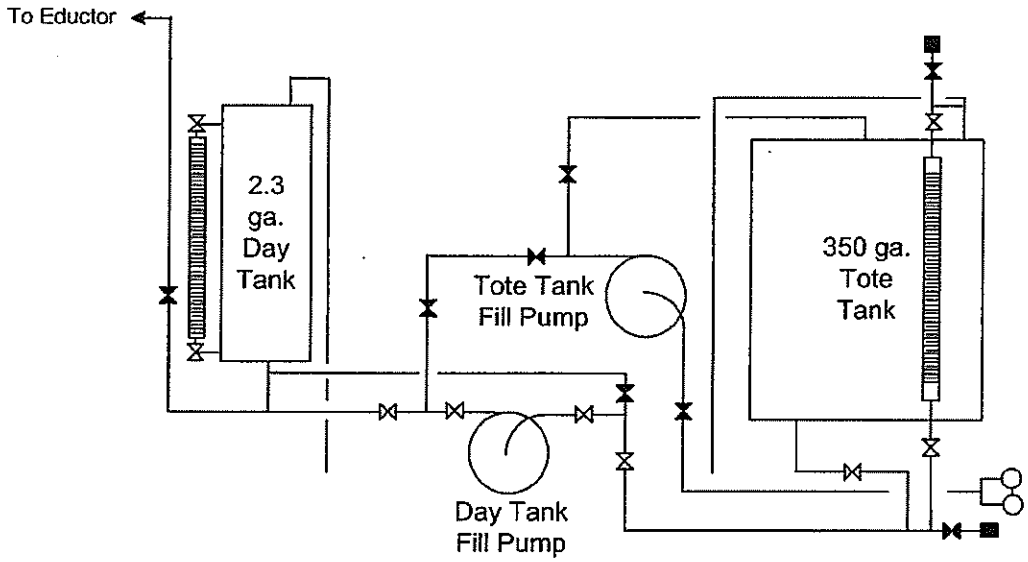
Figure 5 – Valve Configuration for Filling Day Tank



KEY: OPEN ⋈ CLOSED ⋈

BLUE DYE EDUCTION SYSTEM

9.2 Start Day Tank Pump and fill with the calculated amount of Blue Dye.

9.3 If too much has been transferred into Day Tank, then pump the excess back by setting valves per Figure 6 – Valve Configuration for Pumping Excess Back.

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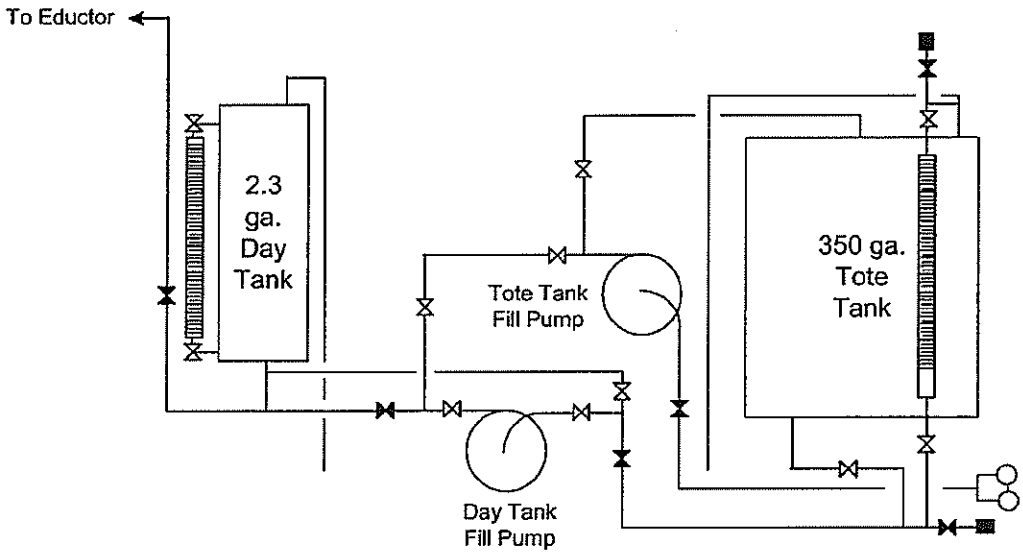
Figure 6 – Valve Configuration for Pumping Excess Back



KEY: OPEN ⋈ CLOSED ⋈

BLUE DYE EDUCTION SYSTEM

9.4 Educt Blue Dye into the blend by setting the valves per Figure 7 – Valve Configuration for Educting into Blend.

9.5 Close Day Tank Eductor Valve.

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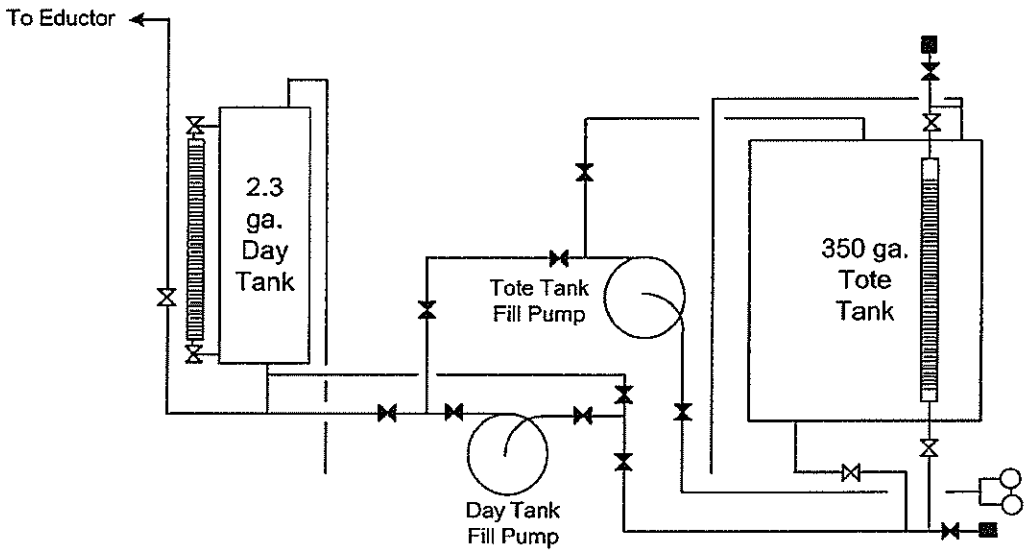
Figure 7 – Valve Configuration for Educting into Blend



KEY: OPEN ⋈ CLOSED ⋈

BLUE DYE EDUCTION SYSTEM

10. Shutdown P-1.
11. Close Valve #18
12. Add TEL to Blend using the Primary Checklist TBRN5075.
13. Notify RBO that blend has been ethylized.
14. Close out the paperwork:
    - 14.1 Record closing figures on the AvGas Ethylization Report.
    - 14.2 Record closing figures in the Lead Book.
    - 14.3 Record TEL, Dye, and Antioxidant amounts on the Pump Sheet.
15. Circulate tank 2½ hours after ethylization to ensure tank uniformity.

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When making changes to Revision Record refer to Base Oil 9000 Manual Level 2 Section SO4.5 step 5.3 for instruction.

(RIS/Other Reference Manuals/Base Oil ISO-9000 Manuals/Level 2 System Overview)

Revision Record

Date	Page	Step #	MOC#	Comments
9/30/97	All			Originally Issued.
10/19/98				Updated the drawings and converted them to VISIO.
3/16/99	5		REF99-001	Changed SS to RHO in form inset "more than 15# needs..."
5/8/02	All			Updated drawings. Separated original Job Aid into two discrete Job Aids. This reflects the two different work processes previously described in the original; i.e. calculation of additive amounts is now in Job Aid Tbr2q19j. Removed Steps for adding TEL to blend. This is covered by Normal Procedure TBRN5080 and Primary Checklist TBRP5080.
8/5/02	2			Labeled Day Tank Eductor Valve in diagram on Page 2.
	3	8.1		Added Step 8.1.
	7	9.5		Added Step 9.5.
	11	8		Changed valve #46 to valve #47.
9/23/2007	All			Updated Ethyl schematic to reflect Changes to lead system and renumbered the valves

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Info | Return

Final PSI Review

MOC Number: 17470

Completed On: 4/10/2008

Person Responsible: Reynolds, Stacey A.

Project/Equipment Titl

T&B / Ethyl Plant /Tetra Ethyl Lead Injection System

Supporting Documentatio

RI-362

Typ	Numbe	Owner	Markup Date	Final Date		Document UR
EOM	TBR2Q32J	Prather, Seth A.			Browse	\\ric841vmq3web1\psidocs$\1
EOM	TBRN5075	Prather, Seth A.			Browse	\\ric841vmq3web1\psidocs$\1
EOM	TBRN5080	Prather, Seth A.			Browse	\\ric841vmq3web1\psidocs$\1
P&ID	D-338903				Browse	http://ric841ntq3web8/DWGS/
P&ID	D-338942				Browse	http://ric841ntq3web8/DWGS/
P&ID	D-361552				Browse	http://ric841ntq3web8/DWGS/
P&ID	D-332402				Browse	http://ric841ntq3web8/DWGS/

WPEA or Section 2 Reviewer has confirmed that all PSI has been Updated and is in

Reynolds, Stacey A.

Summary of Revie

P&ID's are updated and posted to the web.

Detailed Air Monitoring Results by Substance and Employee - Chevron Custom Report

5

Sample Date Range from 08/04/1980 to 08/04/2008
Company: GLOBAL REFINING
Location: RICHMOND, CA
Substance: 1,2-DIBROMOETHANE
Approved = Yes
Rejected = No

Substance	Sample No	Sample Date	Employee Name	Job Position	Duration (min)	Sample Location	Result	Sample Type	OEL
1,2-DIBROMOETHANE									
	322256	8/12/2002	REDACTED	REPAIRMAN/FOREM	170	BLENDING AND SHIPPING	< 0.38 ppm	TWA	20.00 ppm
Comments: Removing and replacing primary									
	322257	8/12/2002		REPAIRMAN A	170	BLENDING AND SHIPPING	< 0.38 ppm	TWA	20.00 ppm
Comments: Removing and replacing primary									
	119297	9/26/1989		SALES OPERATOR	56	RICHMOND REFINERY	< 0.00 ppm	TWA	20.00 ppm
	212184	2/6/1992		OPERATOR	210	Richmond Refinery	0.02 ppm	TWA	20.00 ppm
Comments: wearing scott airpak while hooking up unloading system. job duties: setting up, hook up, monitoring process, uncoupling									

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Detailed Air Monitoring Results by Substance and Employee - Chevron Custom Report

Sample Date Range from 07/23/1960 to 07/23/2008
Company: GLOBAL REFINING
Location: RICHMOND, CA
Substance: TETRAETHYL LEAD AS PB
Approved = Yes
Rejected = No

Substance	Sample No	Sample Date	Employee Name	Job Position	Duration (min)	Sample Location	Result	Sample Type	OEL
TETRAETHYL LEAD AS PB									
	218457	5/23/1991	REDACTED	OPERATOR	245	Richmond Refinery	< 0.04 mg/m3	TWA	0.10 mg/m3
Comments: employee had already opened th				d the hoses before the pump was started					
	322252	8/12/2002		REPAIRMAN/FOREM	131	BLENDING AND SHIPPING	0.05 mg/m3	TWA	0.10 mg/m3
Comments: Removing and replacing primary				s					
	322251	8/12/2002		REPAIRMAN A	178	BLENDING AND SHIPPING	0.04 mg/m3	TWA	0.10 mg/m3
Comments: Removing and replacing primary				s.					
	119295	9/26/1989		SALES OPERATOR	56	Richmond Refinery	< 0.00 mg/m3	TWA	0.10 mg/m3
	200369	10/9/1989		SALES OPERATOR	143	RICHMOND REFINERY	< 0.00 mg/m3	TWA	0.10 mg/m3
	200371	10/9/1989		SALES OPERATOR	143	RICHMOND REFINERY	0.00 mg/m3	TWA	0.10 mg/m3
	200374	10/19/1989		SALES OPERATOR	555	RICHMOND REFINERY	< 0.00 mg/m3	TWA	0.10 mg/m3
Comments: worked overtime because of pro				n railcar					
	201801	10/19/1989		SALES OPERATOR	555	RICHMOND REFINERY	0.00 mg/m3	TWA	0.10 mg/m3
Comments: worked overtime because of prc				in railcar					
	321756	7/10/2007		TRANSFER AND BL	106	RICHMOND, CA	< 0.00/mg/m3	TWA	0.10 mg/m3
Comments: At B&S while ethylizing the avgi				Was opening an dclosing valves at the TEL A Drum.					
	212187	2/6/1992		OPERATOR	210	Richmond Refinery	0.30 mg/m3	TWA	0.10 mg/m3
Comments: wearing scott airpak while hooking up unloading system. job duties: setting up, hook up, monitoring process, uncoupling									

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Detailed Air Monitoring Results By Substance

Include UnApproved = No
Include Void = No
Sample Date from 07/23/1980 to 07/23/2008
Substance: TETRAETHYL LEAD AS PB
Company: GLOBAL REFINING

Location: RICHMOND, CA

Substance/ Agent	Sample No	Sample Date	Type	Employee Name	SEG	Duration (mins)	A V	Result	OEL	Standard Source	Limit Type	% of Limit
TETRAETHYL LEAD AS PB												
	119295	9/26/1989	P			56	<	0.0010000mg/m3	0.08000	OSHA	TWA	1.3%
	119296	9/28/1989	A	,		406		0.0010000mg/m3	0.08000	OSHA	TWA	1.3%
	200273	10/19/1989	A	,		428	<	0.004000mg/m3	0.08000	OSHA	TWA	5.0%
	200368	10/9/1989	A			153	<	0.010000mg/m3	0.08000	OSHA	TWA	12.5%
	200369	10/9/1989	P			143	<	0.003000mg/m3	0.08000	OSHA	TWA	3.8%
	200370	10/9/1989	A	,		153		0.06500mg/m3	0.08000	OSHA	TWA	81.3%
	200371	10/9/1989	P			143		0.003000mg/m3	0.08000	OSHA	TWA	3.8%
	200372	10/9/1989	A	,		428		0.010000mg/m3	0.08000	OSHA	TWA	12.5%
	200374	10/19/1989	P			555	<	0.002300mg/m3	0.08000	OSHA	TWA	2.9%
	201801	10/19/1989	P			555		0.004600mg/m3	0.08000	OSHA	TWA	5.8%
	212031	9/4/1990	A	,		298	<	0.0010000mg/m3	0.08000	OSHA	TWA	1.3%
	212032	9/4/1990	A	,		295	<	0.010000mg/m3	0.08000	OSHA	TWA	12.5%
	212254	6/7/1990	A	,		345		3.030mg/m3	0.08000	OSHA	TWA	3787.5%
	212255	6/7/1990	A	,		345		2.790mg/m3	0.08000	OSHA	TWA	3487.5%
	218264	10/4/1990	A	,		290		0.04500mg/m3	0.08000	OSHA	TWA	56.3%
	218265	10/4/1990	A	,		291		0.02400mg/m3	0.08000	OSHA	TWA	30.0%
	218457	5/23/1991	P			245	<	0.04250mg/m3	0.08000	OSHA	TWA	53.1%
	230160	6/11/1991	A	,		431	<	0.05000mg/m3	0.08000	OSHA	TWA	62.5%
	230161	6/11/1991	A	,		433	<	0.05000mg/m3	0.08000	OSHA	TWA	62.5%
	212187	2/6/1992	P			210		0.3000mg/m3	0.08000	OSHA	TWA	375.0%
	212188	2/6/1992	A	,		195		0.1600mg/m3	0.08000	OSHA	TWA	200.0%
	243677	4/4/1995	A	,		31		0.09300mg/m3	0.08000	OSHA	TWA	116.3%
	255189	3/31/1995	A	,		31		1.100mg/m3	0.08000	OSHA	TWA	1375.0%
	322251	8/12/2002	P			178		0.04120mg/m3	0.08000	OSHA	TWA	51.5%
	322252	8/12/2002	P			236		0.04620mg/m3	0.08000	OSHA	TWA	57.8%
	321751	6/21/2007	A	,		171		0.0003000mg/m3	0.08000	OSHA	TWA	0.4%
	321757	7/5/2007	A	,		124	<	0.0006100mg/m3	0.08000	OSHA	TWA	0.8%

REDACTED

Detailed Air Monitoring Results By Substance

Include UnApproved = No
Include Void = No
Sample Date from 07/23/1980 to 07/23/2008
Substance: TETRAETHYL LEAD AS PB
Company: GLOBAL REFINING

Location: RICHMOND, CA

Substance/ Agent	Sample No	Sample Date	Type	Employee Name	SEG	Duration (mins)	< >	Result	OEL	Standard Source	Limit Type	% of Limit
TETRAETHYL LEAD AS PB												
	321756	7/10/2007	P	**REDACTED**		106	<	0.0010000mg/m3	0.08000	OSHA	TWA	1.3%

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Sample #	Date	Substance	Exposure Limit *	Concentration	units	TWA	Minutes Monitored	Minutes Exposed	Smpl Type	Purpose	Division	Org Unit	Location Description
1	4/4/95	Tetraethyl Lead as Pb	0.0750	0.0930	mg/m3		31		AREA		BLENDING & SHIPPING	B&S TRANSFER & BLENDING	T-1645
2	3/31/95	Tetraethyl Lead as Pb	0.0750	1.1000	mg/m3		31		AREA		BLENDING & SHIPPING	B&S TRANSFER & BLENDING	T-1645
3	2/6/92	Tetraethyl Lead as Pb	0.0750	0.1600	mg/m3		195		AREA		BLENDING & SHIPPING	B&S TRANSFER & BLENDING	ETHYL PLANT
4	2/6/92	Tetraethyl Lead as Pb	0.0750	0.4000	mg/m3	0.3000	210	360	PERSONAL	TWA	BLENDING & SHIPPING	B&S TRANSFER & BLENDING	ETHYL PLANT
5	6/11/91	Tetraethyl Lead as Pb	0.0750	0.0500	mg/m3		431		AREA		BLENDING & SHIPPING	INACTIVE	ETHYL PLANT - H DRUM
6	6/11/91	Tetraethyl Lead as Pb	0.0750	0.0500	mg/m3		433		AREA		BLENDING & SHIPPING	INACTIVE	ETHYL PLANT - B DRUM
7	5/23/91	Tetraethyl Lead as Pb	0.0750	0.0800	mg/m3	0.0425	245	255	PERSONAL	TWA	BLENDING & SHIPPING	INACTIVE	ETHYL PLANT
8	10/4/90	Tetraethyl Lead as Pb	0.0750	0.0450	mg/m3		290		AREA		BLENDING & SHIPPING	INACTIVE	T-1645
9	10/4/90	Tetraethyl Lead as Pb	0.0750	0.0240	mg/m3		291		AREA		BLENDING & SHIPPING	INACTIVE	T-1645
10	9/4/90	Tetraethyl Lead as Pb	0.0750	0.0100	mg/m3		295		AREA		BLENDING & SHIPPING	INACTIVE	S.P. HILL-T992
11	9/4/90	Tetraethyl Lead as Pb	0.0750	0.0010	mg/m3		298		AREA		BLENDING & SHIPPING	INACTIVE	S.P. HILL-T992
12	6/7/90	Tetraethyl Lead as Pb	0.0750	3.0300	mg/m3		345		AREA		BLENDING & SHIPPING	INACTIVE	T-1444 TRANSFER & BLENDING
13	6/7/90	Tetraethyl Lead as Pb	0.0750	2.7900	mg/m3		345		AREA		BLENDING & SHIPPING	INACTIVE	T-1444 TRANSFER & BLENDING
14	10/19/89	Tetraethyl Lead as Pb	0.0750	0.0040	mg/m3		428		AREA		BLENDING & SHIPPING	INACTIVE	BLENDING & SHIPPING
15	10/19/89	Tetraethyl Lead as Pb	0.0750	0.0040	mg/m3	0.0046	555	555	PERSONAL	TWA	BLENDING & SHIPPING	INACTIVE	BLENDING & SHIPPING
16	10/19/89	Tetraethyl Lead as Pb	0.0750	0.0020	mg/m3	0.0023	555	555	PERSONAL	TWA	BLENDING & SHIPPING	INACTIVE	BLENDING & SHIPPING
17	10/9/89	Tetraethyl Lead as Pb	0.0750	0.0650	mg/m3		153		AREA		BLENDING & SHIPPING	INACTIVE	BLENDING & SHIPPING
18	10/9/89	Tetraethyl Lead as Pb	0.0750	0.0100	mg/m3		153		AREA		BLENDING & SHIPPING	INACTIVE	BLENDING & SHIPPING
19	10/9/89	Tetraethyl Lead as Pb	0.0750	0.0100	mg/m3		428		AREA		BLENDING & SHIPPING	INACTIVE	BLENDING & SHIPPING
20	10/9/89	Tetraethyl Lead as Pb	0.0750	0.0100	mg/m3	0.0030	143	143	PERSONAL	TWA	BLENDING & SHIPPING	INACTIVE	BLENDING & SHIPPING
21	10/9/89	Tetraethyl Lead as Pb	0.0750	0.0100	mg/m3	0.0030	143	143	PERSONAL	TWA	BLENDING & SHIPPING	INACTIVE	BLENDING & SHIPPING
22	9/28/89	Tetraethyl Lead as Pb	0.0750	0.0010	mg/m3		406		AREA		BLENDING & SHIPPING	INACTIVE	BLENDING & SHIPPING
23	9/26/89	Tetraethyl Lead as Pb	0.0750	0.0090	mg/m3	0.0010	56	56	PERSONAL	TWA	BLENDING & SHIPPING	INACTIVE	BLENDING & SHIPPING

*** Exposure Limit is (except where noted otherwise) the California OSHA Permissible Exposure Limit (legally required limit PEL) in the same units as the concentration**

a = AICGH (American Conference of Governmental Industrial Hygienists) Thresold Limit Value (recommended exposure limits called TLV) is used in this case since it is lower than the OSHA PEL

b = ACGIH TLV is used since it is the only exposure limit established for this substance

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Sample #	Name	Position Title	PPE	Other Protection	Operating Conditions	Exposure	Task Description
1	REDACTED				Abnormal	NORMAL	BULK
2					Abnormal	NORMAL	After one water wash of Av Gas Tank
3					Normal	NORMAL	railcar unloading at "b" drum
4		OPERATOR	Positive Pressure	RUBBER GLOVES&BOOTS,TYVEK SUIT	Normal	NORMAL	railcar unloading at "b" drum
5					Abnormal	NORMAL	Near "h" Drum
6					Abnormal	NORMAL	Near "B" Drum
7		TRAINER/OPERATOR	No Respirator Worn	TYVEK, RUBBER BOOTS	Normal	LOWER	unloading tel railcar
8					Abnormal	NORMAL	Beneath floating roof
9					Abnormal	NORMAL	Above floating & below fixed roofs
10					Abnormal	NORMAL	During the cleaning of T922
11					Abnormal	NORMAL	During the cleaning of T922
12					Normal	NORMAL	Tank was in aviation service.
13					Normal	NORMAL	Tank was in aviation service.
14					Normal	NORMAL	unloading railcar of (tel) lead
15		SALES OPERATOR	No Respirator		Normal	NORMAL	unloading railcar of (tel) lead
16		SALES OPERATOR	No Respirator		Normal	NORMAL	unloading railcar of (tel) lead
17					Normal	NORMAL	unloading railcar of (tel) lead
18					Normal	NORMAL	unloading railcar of (tel) lead
19					Normal	NORMAL	unloading railcar of (tel) lead
20		SALES OPERATOR	No Respirator		Normal	NORMAL	unloading railcar of (tel) lead
21		SALES OPERATOR	No Respirator		Normal	NORMAL	unloading railcar of (tel) lead
22					Normal	NORMAL	Above balance next to IT tank
23		SALES OPERATOR	No Respirator		Normal	NORMAL	Adding tetraethyl lead to aviation gas

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Sample #	Additional Comments	Additional Comments 2nd Line	Sampling Medium Used	Sample Collected by
1	AFTER 2nd WATER WASH AVGAS TANK- TANK COATED WITH TEFLON		Charcoal Tube	JIMMY L TERRY
2	Tank was coated with telfon. Strong Odors present in tank.		Charcoal Tube	JIMMY L TERRY
3	SAMPLING PUMP PLACED AT WORST CASE EXPOSURE AREA AT TOP OF RAILCAR	NEAR HOOK UP ASSEMBLY	Other Adsorption Tube	ARTHUR C BAGOS
4	wearing scott airpak while hooking up unloading system	job duties: setting up, hook up, monitoring process, uncoupling	Other Adsorption Tube	ARTHUR C BAGOS
5	A recent TEL spill in the area had not yet been cleaned up -- the	pump was placed downwind from spill at the railroad track end of the	Other Adsorption Tube	BONNIE L BAIRD
6	A recent TEL spill in the area had not yet been cleaned up -- the	pump was placed downwind from spill between "H" and "b" drums on the	Other Adsorption Tube	BONNIE L BAIRD
7	employee had already opened the railcar and attached the hoses before	the pump was started	Other Adsorption Tube	BONNIE L BAIRD
8	Tank was in Aviation gas service		Other Adsorption Tube	HERBERT P DAVIS
9	Tank was in Aviation gas service		Other Adsorption Tube	HERBERT P DAVIS
10	Tank was formerly in leaded gas service. Tank was about 2/3	cleaned when monitoring was done.	Other Adsorption Tube	HERBERT P DAVIS
11	Tank was formerly in leaded gas service. Tank was about 2/3	cleaned when monitoring was done.	Other Adsorption Tube	HERBERT P DAVIS
12	Samples taken after cleaning to quantify airborne lead levels.	Rubber boots, gloves and impervious clothing required for entry.	Other Adsorption Tube	HERBERT P DAVIS
13	Samples taken after cleaning to quantify airborne lead levels.	Rubber boots, gloves and impervious clothing required for entry.	Other Adsorption Tube	HERBERT P DAVIS
14	sampler on scale		Other	HERBERT P DAVIS
15	worked overtime because of problems with suction on railcar		Other	HERBERT P DAVIS
16	worked overtime because of problems with suction on railcar		Other	HERBERT P DAVIS
17	above scale next to it tank		Other	HERBERT P DAVIS
18	above scale next to it tank		Other	HERBERT P DAVIS
19	sample pump on scale		Other	HERBERT P DAVIS
20			Other	HERBERT P DAVIS
21			Other	HERBERT P DAVIS
22	Ambient air - no work in progress.		Other Adsorption Tube	HERBERT P DAVIS
23			Other Adsorption Tube	HERBERT P DAVIS

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Sample #	Start	Stop	Batch	Emp?	Contractor Company	Ser.#
1	1335	1406	LTER 9522			243677
2	1135	1206	LTER 9529			255189
3	1715	2030	ACBA 9202			212188
4	1700	2030	ACBA 9202	Y		212187
5	759	1510	BERA 9109			230160
6	801	1513	BERA 9109			230161
7	1134	1539	BERA 9109	Y		218457
8	845	1335	HPD906052			218264
9	849	1335	HPD906052			218265
10	830	1325	905407			212032
11	830	1328	905407			212031
12	750	1335	903829			212254
13	750	1335	903695			212255
14	834	1542	HPD 89-15			200273
15	830	1745	HPD 89-15	Y		201801
16	830	1745	HPD 89-15	Y		200374
17	1137	1410	HPD 89-15			200370
18	1137	1410	HPD 89-15			200368
19	830	1538	HPD 89-15			200372
20	1139	1402	HPD 89-15	Y		200369
21	1139	1402	HPD 89-15	Y		200371
22	851	1537				119296
23	1449	1545		Y		119295

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RADIOGRAPHIC THICKNESS EXAMINATION RECORD

Form07(Ja)

UNIT NO.	SYSTEM AND DWG. NO.	POINT NO.	PIPE SIZE	RT THICKNESS
20	1615-A-Drum	N2	6"	0° .50
			8"	90° .46
20	1615-A-Drum	N3	2"	0° .20
			2"	90° .13
20	1615-A-Drum	N4	6"	0° .48
			6"	90° .49

DATE: 4-28-08 Page: 1 of 1

PROJECT NO: 26231521 SITE: RICHMOND

PLANT: #20

RT CONTRACTOR: TC INSPECTION

RADIOGRAPHER: SHAWN WELLS LEVEL: II

ASSISTANT: Ernie Holloway LEVEL: I

TECHNIQUE DATA

INSPECTION SPECIFICATIONS: ASME V

RT PROCEDURE NO: REVISION: 4

SOURCE: IR 192 SOURCE ACTIVITY: 35 KV —

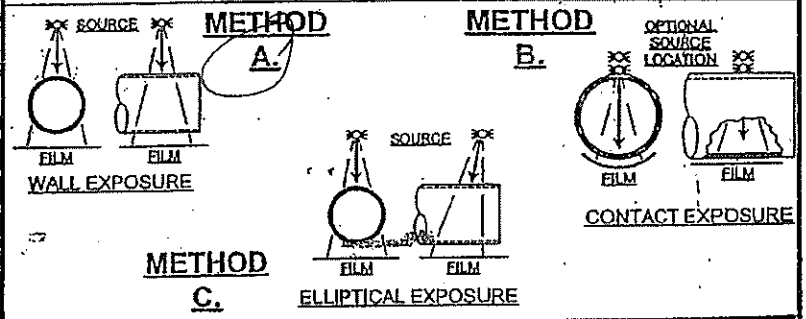
SOURCE TO FILM DIST: VAR. SOURCE TO OBJECT DIST: VAR.

MATERIAL THICKNESS: VAR. TYPE MATERIAL: CS

THICKNESS COMPARATOR: STANDARD 0.10" FILM TYPE:

EXPOSURE TIME: VARIES DEV. TIME: 5 MIN @ 68°F

EXPOSURE SKETCH OR ADDITIONAL INFORMATION



COMMENTS: 0° WAS SHOT FROM SOUTH TO NORTH
90° WAS SHOT FROM EAST TO WEST

NOTE: NOZ # 2 90° WAS SHOT FROM WEST TO EAST

REVIEWED BY: [signature] SNT LEVEL: II DATE: 4-28-08

6

RT Corrosion Report By Location ID

August 4, 2008

Location Type	252 - Drums / Vessel Location	**Current Corrosion Rate**	19.658	MPY
Equipment Location ID	A-DRUM	**Last Inspection Date**	01/07/2008	
Equip. Location Descrip.	TETRA-ETHYL LEAD A-DRUM	**Next Inspection Date**	01/07/2008	
		Retirement Date	01/07/2008	
		Remaining Life (Years)	0	

Datapoint ID	Datapoint Type	Base Date	Base Value	Near Date	Near Value	Last Date	Last Value	Min Value	S.T.C.R.	L.T.C.R.
N02.R	NOZ	06/22/2005	0.430	03/20/2007	0.410	01/07/2008	0.410	0.245	0.000	7.863
N03.R	NOZ	06/22/2005	0.140	03/20/2007	0.130	01/07/2008	0.130	0.130	0.000	3.932
N04.R	NOZ	06/22/2005	0.470	03/20/2007	0.420	01/07/2008	0.420	0.245	0.000	19.658

UT Corrosion Report By Location ID

August 4, 2008

Location Type	252 - Drums / Vessel Location	**Current Corrosion Rate**	2.000	MPY
Equipment Location ID	A-DRUM	**Last Inspection Date**	06/22/2005	
Equip. Location Descrip.	TETRA-ETHYL LEAD A-DRUM	**Next Inspection Date**	12/14/2014	
		Retirement Date	06/15/2027	
		Remaining Life (Years)	22.5	

Datapoint ID	Datapoint Type	Base Date	Base Value	Near Date	Near Value	Last Date	Last Value	Min Value	S.T.C.R.	L.T.C.R.
001	HEAD	05/24/1994	0.490			06/22/2005	0.490	0.375		
002	SHELL	05/24/1994	0.480			06/22/2005	0.490	0.375		
003	SHELL	05/24/1994	0.490			06/22/2005	0.490	0.375		
004	SHELL	05/24/1994	0.490			06/22/2005	0.500	0.375		
005	HEAD	05/24/1994	0.490			06/22/2005	0.490	0.375		
M01	NOZ	06/22/2005	1.630					0.329		
N02	NOZ	12/14/2004	0.410					0.245		
N03	NOZ	12/14/2004	0.180					0.135		
N04	NOZ	12/14/2004	0.390					0.245		

CHEVRON TEXACO

INSPECTION RECOMMENDATION

Fixed Equip. Reliability
Equipment Reliability Group
Richmond Refinery, Richmond CA

I. RECO IDENTIFICATION:

RECO #: A-DrumInsp.-06-05 **W/R #:** 28096720 **Date Written:** 6/23/05

Plant: Ethyl Plant
Plt. Eqp. #: A-Drum
Brass Tag#:

PRIORITY	RECO TYPE	MAINT. ZONE
[ ] Immediate Action	[ ] Information Only	[ ] Utilities
[ ] Planned Shutdown	[X] Eng. Required	[ ] Hydro
[X] Next Opportunity	[ ] Eng. Not Req'rd	[ ] D&R
[ ] Routine	[ ] Other_____	[X] B & S_____

Service: Lead (TEL)

II. MANAGEMENT OF CHANGE:

Level 1 Review Summary

- NO Will new feeds, chemicals or catalysts be used? (See RI-313 for new chemicals, Oprs. Coord for new feeds)
- NO Will this work lead to operation outside established limits? Which Equipment? *List Equipment if Yes*
- NO Is this repair or replacement other than "In-kind" ?
- NO Does this involve developing new and / or modifying existing procedure?
- NO Does this work involve the addition of new equipment? (Send copy of the MOC form to EAD for new equipment)
- NO Will this impact upstream or downstream plants? If "YES" ... then which Plants? *List Plant (s) if Yes*

If any of the above questions were answered "YES", then a Level 2 review is required.

III. RECO INFORMATION (Summary and Details):

A-Drum External In Lieu Inspection Results. REC-44234

Information

The A-Drum was visually inspected & UT scanned. There was no change in the shell wall thickness since the last inspection in 1994. The 18" manway (M1) was UT scanned and found to have a wall thickness of 1.62".
Nozzle #N-2 (6") was radiographed and a wall thickness of 0.43" was found. Nozzle #N-3 (2") was radiographed and has moderate to severe internal corrosion a wall thickness of 0.14" (T-Min is 0.135), replacement is required. The outlet piping is also severely corroded. The radiograph for N-4 (6") revealed the 2" pipe coming off of it also goes through the 6" nozzle into the vessel. The wall thickness for the 6" is 0.47"; the thickness for the 2" is 0.22". The radiographs revealed external corrosion in all the nozzles. The following is a list of required and recommended repairs.

Required Work:
1) Replace nozzle N-3 per Engineering specs.

All hot work in this Inspection Recommendation is subject to the "Richmond Refinery – Metal Craft Quality Assurance Procedures Manual;

Cost Estimate by:	Total Man-Days		Cost per Man-Day		Total Labor Cost:		Total M'trl. Cost:		Total Cost:
Estimator		x		=		+		=	

IV. RECO APPROVAL (Enter Name & Phone):

	Name	Phone		Name	Phone
Area Inspector:	Shirley Tyree	2-2724	Engineering:	Noer Ibrahim	2-2508
Lead Inspector:	Dan Mason	2-3287	Operations:	Marshall Miller	2-4002

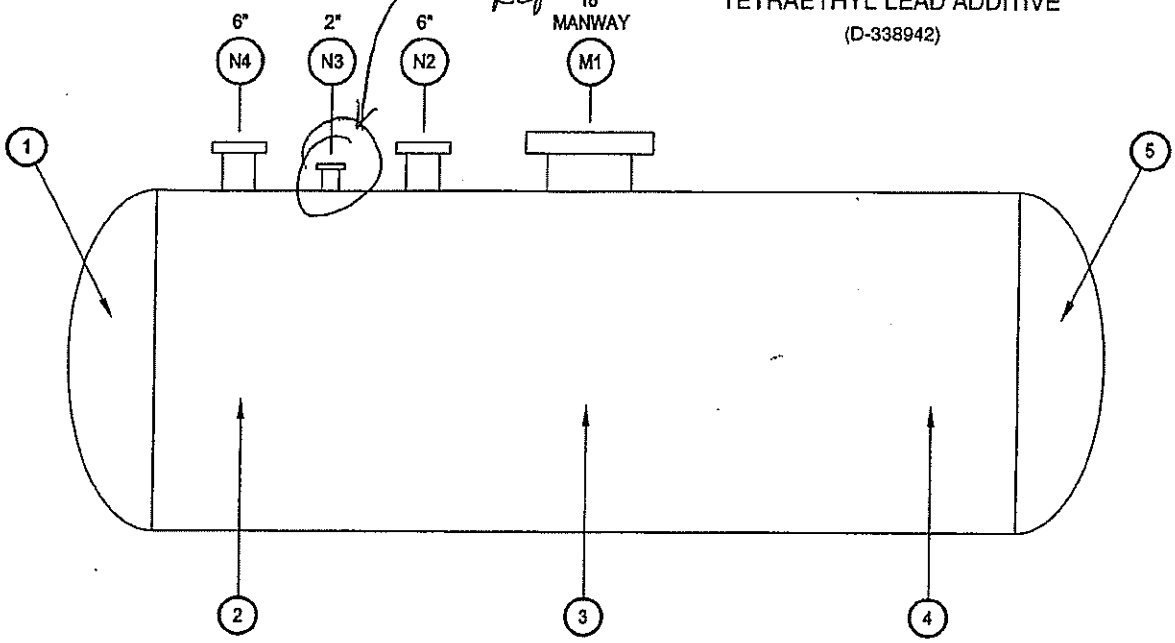
CUSA-CSB-0082798
EPA

Recd I
Replace nozzle
N-3

A-DRUM

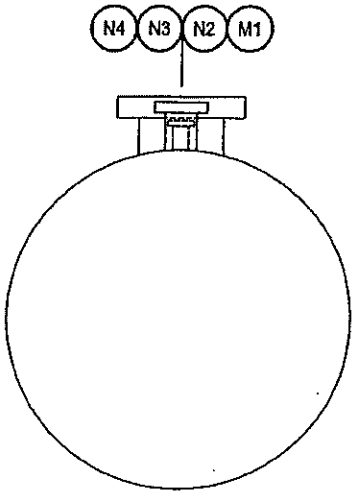
TETRAETHYL LEAD ADDITIVE

(D-338942)



ELEVATION VIEW

LOOKING NORTH



END VIEW

LOOKING EAST

STATUS: ISO570 COMPLETE	INSULATED? ☐	12/17/04 mhee	INSPECTION EQUIPMENT DRAWING
EQUIPMENT NO: A-DRUM			TETRAETHYL LEAD ADDITIVE
			#20 PUMP STATION
EQUIPMENT SERVICE: TETRAETHYL LEAD LIQUID			BLENDING AND SHIPPING AREA BUSINESS UNIT
EQUIPMENT ID: D-7143		Z	1615-A-DRUM — REV 1, SHT 1

EMPLOYEEID	LASTNAME	FIRSTNAME	COURSECODE	CRSTITLE	D_COMPDT	SCORE
REDACTED		REDACTED	GR41H	Respiratory quantitative Fit Test	1/15/2005	Pass
			GR41H	Respiratory quantitative Fit Test	1/2/2006	Pass
			GR41H	Respiratory quantitative Fit Test	1/2/2007	Pass
			GR41H	Respiratory quantitative Fit Test	10/20/2007	Pass
			GR41H	Respiratory quantitative Fit Test	12/6/2005	Pass
			GR41H	Respiratory quantitative Fit Test	10/27/2006	Pass
			GR41H	Respiratory quantitative Fit Test	10/10/2007	Pass
			GR41H	Respiratory quantitative Fit Test	6/15/2005	Pass
			GR41H	Respiratory quantitative Fit Test	12/10/2005	Pass
			GR41H	Respiratory quantitative Fit Test	11/18/2006	Pass
			GR41H	Respiratory quantitative Fit Test	11/18/2007	Pass
			GR41H	Respiratory quantitative Fit Test	11/27/2005	Pass
			GR41H	Respiratory quantitative Fit Test	10/10/2006	Pass
			GR41H	Respiratory quantitative Fit Test	10/10/2007	Pass
			GR41H	Respiratory quantitative Fit Test	5/3/2007	Pass
			GR41H	Respiratory quantitative Fit Test	10/10/2007	Pass
			GR41H	Respiratory quantitative Fit Test	5/3/2007	Pass
			GR41H	Respiratory quantitative Fit Test	10/20/2007	Pass
			GR41H	Respiratory quantitative Fit Test	11/12/2005	Pass
			GR41H	Respiratory quantitative Fit Test	7/8/2006	Pass
			GR41H	Respiratory quantitative Fit Test	10/19/2006	Pass
			GR41H	Respiratory quantitative Fit Test	10/7/2007	Pass
			GR41H	Respiratory quantitative Fit Test	3/28/2008	Pass
			GR41H	Respiratory quantitative Fit Test	5/3/2007	Pass
			GR41H	Respiratory quantitative Fit Test	10/7/2007	Pass
			GR41H	Respiratory quantitative Fit Test	9/20/2005	Pass
			GR41H	Respiratory quantitative Fit Test	12/6/2005	Pass
			GR41H	Respiratory quantitative Fit Test	10/22/2006	Pass
			GR41H	Respiratory quantitative Fit Test	10/10/2007	Pass
			GR41H	Respiratory quantitative Fit Test	1/18/2005	Pass
			GR41H	Respiratory quantitative Fit Test	1/9/2006	Pass
			GR41H	Respiratory quantitative Fit Test	1/9/2007	Pass
			GR41H	Respiratory quantitative Fit Test	1/23/2008	Pass
			GR41H	Respiratory quantitative Fit Test	2/22/2005	Pass
			GR41H	Respiratory quantitative Fit Test	12/9/2005	Pass
			GR41H	Respiratory quantitative Fit Test	10/14/2006	Pass

REDACTED

REDACTED

GR41H	Respiratory quantitative Fit Test	10/14/2007	Pass
GR41H	Respiratory quantitative Fit Test	9/18/2005	Pass
GR41H	Respiratory quantitative Fit Test	9/19/2006	Pass
GR41H	Respiratory quantitative Fit Test	8/27/2007	Pass
GR41H	Respiratory quantitative Fit Test	11/18/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/22/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/20/2007	Pass
GR41H	Respiratory quantitative Fit Test	9/1/2006	Pass
GR41H	Respiratory quantitative Fit Test	8/31/2007	Pass
GR41H	Respiratory quantitative Fit Test	10/20/2007	Pass
GR41H	Respiratory quantitative Fit Test	1/25/2005	Pass
GR41H	Respiratory quantitative Fit Test	12/10/2005	Pass
GR41H	Respiratory quantitative Fit Test	6/21/2007	Pass
GR41H	Respiratory quantitative Fit Test	10/15/2007	Pass
GR41H	Respiratory quantitative Fit Test	9/1/2006	Pass
GR41H	Respiratory quantitative Fit Test	9/15/2007	Pass
GR41H	Respiratory quantitative Fit Test	11/21/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/14/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/9/2007	Pass
GR41H	Respiratory quantitative Fit Test	6/7/2007	Pass
GR41H	Respiratory quantitative Fit Test	6/2/2008	Pass
GR41H	Respiratory quantitative Fit Test	11/12/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/19/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/10/2007	Pass
GR41H	Respiratory quantitative Fit Test	12/4/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/19/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/16/2007	Pass
GR41H	Respiratory quantitative Fit Test	6/15/2005	Pass
GR41H	Respiratory quantitative Fit Test	6/5/2006	Pass
GR41H	Respiratory quantitative Fit Test	5/15/2007	Pass
GR41H	Respiratory quantitative Fit Test	5/13/2008	Pass
GR41H	Respiratory quantitative Fit Test	6/15/2005	Pass
GR41H	Respiratory quantitative Fit Test	6/1/2006	Pass
GR41H	Respiratory quantitative Fit Test	5/30/2007	Pass
GR41H	Respiratory quantitative Fit Test	10/10/2007	Pass
GR41H	Respiratory quantitative Fit Test	11/18/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/22/2006	Pass

REDACTED

REDACTED

GR41H	Respiratory quantitative Fit Test	10/20/2007	Pass
GR41H	Respiratory quantitative Fit Test	12/10/2005	Pass
GR41H	Respiratory quantitative Fit Test	12/11/2006	Pass
GR41H	Respiratory quantitative Fit Test	12/11/2007	Pass
GR41H	Respiratory quantitative Fit Test	12/9/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/14/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/1/2007	Pass
GR41H	Respiratory quantitative Fit Test	2/18/2005	Pass
GR41H	Respiratory quantitative Fit Test	1/9/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/22/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/19/2007	Pass
GR41H	Respiratory quantitative Fit Test	1/11/2005	Pass
GR41H	Respiratory quantitative Fit Test	12/28/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/10/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/10/2007	Pass
GR41H	Respiratory quantitative Fit Test	12/1/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/14/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/15/2007	Pass
GR41H	Respiratory quantitative Fit Test	11/18/2005	Pass
GR41H	Respiratory quantitative Fit Test	11/19/2006	Pass
GR41H	Respiratory quantitative Fit Test	11/20/2007	Pass
GR41H	Respiratory quantitative Fit Test	11/2/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/19/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/17/2007	Pass
GR41H	Respiratory quantitative Fit Test	11/12/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/19/2006	Pass
GR41H	Respiratory quantitative Fit Test	4/28/2008	Pass
GR41H	Respiratory quantitative Fit Test	3/28/2008	Pass
GR41H	Respiratory quantitative Fit Test	3/28/2008	Pass
GR41H	Respiratory quantitative Fit Test	2/24/2005	Pass
GR41H	Respiratory quantitative Fit Test	11/18/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/22/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/16/2007	Pass
GR41H	Respiratory quantitative Fit Test	3/28/2008	Pass
GR41H	Respiratory quantitative Fit Test	11/18/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/22/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/20/2007	Pass

REDACTED

REDACTED

GR41H	Respiratory quantitative Fit Test	10/21/2005	Pass
GR41H	Respiratory quantitative Fit Test	12/9/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/24/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/17/2007	Pass
GR41H	Respiratory quantitative Fit Test	12/15/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/10/2007	Pass
GR41H	Respiratory quantitative Fit Test	11/29/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/14/2006	Pass
GR41H	Respiratory quantitative Fit Test	11/27/2007	Pass
GR41H	Respiratory quantitative Fit Test	12/9/2005	Pass
GR41H	Respiratory quantitative Fit Test	10/14/2006	Pass
GR41H	Respiratory quantitative Fit Test	10/10/2007	Pass

EMPLOYEEID	LASTNAME	FIRSTNAME	COURSECODE	CRSTITLE	D_COMPDT	SCORE
REDACTED		REDACTED	5001	Respiratory Protection	2/20/2005	95
			5001	Respiratory Protection	2/10/2006	93
			5001	Respiratory Protection	2/1/2007	85
			5001	Respiratory Protection	1/31/2008	98
			5001	Respiratory Protection	1/21/2005	88
			5001	Respiratory Protection	1/20/2006	80
			5001	Respiratory Protection	1/8/2007	95
			5001	Respiratory Protection	1/3/2008	90
			5001	Respiratory Protection	6/15/2005	80
			5001	Respiratory Protection	6/2/2006	93
			5001	Respiratory Protection	4/17/2007	83
			5001	Respiratory Protection	4/3/2008	85
			5001	Respiratory Protection	1/13/2005	88
			5001	Respiratory Protection	1/10/2006	93
			5001	Respiratory Protection	1/4/2007	80
			5001	Respiratory Protection	1/3/2008	88
			5001	Respiratory Protection	5/3/2007	80
			5001	Respiratory Protection	4/29/2008	78
			5001	Respiratory Protection	4/30/2008	90
			5001	Respiratory Protection	5/3/2007	80
			5001	Respiratory Protection	4/21/2008	82
			5001	Respiratory Protection	2/16/2005	88
			5001	Respiratory Protection	2/15/2006	76
			5001	Respiratory Protection	2/16/2006	85
			5001	Respiratory Protection	2/13/2007	80
			5001	Respiratory Protection	2/12/2008	82
			5001	Respiratory Protection	4/1/2008	80
			5001	Respiratory Protection	5/3/2007	80
			5001	Respiratory Protection	3/29/2008	88
			5001	Respiratory Protection	2/7/2005	85
			5001	Respiratory Protection	1/23/2006	80
			5001	Respiratory Protection	1/3/2007	85
			5001	Respiratory Protection	11/30/2007	82
			5001	Respiratory Protection	2/22/2005	83
			5001	Respiratory Protection	2/15/2006	83
			5001	Respiratory Protection	1/22/2007	80
			5001	Respiratory Protection	1/23/2008	90
			5001	Respiratory Protection	2/11/2005	83
			5001	Respiratory Protection	1/8/2006	78
			5001	Respiratory Protection	1/20/2006	93
			5001	Respiratory Protection	1/13/2007	93
			5001	Respiratory Protection	12/24/2007	82
			5001	Respiratory Protection	2/7/2005	90
			5001	Respiratory Protection	2/6/2006	95
			5001	Respiratory Protection	1/18/2007	93
			5001	Respiratory Protection	1/2/2008	92
			5001	Respiratory Protection	1/4/2005	88
			5001	Respiratory Protection	12/8/2005	78
			5001	Respiratory Protection	12/18/2005	80
			5001	Respiratory Protection	12/18/2006	80
			5001	Respiratory Protection	11/25/2007	95

REDACTED

REDACTED

5001	Respiratory Protection	9/1/2006	80
5001	Respiratory Protection	8/15/2007	88
5001	Respiratory Protection	6/17/2008	82
5001	Respiratory Protection	1/15/2005	85
5001	Respiratory Protection	12/16/2005	98
5001	Respiratory Protection	6/4/2007	93
5001	Respiratory Protection	4/4/2008	82
5001	Respiratory Protection	9/1/2006	80
5001	Respiratory Protection	12/18/2006	85
5001	Respiratory Protection	10/1/2007	90
5001	Respiratory Protection	11/14/2005	80
5001	Respiratory Protection	10/20/2006	98
5001	Respiratory Protection	9/24/2007	92
5001	Respiratory Protection	6/7/2007	80
5001	Respiratory Protection	4/26/2008	98
5001	Respiratory Protection	11/22/2005	80
5001	Respiratory Protection	10/25/2006	83
5001	Respiratory Protection	7/31/2007	82
5001	Respiratory Protection	5/27/2008	82
5001	Respiratory Protection	2/25/2005	83
5001	Respiratory Protection	2/24/2006	85
5001	Respiratory Protection	2/24/2007	88
5001	Respiratory Protection	2/24/2008	92
5001	Respiratory Protection	6/15/2005	80
5001	Respiratory Protection	6/6/2006	71
5001	Respiratory Protection	6/8/2006	88
5001	Respiratory Protection	5/4/2007	83
5001	Respiratory Protection	5/9/2008	78
5001	Respiratory Protection	5/10/2008	85
5001	Respiratory Protection	6/15/2005	80
5001	Respiratory Protection	5/1/2006	73
5001	Respiratory Protection	5/23/2006	80
5001	Respiratory Protection	5/18/2007	83
5001	Respiratory Protection	4/12/2008	90
5001	Respiratory Protection	1/26/2005	88
5001	Respiratory Protection	1/26/2006	88
5001	Respiratory Protection	1/25/2007	85
5001	Respiratory Protection	1/23/2008	90
5001	Respiratory Protection	1/20/2005	90
5001	Respiratory Protection	1/16/2006	98
5001	Respiratory Protection	1/11/2007	98
5001	Respiratory Protection	12/14/2007	88
5001	Respiratory Protection	1/9/2005	90
5001	Respiratory Protection	12/21/2005	98
5001	Respiratory Protection	6/30/2006	93
5001	Respiratory Protection	6/23/2007	98
5001	Respiratory Protection	4/25/2008	95
5001	Respiratory Protection	1/18/2005	85
5001	Respiratory Protection	1/6/2006	88
5001	Respiratory Protection	12/17/2006	93
5001	Respiratory Protection	12/8/2007	92
5001	Respiratory Protection	2/10/2005	93

REDACTED

REDACTED

5001	Respiratory Protection	2/2/2006	100
5001	Respiratory Protection	1/20/2007	98
5001	Respiratory Protection	1/16/2008	92
5001	Respiratory Protection	1/5/2005	90
5001	Respiratory Protection	11/28/2005	78
5001	Respiratory Protection	12/18/2005	95
5001	Respiratory Protection	10/30/2006	88
5001	Respiratory Protection	10/12/2007	90
5001	Respiratory Protection	1/21/2005	90
5001	Respiratory Protection	1/20/2006	83
5001	Respiratory Protection	12/15/2006	95
5001	Respiratory Protection	12/6/2007	85
5001	Respiratory Protection	11/14/2005	80
5001	Respiratory Protection	10/25/2006	80
5001	Respiratory Protection	10/9/2007	88
5001	Respiratory Protection	1/3/2005	98
5001	Respiratory Protection	12/10/2005	80
5001	Respiratory Protection	11/20/2006	85
5001	Respiratory Protection	5/6/2008	95
5001	Respiratory Protection	4/1/2008	80
5001	Respiratory Protection	4/1/2008	80
5001	Respiratory Protection	2/24/2005	95
5001	Respiratory Protection	2/21/2006	88
5001	Respiratory Protection	2/1/2007	95
5001	Respiratory Protection	1/3/2008	85
5001	Respiratory Protection	4/1/2008	80
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5001	Respiratory Protection	3/8/2006	85
5001	Respiratory Protection	1/23/2007	88
5001	Respiratory Protection	1/18/2008	80
5001	Respiratory Protection	1/8/2005	98
5001	Respiratory Protection	1/7/2006	98
5001	Respiratory Protection	1/7/2007	98
5001	Respiratory Protection	1/5/2008	98
5001	Respiratory Protection	12/14/2006	80
5001	Respiratory Protection	12/15/2006	80
5001	Respiratory Protection	12/12/2007	82
5001	Respiratory Protection	1/13/2005	85
5001	Respiratory Protection	1/9/2006	93
5001	Respiratory Protection	12/20/2006	80
5001	Respiratory Protection	12/7/2007	90
5001	Respiratory Protection	12/16/2005	88
5001	Respiratory Protection	12/13/2006	93
5001	Respiratory Protection	11/2/2007	100

CHEVRON RICHMOND REFINERY
QUALIFICATION COMPLETION LOG

Blending and Shipping Refine

Temporary Lead Injection System

Main Tank Field Ethyl Plant

MOC # 17470

Qualification Description(s)

Qualification Code(s)

Seth Prather

Instructor - Print Name

Instructor - Signature

# of Hours

I CERTIFY THAT THE LISTED EMPLOYEES HAVE COMPLETED TRAINING

Your attendance must be documented. Please print your name, CAI, sign your name and indicate your ABU or department and section.

I attended the training described above on

Print Name (Last, First, MI)	CAI	Signature	ABU or Dept. and Section	Test Score Score	Test Score P/F	Performance Demonstration Yes=Can Do No=Can't Do
REDACTED	REDACTED	REDACTED	B&S/T&B	N/A	P	N/A
			"		P	yes
					P	yes
					P	yes
			"	"	P	yes
			"	"	P	yes
			"	"	P	yes
			"	"		
			"			
			"	"		
			"	"		
			"	"	P	YES
			"	"	P	YES
			"	"		
			"			
			"	"	P	OK

PQD Lead Use Only Qualification ID# Date Entered

8

CHEVRON RICHMOND REFINERY
QUALIFICATION COMPLETION LOG

Blending and Shipping Refine

Temporary Lead Injection System

Main Tank Field Ethyl Plant

MOC # 17470

Qualification Description(s)

Qualification Code(s)

Seth Prather

Instructor - Print Name

Instructor - Signature

# of Hours

I CERTIFY THAT THE LISTED EMPLOYEES HAVE COMPLETED TRAINING

Your attendance must be documented. Please print your name, CAI, sign your name and indicate your ABU or department and section.

I attended the training described above on

Print Name (Last, First, MI)	CAI	Signature	ABU or Dept. and Section	Test Score Score	Test Score P/F	Performance Demonstration Yes=Can Do No=Can't Do
REDACTED	REDACTED		B&S/T&B	N/A	P	N/A
			B&S/T&B			

PQD Lead Use Only Qualification ID# Date Entered

Loss/Near Loss Listing for CSB - Richmond

Loss/Near Loss ID

Date Occurred - Between Sep 1, 2010 and Aug 8, 2012

Location of Loss/Near Loss - Rich|Crack | LPG/Alky | Acid Storage & Distr Fac,
Rich|Crack | FCC | Structure,
Rich|Crack | FCC | SGRU,
Rich|Crack | FCC | NGRU,
Rich|Crack | FCC | FCC|SRU CWT,
Rich|Crack | FCC | Caustic Storage | Distribution,
Rich|Crack | FCC | #3H2S,
Rich|Crack | Crack Gen | Crack Area Ctrl Center,
Rich|Clinic,
Rich|Capital Projects | Marina Way,
Rich|B&S | Vessels | Other Vessels,
Rich|B&S | T&B | SP Hill Tank Field,
Rich|B&S | T&B | Pole Yard Tank Field,
Rich|B&S | T&B | Petrolite Hill,
Rich|B&S | T&B | PG&E Tank & System,
Rich|B&S | T&B | Light Oil Manifold,
Rich|B&S | Pump Stations | #24 Pump Station,
Rich|B&S | Pump Stations | #21A Pump Station,
Rich|B&S | Pump Stations | #2 Pump Station,
Rich|B&S | Pump Stations | #17 Pump Station,
Rich|B&S | Pump Stations | #1 Pump Station,
Rich|B&S | Long Wharf | Shore Tanks,
Rich|B&S | Long Wharf | Berth 9,
Rich|B&S | Long Wharf | Berth 3,
Rich|B&S | Long Wharf | Berth 11,
Rich|B&S | B&S Gen | B&S Ctrl House,
Rich|Admin Building,
Rich|U&E | Utilities | Substations,
Rich|U&E | Utilities | Reverse Osmosis Plant,
Rich|U&E | Utilities | Other (Utilities),
Rich|U&E | Utilities | CoGen,
Rich|U&E | Haz Waste Section | Wash Down Area,
Rich|U&E | Haz Waste Section | Haz Waste Adm Ofcs,
Rich|U&E | Enviro | T-3127,
Rich|U&E | Enviro | Separators,
Rich|U&E | Enviro | Ponds,
Rich|U&E | Enviro | Landfills,
Rich|U&E | Enviro | Deep Water Outfall,
Rich|U&E | Enviro | Bioreactor,
Rich|Technical Center | 3rd floor,
Rich|Technical Center | Cafeteria,
Rich|Refinery Gen,
Rich|Quality Ctrl (QCD) | Other (QCD),
Rich|Quality Ctrl (QCD) | Lab Building,
Rich|Global Procurement Offices,
Rich|Plant Protection | Firehouse,
Rich|Maint Facilities | South Yard Maint Facility,
Rich|Maint Facilities | I&E Shop,
Rich|Maint Facilities | GMG Facility,
Rich|Maint Facilities | Central Tool Room,
Rich|Maint Facilities | #3 District Facility,
Rich|Hydroprocessing | S Iso | SNR Unit,
Rich|Hydroprocessing | S Iso | Other (S.Iso),
Rich|Hydroprocessing | S Iso | Hydrogen A Train,
Rich|Hydroprocess | S Iso | 8 Plant Sour H2OPlant,
Rich|Hydroprocess | S Iso | 10.5 PlantFlareGasRec,
Rich|Hydroprocessing | RLOP | Other (RLOP),
Rich|Hydroprocessing | RLOP | LND ,
Rich|Hydroprocessing | RLOP | HNF ,
Rich|Hydroprocessing | RLOP | HNC ,
Rich|Hydroprocessing | N Isomax | TKC 7,
Rich|Hydroprocessing | N Isomax | ISO 7,
Rich|Hydroprocessing | N Isomax | GRU 7,
Rich|Hydroprocessing | General | Admin Ofc(Crack),
Rich|D&R | D&R West | Utility Plant,
Rich|D&R | D&R West | LSFO H2 Booster,
Rich|D&R | D&R West | #5 Rhenformer,
Rich|D&R | D&R West | #4 Rhenformer,
Rich|D&R | D&R Gen | D&R Ctrl House,

Rich|D&R | D&R Gen | D&R Admin Office Building #2,
Rich|D&R | D&R East | Other (D&R East),
Rich|Crack | LPG/Alky | Alky Distillation,
Rich|B&S | T&B | Main Tank Field,
Rich|U&E | Enviro | Ground Water Wells,
Rich|Maint Facilities | RMC,
Rich|Hydroprocessing | N Isomax | Old Ctrl House,
Rich|Crack | Crack Gen | Crack Admin Ofcs,
Rich|B&S | Pump Stations | #11 Pump Station,
Rich|U&E | Utilities | SOSS,
Rich|Technical Center | 4th floor,
Rich|Maint Facilities | Electrical Shop,
Rich|Hydroprocessing | RLOP | HND ,
Rich|D&R | D&R Gen | Other (D&R),
Rich|Crack | SRU , 2300 Plant #3 SRU,
Rich|U&E | Enviro | Additive Plant (Castro St),
Rich|Maint Facilities | Machine Shop,
Rich|Hydroprocessing | RLOP | RLOP Flare,
Rich|D&R | D&R West | Other (D&R West),
Rich|Crack | Crack Gen | Other (CABU),
Rich|B&S | T&B | Loading Racks,
Rich|B&S | Long Wharf | Berth, other berths,
Rich|U&E | Enviro | Tide gates,
Rich|Technical Center | 2nd floor,
Rich|Maint Facilities | RTD,
Rich|Hydroprocessing | S Iso | SDA Unit,
Rich|Hydroprocessing | N Isomax | TKN 5,
Rich|D&R | D&R West | PenHex,
Rich|D&R | D&R East | Diesel Hydrotreater,
Rich|Crack | SRU | 2500 Plant | SWC,
Rich|Crack | LPG/Alky | LPG Railcar Racks,
Rich|Maint Facilities | Other (M&R),
Rich|D&R | D&R West | Jet Hydro Treater,
Rich|Capital Projects | Other,
Rich|U&E | Enviro | Alkane Ground Water Treat Unit,
Rich|Hydroprocess | S Iso | 9 Plant Booster Comp,
Rich|D&R | D&R West | #4 Rhenformer CWT,
Rich|Crack | LPG/Alky | NH3 Railcar Racks,
Rich|Crack | LPG/Alky | Alky Unit,
Rich|Crack | LPG/Alky | Alky CWT,
Rich|Crack | FCC | Utility Area,
Rich|Crack | FCC | SWC,
Rich|Crack | FCC | Other (FCC),
Rich|Crack | FCC | Minalk Merox,
Rich|Crack | FCC | Caustic Treating,
Rich|Crack | FCC | CWT Chemical Injection Facility,
Rich|Capital Projects | 214 Main,
Rich|B&S | Vessels | Chevron Shipping Vessels,
Rich|B&S | T&B | Quarry Tank Field,
Rich|B&S | T&B | Pipeline (BAPL, SPPL),
Rich|B&S | T&B | Petrolite Blend Station,
Rich|B&S | T&B | Other (T&B),
Rich|B&S | Pump Stations | #8 Pump Station,
Rich|B&S | Pump Stations | #7 Pump Station,
Rich|B&S | Pump Stations | #22 Pump Station,
Rich|B&S | Pump Stations | #21 Pump Station,
Rich|B&S | Pump Stations | #19 Pump Station,
Rich|B&S | Pump Stations | #18 Pump Station,
Rich|B&S | Long Wharf | Shore tanks, sump pump stn,
Rich|B&S | Long Wharf | Berth 4,
Rich|B&S | Long Wharf | Berth 2,
Rich|B&S | Long Wharf | Berth 1,
Rich|B&S | B&S Gen | B&S Admin Office,
Rich|Visitor Center,
Rich|U&E | Utilities | PG&E Pipeline,
Rich|U&E | Utilities | CoGen Ctrl House,
Rich|U&E | Utilities | #1 Power & Ctrl House,
Rich|U&E | U&E Gen | U&E Admin Offices,
Rich|U&E | Haz Waste Section | Other,
Rich|U&E | Enviro | Sumps,
Rich|U&E | Enviro | Sanitary Sewer System,
Rich|U&E | Enviro | Other (Enviro),
Rich|U&E | Enviro | Land Farms,
Rich|U&E | Enviro | EOD Ctrl House,
Rich|U&E | Enviro | Castro St Pump Station,
Rich|Rod & Gun Club,

Rich|Reclamation,
Rich|Quality Crl (QCD) | CEL Lab,
Rich|Global Procurement Storehouse,
Rich|Plant Protection | Other,
Rich|Plant Protection | Drill Grounds,
Rich|Offsite,
Rich|Maint Facilities | Planning & Scheduling Fac,
Rich|Maint Facilities | North Yard Maint Facility,
Rich|Maint Facilities | IMPACT Building,
Rich|Maint Facilities | Gate 91 - Contractor Fac,
Rich|Maint Facilities | Central Maint Bldg,
Rich|Maint Facilities | Boiler Shop,
Rich|Hydroprocessing | S Iso | Tar Stripper,
Rich|Hydrocracks | S Iso | Old Crl House(S Isol,
Rich|D&R | D&R East | #4 Crude Unit

Loss/Near Loss ID	Site	Date Occurred	Loss Status	Loss Type	Short Description	Loss/Near Loss Description	Loss Subtype	Investigation Root Cause
19	Richmond, CA - Refinery	10/3/2010 8:00:00 PM	Closed	Loss	R-1310 temperature excursion	RLOP UNF temperature excursion on R-1310.	Quality	(1) UNF R-1310 Bed 1 deactivated from water (See corrective actions from IPS-1902619), (2) Guidance on maximum temperature for process conditions did not exist, (3) Incorrect analysis of process conditions (recycle H2 SpGr), (4) Risk of unstable condition not adequately communicated.
23	Richmond, CA - Refinery	10/3/2010 3:15:00 AM	Closed	Near Loss	C-810 High Delta pressure	High pressure per SBP0812 upset C-810.	NL-Quality - Product Contamination (PN)	(1) High column DP
37	Richmond, CA - Refinery	10/2/2010 9:15:00 AM	Closed	Loss	Diesel Spill 1899 Tank	Refinery Fuel Truck Driver was fueling a large (Diesel) compressor @ 1899 Tank, (this compressor is on an 3% incline), he began fueling the up side tank which was located between the hill side and the compressor. Note:There are two tanks on this compressor are joined together with a hose or pipe, so the compressor can be filled on either side. After a few minutes the EE was finished fueling the compressor and noticed that the fuel had overflowed on the down side of the tank, creating a 10 to 15 gallon spill on the asphalt road. The diesel spill was draining to a concrete pipe trench. Diesel was leaking from the compressor, so Operations put a bucket to catch the residual from the bottom of the compression compartment and called for a vacuum truck. Operations started the clean up of the spill on the asphalt road.	NL-Environmental - Spill	(1) EE was not paying attention to duties
56	Richmond, CA - Refinery	10/4/2010 9:00:00 AM	Closed	Loss	Operator hit head on pipe. Stiff neck	At around 10:00, operator was walking between F-510 and F-520 and hit hard hat on boilermaker. Operator jerked head in a reaction and felt a small pain in the neck. At 14:30, operator reported to the STL office that the neck was getting stiff	Injury/Illness	(1) Eyes not on path
69	Richmond, CA - Refinery	10/4/2010 7:00:00 AM	Closed	Loss	Auto generated maintenance PM's unable to complete on time	ABU maintenance is unable to complete scheduled PM workday due date. The B&SA/&E scheduler had 86 INSTPM/SERVCUST work orders moved into his que for scheduling. The work orders were written on 9/5/10 and prioritized as a 5. Priority 5 generates a complete by date of 31 to 90 days from the Work request approval date. The complete by date had been set for 9/30/10. The work was scheduled per Instrument mechanic available man power resulting in 33 Service/Custody meters with overdue the complete by date.	Business Process	(1) The job plan PM was rolled over into Maximo form Passport. PM Job plans with large numbers items with the same due date as result of Passport roll over was known issue by Area scheduler. Prior decision made was to have Area scheduler schedule the PM pre manpower availability the first time PM was generated, and allow schedule to auto adjust. The PM would then be auto generated at next schedule cycle with work lead complete by dates corrected. This requires the scheduler to notify the Equipment Controller to uncheck the "generate by release date box on the Maximo work order. The Equipment Controller confirmed the Steam meter PM job plan is checked to generate by release date.
94	Richmond, CA - Refinery	10/3/2010 7:30:00 PM	Closed	Near Loss	When opening an apparatus door some equipment fell out	When opening a cabinet door on E-250 a piece of equipment (a Paratech Strut) fell out narrowly missing the apparatus operator. The Paratech Strut had been secured but the restraint was inadequate and must have come loose during normal vehicle operations.	NL-Equipment/Property Damage - Equipment Damage	
105	Richmond, CA - Refinery	10/5/2010 5:00:00 AM	Closed	Loss	MVA on Standard Rd. Near #4 TEL Injection facility	The EE collided with a reflectorized road edge marker causing minor damage to the front end of the motor vehicle.	Transportation	(1) Inattention to surroundings while operating a motor vehicle.

155	Richmond, CA - Refinery	10/7/2010 11:00:00 AM	Closed	Loss	Vacuum truck spilled <2 gallons of MEA onto the asphalt parking lot next to the scatehoouse	Vacuum truck spilled <2 gallons of Monoethanolamine onto the asphalt parking lot next to the Haz Ops Building. This occured at the time the driver pulled into the parking lot. Vacuum was lost and material began leaking to the ground. It was determined that the gasket on 4" reducer fitting had failed allowing the material to spill.	Environmental	(1) 1. Why did product leak from truck? - Gasket was compromised at 4" reducer. 2. Why did gasket fail? – The gasket was not known to be in bad condition. 3. Why was it not known that the gasket was in bad condition? No visual inspection of the gasket was done. 4. Why was no visual inspection of the gasket done? Because there was no formal process to do a visual inspection of the gaskets.
174	Richmond, CA - Refinery	10/7/2010 3:00:00 PM	Closed	Loss	E-1413C bad bearing causing loss of cooling and cut in HNC feed rate.	E-1413C lost a bearing causing the blades to hit the shrouds HNC had to cut rates to handle the loss of cooling.	Equipment/Property Damage	(1) SOS: Design & Engineering-- Feed Rate Cut in Plant Normally Run with Hi-Temp Alarm with Four Fans Running. Increased Throughput from the 2007 Turbo Project 18.5 to 24 , (2) SOS: Maintenance & Inspection--Fan Blades were Hitting the Wall. Fan Shaft was Worn. Normal Wear and Tear , (3) SOS: Maintenance & Inspection--Manually Shut Down for High Vibrations. Automatic Shut Down Switch Didn't Work. , (4) SOS: Maintenance & Inspection--Process running above alarm settings. Possible fouling of the tubes. , (5) SOS: Warning Devices--Alarms set for product quality not set for safety or mechanical limits. The higher the temperature the higher the amount of hydrocarbon that is carried over to the overhead of the separator, reducing catalyst life.
280	Richmond, CA - Refinery	10/9/2010 5:00:00 AM	Closed	Near Loss	P-26 set in error to T-3180 instead of T-3073	Started blending T-3134, T-3073 was in the blend and split between P-35 and P-26. RBO was notified that P-26 was set in error to T-3180 instead of T03073. Operator immediatly corrected valve lineup and the blend corrected itself to spec. No product contamination and the CofA was issued on the blend tank when completed.	NL-Quality - Product Quality (Int)	
291	Richmond, CA - Refinery	10/11/2010 7:20:00 AM	Closed	Loss	Spidor Bite	While putting on work gloves, EE felt some itching and burning at which time he removed them and reported the incident.	Injury/Illness	(1) Work Gloves
291	Richmond, CA - Refinery	10/11/2010 7:20:00 AM	Closed	Loss	Spider Bite	While putting on work gloves, EE felt some itching and burning at which time he removed them and reported the incident.	NL-Injury/Illness - Employee Injury	(1) Work Gloves
307	Richmond, CA - Refinery	10/10/2010 5:40:00 PM	Closed	Loss	Pumped summer grade T-3133 down the pipe line when it should have been winter grade from T- 1687.	On Sunday around shift change, pipeline batch CHVN-A3-738R for 30 mb started pumping. It pumped from 5:40 pm on 10/10 until 5:51 am on 10/11. It went to the Richmond Inner harbor terminal to be loaded on a brage to go to our Eureka terminal. The tank pumped was summer grade CARB RUL from T-3133, when the tender called for winter grade from T-1687 which had been specifically blended for this load The economic penalty is we should is the lower RVP.	Business Process	(1) Inadaquat notification and communication between planners and T&B personnel, new personnel working Refine Board operator Job
329	Richmond, CA - Refinery	10/7/2010 5:00:00 PM	Closed	Near Loss	Adminstrative deviation-Missed Title V notification for unplanned S/D	Missed Title V notification for unplanned shutdown of RLOP LNF plant. Needed to be submitted by the end of the next business day.	NL-Regulatory Compliance - Non Compliance	(1) LNF S/D was communicated under planned activity in RSL turnover. RSLs were unaware that EFC depeneded on this fro making required notifications, (2) EFC did not review shutdown page in index, due to distractions
334	Richmond, CA - Refinery	10/12/2010 5:20:00 PM	Closed	Near Loss	#3 Boiler breaker tripped open and shutdown the running boiler	Due to refinery steam demand operations was trying to start up #5 boiler. Operations had difficulty closing the breaker on the fan to #5 boiler so maintenance was called in to troubleshoot and repair. While operating the breaker on #5 boiler fan, the breaker on #3 boiler fan tripped open and shut down the boiler.	NL-Business Process - Business Interruption	
338	Richmond, CA - Refinery	10/12/2010 11:35:00 PM	Closed	Loss	Very small wooden scaffolding fire - no plant damage caused	Operator smelled smoke and immediately investigated discovering a small incipient stage fire. Wooden scaffolding that was in place for some maintenance work on #5 boiler had been in contact with an uninsulated 800# steam block valve. The boiler was started earlier in the evening and the valve got extremely hot, eventually igniting the wood.	Fire/Explosion	(1) SOS: Design & Engineering Insulation not re-installed in a timely fashion. Insulation installation in w/o backlog., (2) SOS: Design & Engineering Boiler put back in service. Management decides which boilers will be in service
465	Richmond, CA - Refinery	10/15/2010 1:00:00 PM	Closed	Near Loss	Catalyst blowdown line use caused smoldering of staging kickboard	Staging put up in preparation of FCC major had a wooden toe board touching the catalyst blowdown line. When the staging was installed that line was cool to the touch. During preparations to shutdown the FCC catalyst was dumped from the reactor throught this line at 1300 deg F. This caused the toe board to begin to smolder. The Field Operator wet the staging to stop smoldering	NL-Fire/Explosion	
469	Richmond, CA - Refinery	10/14/2010 12:00:00 AM	Closed	Near Loss	K-1070 shutdown and would not restart.	K-1070 was shutdown for Maint.and would not restart. Maint worked thought the night and could not find the problem	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) A dirty Test position Contact in the K-1070 switchgear prevented it from being started back up after it was shutdown, (2) A dirty contact in the breaker panel of K-1070 prevented the breaker contact from closing suppling power to K-1070
473	Richmond CA - Refinery	10/15/2010 12:00:00 PM	Closed	Near Loss	Minor flare activity due to clean up activity associated with Cracking area Major turn around.	Minor flow to FCC flare occured due to K-1070 flare gas recovery compressor being down for minor maintenance and various clean up activities associated with the Cracking area complex shutdown. This NLI will serve as a placeholder for all minor flaring activity due to CABU cleanup activity in the future. Business unit will track daily activity and report at end of turnaround. Any major flare activity that impacts the community or requires sampling will result in additional LI and will be investigated seperately.	NL-Lessons Learned	

491	Richmond, CA - Refinery	10/16/2010 10:15:00 PM	Closed	Near Loss	K-840 lose of pumping capacity causing all products to be routed off test	At 22:15 on 10/16/2010, K-840 amps dropped off from 95 amps to 85 amps. At the same time, PC-820 increased from 50 psig to 60 psig. It appears that K-840 lost some loading capacity.	NL-Equipment/Property Damage - Equipment Damage	(1) SOS: Design & Engineering: Iron sulfide scale is normal for upstream equipment/ process. Test new filters to help mitigate scale build up. , (2) SOS: Maintenance & Inspection: K-840A was isolated/ unavailable To troubleshoot electrical problems (tripping) , (3) SOS: Maintenance & Inspection: Some Lube oil in cylinder is normal. Cause of excess oil cannot be determined at this time. Troubleshooting is needed. , (4) SOS: WarningDevices: Sludge could be result of chemical reaction of iron sulfide and lube oil when exposed to O2 when compressor is opened up to atmosphere for maintenance , (5) Sidebar Issues: •Design & Engineering: • The loss of compression capacity due to plugging/sludge issues does not normally occur on both compressors at the same time. The cycle is normally between 18 to 24 months of good performance per compressor. With the last two to three months trending toward enough loss of compression (and high temperature alarms) to necessitate switching the compressors, and/or eventual routing of product to off test.
491	Richmond, CA - Refinery	10/16/2010 10:15:00 PM	Closed	Near Loss	K-840 lose of pumping capacity causing all products to be routed off test	At 22:15 on 10/16/2010, K-840 amps dropped off from 95 amps to 85 amps. At the same time, PC-820 increased from 50 psig to 60 psig. It appears that K-840 lost some loading capacity.	NL-Quality - Product Quality (Int)	(1) SOS: Design & Engineering: Iron sulfide scale is normal for upstream equipment/ process. Test new filters to help mitigate scale build up. , (2) SOS: Maintenance & Inspection: K-840A was isolated/ unavailable To troubleshoot electrical problems (tripping) , (3) SOS: Maintenance & Inspection: Some Lube oil in cylinder is normal. Cause of excess oil cannot be determined at this time. Troubleshooting is needed. , (4) SOS: WarningDevices: Sludge could be result of chemical reaction of iron sulfide and lube oil when exposed to O2 when compressor is opened up to atmosphere for maintenance , (5) Sidebar Issues: •Design & Engineering: • The loss of compression capacity due to plugging/sludge issues does not normally occur on both compressors at the same time. The cycle is normally between 18 to 24 months of good performance per compressor. With the last two to three months trending toward enough loss of compression (and high temperature alarms) to necessitate switching the compressors, and/or eventual routing of product to off test.
503	Richmond, CA - Refinery	10/17/2010 10:30:00 PM	Closed	Loss	FCC Operators Sprayed and burned with hot oil	FCC Shutdown: During plant cleanup operations, while unlatching strainer box under V-102B coke strainer, hot oil sprayed out of the box onto two area operators, causing burns to both. One was transported to the hospital via ambulance. The other was treated at the clinic and released to work.	Injury/Illness	(1) The cleanup for the Turnaround caused an unexpected and unanticipated volume of catalyst to plug the strainer baskets, (2) This is the first Turnaround where the strainer baskets were being used for cleaning the C-90 bottoms system strainers, (3) The current written Job Aid did not address the unexpected and unanticipated volume of catalyst to the strainer basket, (4) Operations personnel indicated that during the last few months of the FCC run they noticed more plugging in the strainer baskets, due to an increased amount of catalyst present. There were several events where steam and hot vapors came out of the strainer baskets during routine cleaning. These events were not reported until after this incident, (5) Although expected by Refinery practices, operations personnel did not document near loss reports of similar incidents in the Richmond Refinery's Incident Reporting database
503	Richmond, CA - Refinery	10/17/2010 10:30:00 PM	Closed	Loss	FCC Operators Sprayed and burned with hot oil	FCC Shutdown: During plant cleanup operations, while unlatching strainer box under V-102B coke strainer, hot oil sprayed out of the box onto two area operators, causing burns to both. One was transported to the hospital via ambulance. The other was treated at the clinic and released to work.	Loss of Containment	(1) The cleanup for the Turnaround caused an unexpected and unanticipated volume of catalyst to plug the strainer baskets, (2) This is the first Turnaround where the strainer baskets were being used for cleaning the C-90 bottoms system strainers, (3) The current written Job Aid did not address the unexpected and unanticipated volume of catalyst to the strainer basket, (4) Operations personnel indicated that during the last few months of the FCC run they noticed more plugging in the strainer baskets, due to an increased amount of catalyst present. There were several events where steam and hot vapors came out of the strainer baskets during routine cleaning. These events were not reported until after this incident, (5) Although expected by Refinery practices, operations personnel did not document near loss reports of similar incidents in the Richmond Refinery's Incident Reporting database
528	Richmond, CA - , Refinery	10/17/2010 3:15:00 PM	Closed	Loss	TRIPPED GOING UP STAIRS	Contract EE tripped while going up the stairs on the north side of the regen. EE injured right pinky finger while stopping their fall. EMT's were called and ice was applied. EE returned to work.	Injury/Illness	(1) Not making use of the stair handrails
	Richmond,	10/17/2010				Contract EE tripped while going up the stairs on the north side of the regen. EE		

528	CA - Refinery	3:15:00 PM	Closed	Loss	TRIPPED GOING UP STAIRS	Injured right pinky finger while stepping their fall. EMT's were called and ice was applied, EE returned to work.	NL-Injury/Illness - Contractor Injury	(1) Not making use of the stair handrails
543	Richmond, CA - Refinery	10/18/2010 6:30:00 AM	Closed	Near Loss	Hose Modification Violation of RI-613 Discovered	A steam hose was found in front of CTR Monday morning 10/18/10 with a garden hose fitting attached to one end violating RI-613 sections 3.0 Specific Use of Hose, 4.2 General Instructions, and Appendix 1-A. Investigation to follow.	NL-Equipment/Property Damage - Equipment Damage	
560	Richmond, CA - Refinery	10/18/2010 8:00:00 PM	Closed	Near Loss	Particle in right eye	Walking into contractor office near gate 91. EE felt something in right eye. EMT were called and flushed EE eye. After flushing EE was taking to clinc for further treatment. An eyelash was found and EE was released back to work	NL-Injury/Illness - Contractor Injury	(1) Eye lash
570	Richmond, CA - Refinery	10/19/2010 2:45:00 AM	Closed	Near Loss	Forklift caught Electrical Pull Box Cover No. PB10	Forklift driver driving over uneven surface caused the vehicle to bounce and the forks to catch the Pullbox cover plate and caused it to move slightly.	NL-Equipment/Property Damage - Equipment Damage	
611	Richmond, CA - Refinery	10/19/2010 10:30:00 AM	Closed	Loss	Cutter leaked to ground at Main Street Cutter rack	Small leak occured at 6" fitting, noticed immediately, but when truck was put under vacuum it did not respond and pull vacuum. The road valve had been closed by the vacuum truck driver's step-up Supervisor. The Supervisor's intent was to train the driver on the need to close the road valve manually on this particular truck. This aspect was forgotten about minutes later because had the road valve been re-opened the truck would have pulled vacuum when the leak was first spotted. Upon arrival to scene by regular vacuum Supervisor the closed valve was noticed, valve was opened, and leak was stopped. Approximately 4 gallons of cutter leaked to concrete surface before leak was stopped. Leak was immediately contained, absorbed, and cleaned up at that time.	Environmental	(1) 1. Why did product leak to the ground? 6"x4" reducer fitting was not sealing properly. 2. Why was fitting not sealing properly? Because the camlock ears were worn. 3. Why did we continue to use the camlock ears if they were worn? Because the driver thought they were ok for use. 4. Why did the driver think they were ok for use? Because some resistance was felt on the camlock ears and no there were no leaks on prior work. The current acceptable operating practice is, if there is no leak, and resistance is felt on the camlock ears, the connection is considered adequate. Review of the camlock's fitting condition revealed that the wear of these camlocks can result in leaks of certain materials under pressure (as was in this situation) more readily.
627	Richmond, CA - Refinery	10/1/2010 12:00:00 AM	Closed	Near Loss	Incorrect Net Cash Margin calculation	Incorrect Net Cash Margin calculation was performed and reported in our internal refining benchmarking system (Solvchev)	NL-Quality - Paperwork Incorrect/Not Sent	(1) Inadequate procedure - financial desk guide does not specify a stock balance reconciliation or dat check - see journal notes for more detail, (2) Incorrect price set selected in SAProfile - see journal notes for more detail
671	Richmond, CA - Refinery	10/17/2010 12:00:00 AM	Closed	Near Loss	PSM Database Denial of Service	PSM database not allowing access for users working night shifts during turnaround.	NL-Business Process - Business Process	(1) Symptom: Users could not log on to the MOC database. Why did it refuse to allow log ons? Because the system had reached its limit. Why had the system reached its limit? Application load was high because the FCC Major T/A was in progress. The application was bogged down and could not process additional users because it was not compiled at this time making it less efficient.
680	Richmond, CA - Refinery	10/20/2010 12:00:00 AM	Closed	Near Loss	20 plant over pressured K1900	20 plant was being introduced into K1900 feed when it overpressured the first stage PC. PC opened to flare; steam was added to flare. 5-10 minutes later K1900 was once again overpressured by 20 plant. Pressure backed out NISO and RLOP atmospheric drums. Pressure vented to flare and steam was added for better combustion.	NL-Environmental - Release	
688	Richmond, CA - Refinery	10/20/2010 1:45:00 PM	Closed	Loss	Drops of cable dressing spilled to water	While performing PM maint on Berth #3 OCMA 2 cables the mechanic moved the manlift in a way that the bucket shifted and spill over the side less than a table spoon	Environmental	(1) Mechanics didn't have a procedure that would outline the precautions need to prevent the incident.
696	Richmond, CA - Refinery	10/20/2010 9:30:00 AM	Closed	Loss	Crane Load Contacted Light Fixture	A contractor crane operator was receiving relayed hand signals from two ironworkers while attempting to set a lid on 2A Separator. The load contacted a light fixture causing it to be damaged. Operations safety responded and took a report.	Equipment/Property Damage	(1) SOS--Design & Engineering--Light Fixture is on the Middle Edge of the Area Where the Lid is to be Lifted on and Off , (2) SOS--Design & Engineering--Light Fixture is on the Middle Edge of the Area Where the Lid is to be Lifted on and Off , (3) SOS--Design & Engineering--Limited Number of Radios in the Refinery
717	Richmond, CA - Refinery	10/21/2010 5:00:00 AM	Closed	Loss	Particle in left eye	Wyatt; Contract EE was removing gloves at end of shift and rubbed left eye and felt the particle.Chevron EMTs were called to help flush the eye out. EE was sent to clinc as percaution, the particle turned out to be a eye lash	Injury/Illness	(1) Hand rubbing eye
770	Richmond, CA - Refinery	10/21/2010 10:00:00 AM	Closed	Loss	~5 gallon spill of low pH water during liquid transfer to poly tank	Low pH water accumulated from the T-1821 water wash/tank cleaning activity was being transferred from vac trucks to a Poly tank. A Clean Harbors technician along with a Timec technician, on loan, were tasked with securing the hose to the ladder adjacent at the top manway of the Poly tank. The hose workec loose from its rope intended to secure it, and some of the low pH material spilled into the berm with some (~1 gal) splashing onto the asphalt and sol next to the berm. What went right: 1. The procedures were followed. 2. The workers were all out of the line of fire, so none of the spray contacted the workers. 3. The Veolia Vac Truck driver was paying close attention and immed ately shut off the transfer when the hose came loose. 4. Haz Waste personnel were immediately notified of the incident. 5. Clean Harbors immed ately dispatched personnel to clean up the spill.	NL-Environmental - Spill	(1) Inadequate or no training is given to the Technician to perform the job.
					Sewer Cover/Grate	RTD boom truck was parking at RTD. While pulling into the parking space the front wheel rolled over a 36" round sewer cover/grating, dislodged it and in		

771	Richmond, CA - Refinery	10/21/2010 7:00:00 AM	Closed	Loss	Dislodged When Driven Over Causing Minor Damage	doing so the cover contacted the steps of the truck causing minor damage. The driver reported the incident immediately per procedure. Area was coned off until investigation was completed.	Equipment/Property Damage	(1) Cover did not fit hole.
771	Richmond, CA - Refinery	10/21/2010 7:00:00 AM	Closed	Loss	Sewer Cover/Grate Dislodged When Driven Over Causing Minor Damage	RTD boom truck was parking at RTD. While pulling into the parking space the front wheel rolled over a 36" round sewer cover/grating, dislodged it and in doing so the cover contacted the steps of the truck causing minor damage. The driver reported the incident immediately per procedure. Area was coned off until investigation was completed.	NL-Injury/Illness - Employee Injury	(1) Cover did not fit hole.
787	Richmond, CA - Refinery	10/21/2010 5:00:00 PM	Closed	Loss	Light Headed, Disorientated	Koch: EE was climbing a ladder on C-160 assisting co-workers in blinding the column when he began to feel light headed. He returned to the ground and reported his condition and EMT's were summoned.	Injury/Illness	(1) Information Only, Medical Personal
798	Richmond, CA - Refinery	10/22/2010 1:00:00 AM	Closed	Near Loss	ear irritation	Contract EE had ear irritaion in left ear. Plant Protection was called and refered EE to go to clinc. EE's ear irritaion is non-industrial	NL-Injury/Illness - Contractor Injury	
803	Richmond, CA - Refinery	10/21/2010 8:45:00 PM	Closed	Near Loss	Compressor came detached from forklift	Welltech: While transporting air compressor with forklift, the air compressor came detached while transporting. Incorrect style adaptor was used. Forklift had ball style hitch and air compressor had ring style. So when forklift hit a bump the air compressor came loose, the safety chains were not used.	NL-Equipment/Property Damage - Equipment Damage	
840	Richmond, CA - Refinery	10/22/2010 11:00:00 AM	Closed	Loss	H2S Monitor activation	Brand/ Koch: Bleeder was opened to steam to atmosphere and there was residual liquid present, when released it activated 3 H2S monitors Two EE's were working at a lower level at V-148 and had their monitors activate with a peak of 15 ppm. Another EE was reviewing a future job and his monitor also activated with a peak of 18 ppm. All three monitors were removed from service and checked and bump tested, then returned to EE's. Brand EE reported that he was feeling light headed so medical assistance was provided.	Injury/Illness	(1) Residual Liquid in bleeder nozzel.
840	Richmond, CA - Refinery	10/22/2010 11:00:00 AM	Closed	Loss	H2S Monitor activation	Brand/ Koch: Bleeder was opened to steam to atmosphere and there was residual liquid present, when released it activated 3 H2S monitors. Two EE's were working at a lower level at V-148 and had their monitors activate with a peak of 15 ppm. Another EE was reviewing a future job and his monitor also activated with a peak of 18 ppm. All three monitors were removed from service and checked and bump tested, then returned to EE's. Brand EE reported that he was feeling light headed so medical assistance was provided.	NL-Injury/Illness - Contractor Injury	(1) Residual Liquid in bleeder nozzel.
853	Richmond, CA - Refinery	10/22/2010 4:00:00 PM	Closed	Loss	Particle in the eye	Wyatt....EE was descending the Precip when he fell something in his eye.	Injury/Illness	
860	Richmond, CA - Refinery	10/22/2010 11:00:00 PM	Closed	Near Loss	steam line under insulation broke about 2 ft. from the flange	While installing a blind,a deteriorated pipe broke about 2 ft away on the live side of the valve. Steam leaked from the pipe but no on was injured. The pipe was insulated and you couldn't see the bad pipe	NL-Injury/Illness - Contractor Injury	
868	Richmond, CA - Refinery	10/22/2010 10:44:00 PM	Closed	Loss	Fall. V-148, FCC	Brand: EE was inside of V-148 measuring the vessel for scaffolding to be built, and in the process of feeding out the tape and stepping backward fell into the Udder of the vessel. The Udder is 3' in diameter, and 8' deep, and EE was able break his fall by reaching his arms outward preventing him from falling to the bottom. EE was transported via ambulance to an outside hospital for a thorough examination, then returned back to work with modified duty."FIVE WHY" One Page Report Incident Number 868 Business Unit Cracking Location V-148 Facility Name Richmond Incident date 22 October 2010 Type of Process: Shutdown Type of Equipment: Vessel Team Members: Incident Description: What: Brand. EE was inside of V-148 measuring the vessel for scaffolding to be built, and in the process of feeding out the tape and stepping backward fell into the Udder of the vessel. The Udder is 3' in diameter, and 8' deep, and EE was able break his fall by reaching his arms outward preventing him from falling to the bottom. EE was transported via ambulance to an outside hospital for a thorough examination, then returned back to work with modified duty. Where (location or where in the process): V-148 When: 22 October 2010, 10:44 How: EE Fell into the vessel udder. Problem Statement (What is the key issue that needs to be addressed?): Contract Employee fell into V-148 udder FIVE WHY'S 1. Why did 'above' happen? Verification Contract EE did not see the vessel udder. 2. Why did "1" happen? a. Contractor was not focused on their surroundings. b. The entire bottom of the vessel was obscured. [Coated and darkly colored] 3. Why did "2" happen? a Contractor did not maintain 360 degree awareness at all times [Did not keep his eyes on the path, was looking north to take measurements and moving south] b. The interior of V-148 did not have adequate lighting to make the hazard stand out. [Lighting in vessel did not adequately illuminate	Injury/Illness	(1) EE did not maintain 360 degree awareness, (2) Inadequate lighting inside of the vessel
890	Richmond, CA - Refinery	10/24/2010 1:00:00 PM	Closed	Near Loss	#1 Boiler tripped due to High fuel gas pressure	#1 Boiler tripped offline due to High fuel gas pressure indicated by first out on Honeywell DCS.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
	Richmond,	10/25/2010				Welltech: EE was operating the elevator going from floor 4 to floor 8 when she		

936	CA - Refinery	9:00:00 AM	Closed	Loss	Particle in the Eye	felt something in her eye. She reported her situation then started flushing her eye, EMT looked at it, then was transported to the Refinery Clinic	Injury/Illness	(1) Leak in the sealing surface of the goggles due to prescription eye glasses
972	Richmond, CA - Refinery	10/24/2010 3:35:00 AM	Closed	Loss	CFD called to investigate smoking electrical panel for lathe #9 in the machine shop	At approximately 3:30 am on 10/24/2010 the CFD was called to investigate smoke coming from an electrical panel inside the machine shop at lathe #9. Breaker #A12 Circuit #A5733 Lathe#9 on 440v cabinet.	Fire/Explosion	(1) Windows above electrical enclosures were left open, (2) Indoor Electrical Enclosures are not waterproof, (3) Indoor Electrical Enclosures are not waterproof, (4) Indoor Electrical Enclosures are not waterproof
996	Richmond, CA - Refinery	10/26/2010 2:45:00 AM	Closed	Near Loss	Pain in the stomach	Matrix -EE stated he had been coughing for several days and started to hurt when he coughed. He came to work and a little into the shift he lifted a board (50 - 60lbs) and felt pain. Called CFD and took to the clinic where they were evaluated.	NL-Injury/Illness - Contractor Injury	
1052	Richmond, CA - Refinery	10/20/2010 9:00:00 AM	Closed	Loss	Sanitary sewer line leak	The main sanitary sewer fiberglass line located along Channel St above the 100' Channel developed a leak. The leak was caused by an acid line resting on top of the fiberglass sanitary line. The pipe support appears to have settled allowing the acid line to rest on the sanitary line.	Equipment/Property Damage	(1) New acid line installed too close to the existsing fiberglass sanitary sewer line
1052	Richmond, CA - Refinery	10/26/2010 9:00:00 AM	Closed	Loss	Sanitary sewer line leak	The main sanitary sewer fiberglass line located along Channel St above the 100' Channel developed a leak. The leak was caused by an acid line resting on top of the fiberglass sanitary line. The pipe support appears to have settled allowing the acid line to rest on the sanitary line.	Environmental	(1) New acid line installed too close to the existsing fiberglass sanitary sewer line
1053	Richmond, CA - Refinery	10/26/2010 9:30:00 AM	Closed	Near Loss	H2S personal monitors went into alarm	Two Timec employees were replacing a gasket on a 28 inch line off reboiler on C-1400 and when employees seperated the flange their H2S personal monitors went into alarm. workers did 'nt notice any smell but their monitors read 11ppm and the other 32ppm workers stopped work to advise supervisor.	NL-Injury/Illness - Contractor Injury	
1092	Richmond, CA - Refinery	10/26/2010 10:30:00 PM	Closed	Near Loss	Relief header blinded prior to completion of LOTO	36" Inlet blind installed at V-730 relief drum prior to LOTO completion.	NL-Operational Process/Procedures - Safety Systems	(1) Head operator deviated from safe work practices.
1098	Richmond, CA - Refinery	10/27/2010 4:00:00 AM	Closed	Near Loss	Opened flange with live steam - no one hurt	Koch - Opened flange with live steam. Turned out the tag was on the wrong side. It was opened away from mechanics and no one was hurtIncident Number 1098 Business Unit FCC Location V-301/309 Deaerator area Facility Name Richmond Refinery Incident date 10/27/10 Type of Process: 150# steam Type of Equipment: Steam supply piping Team Members: Ron Moore Bobby Testa Mike Gibson Incident Description: Contractor PF/BM exposed to 150# steam during blinding activities for V-301/309 isolation. Contract supervisor walked out blind locations with area operator. Operator pointed out hanging blind tags at PV-309A (3 total) control loop and made note that the "D" section of the blind tags were already removed and the piping was ready to be blinded. Contract supervisor instructed two of his PF/BM to install blinds at identified locations. PF/BM hot bolted the flange on live side of steam line first then began to loosen remaining bolts when water followed by steam shot out of flange. Both PF/BM quickly moved away from the spread flange to avoid getting burned. (Near miss with no injuries) Investigation details: • Area operator claimed to have shown the supervisor the tag locations but never specifically pointed to the exact flanges that were to be blinded. • Supervisor claimed the operator showed him the exact locations to be blinded. • Blind tag in question was hung on the live side of the isolation valve and the "D" section of the tag had been removed prior to this shift possibly several days earlier by others. • Supervisor had his PF/BM install blinds but did not request verification that the piping was depressurized. • PF/BM claimed they felt the line temperature and mentioned to their supervisor that it was still hot. No follow up on this? • PF/BM stated that the operator was present during initial flange break however the operator claims that he wasn't immediately present and was not requested by contractor to be present. • Control loop piping no	NL-Injury/Illness - Contractor Injury	
1099	Richmond, CA - Refinery	10/26/2010 2:30:00 PM	Closed	Near Loss	Operator may have injured back on 10/26 closing non-return valve on #7 boiler	While closing #7 Boiler Non-Return valve after shuting boiler down, operator called from home, talked to STL about their back hurting. Possibly from closing the non-return valve earlier. STL instructed operator to check in at the clinic and not to take the turnover until cleared Operator went to clinic @ 5:30 am. Have no further details as operator still being examined.	NL-Injury/Illness - Employee Injury	
1147	Richmond, CA - Refinery	10/26/2010 3:00:00 PM	Closed	Loss	T3132 Damaged manway flange face .	While removing gasket material on a manway flange surface on T-3132. The surface was gouged and in need of repair before installing a new gasket and bolting up the manway.	Equipment/Property Damage	(1) SOS: Maintenance & Inspections: Gasket surface was not cleaned when tank was opened(Open for 2 weeks). They chose not to do it until the end. , (2) SOS: Training & Procedures: Maintenance employee used pneumatic chisel to clean the gasket surface. Maintenance is not trained on tool used for this task.
1154	Richmond, CA - Refinery	10/27/2010 11:15:00 AM	Closed	Loss	Particle in Eye MABT	While cleaning under the Expander on the MABT, EE felt something come in contact with his left eye under his spoggles.	Injury/Illness	(1) Unknown airborne particle
1172	Richmond, CA - Refinery	10/26/2010 11:35:00 AM	Closed	Near Loss	slip and fall	Redwood; contractor employee was assisting another employee grit blasting the exterior of roof on T-1821. Both employees were tied off. Contractor employee slipped and fell hitting his buttocks and elbow on the steel grit on the roof that did not get captured by the vaccum during the grit blasting.	NL-Injury/Illness - Contractor Injury	

1199	Richmond, CA - Refinery	10/28/2010 3:30:00 AM	Closed	Near Loss	Finger pricket	Waltech EE pricket pinky finger on chair. Plant Protection was called and washed and bandaged . EE returned to work	NL-Injury/Illness - Contractor Injury	
1201	Richmond, CA - Refinery	10/28/2010 1:30:00 AM	Closed	Near Loss	Missed an access point when putting up Scott Air tape	Upon completion of a scott air job it was discovered that one access had been missed	NL-Injury/Illness - Contractor Injury	
1232	Richmond, CA - Refinery	10/28/2010 12:00:00 AM	Closed	Near Loss	Late reporting of inoperative compliance monitor - V-475 H2S analyzer	Late reporting of inoperative compliance monitor. V-475 H2S analyzer failed calibration on 10-24-10, and was not discovered and reported until 10-26-10	NL-Regulatory Compliance - Non Compliance	(1) Checking the analyzer calibrations was not part of the daily review by the HES group
1245	Richmond, CA - Refinery	10/28/2010 11:00:00 AM	Closed	Loss	Twisted Wrist	Wyatt; EE was moving a section of the skirting for V-70 Reactor when he twisted his left wrist. EE and a co-worker were moving the piece that had just been demoed and the co-worker lowered his half before EE causing his wrist to twist somewhat.	Injury/Illness	(1) Co-worker dropped his end of the skirting being removed while EE still had a grip on his end
1291	Richmond, CA - Refinery	10/28/2010 12:00:00 AM	Closed	Near Loss	GHT plant Exchanger fouling	E-1676 and E-1680 during shutdown inspection were found to be fouled and indications of plugging in the cooling water side of exchanger	NL-Lessons Learned	(1) SOS:Maintenance & Inspection: Tubes Needed to be Replaced. Tubes fouled. Reduced flow through the tubes. Debris plugged the tubes. No Backwash. No PM in place. SRCM recommendation was not implemented (either didn't get to Operations or it was missed/ overlooked). , (2) SOS: Training & Procedures: Debris left in exchanger when it was replaced.
1297	Richmond, CA - Refinery	10/28/2010 4:00:00 AM	Closed	Loss	Contractor Particle in eye.	Contract welder felt irritation in right eye at the end of his shift, while cleaning up from weld job in his weld bay. He reported the irritation to his foreman. They suspected it was a slight flash-burn and employee decided to go home.	Injury/Illness	(1) Lack of proper eye protection
1297	Richmond, CA - Refinery	10/28/2010 4:00:00 AM	Closed	Loss	Contractor Particle in eye.	Contract welder felt irritation in right eye at the end of his shift, while cleaning up from weld job in his weld bay. He reported the irritation to his foreman. They suspected it was a slight flash-burn and employee decided to go home.	NL-Injury/Illness - Contractor Injury	(1) Lack of proper eye protection
1331	Richmond, CA - Refinery	10/29/2010 5:45:00 AM	Closed	Loss	Trip and Fall	Contractor Employee was walking along designated walking path to get on the bus to start her shift. Employee tripped and fell on the leg stands that are holding up the chain link fence and recieved a small cut on each hand and a scape on each knee.	Injury/Illness	(1) Temporary Fence
1351	Richmond, CA - Refinery	10/28/2010 8:00:00 PM	Closed	Loss	Employee on company travel sought out medical treatment.	Employee on company travel had medical issue Information for document purposes only.	Injury/Illness	(1) Sharp Object exposed
1368	Richmond, CA - Refinery	10/21/2010 12:00:00 AM	Closed	Loss	Leaking drum at location OUT608	10/20/2010 •OGS generated a replenishment assignment for Warehouse location J-30 to move to location OUT608. This move consisted of 4 pallets of Transultex F. This location is not commonly used, and was assigned when the usual space was unavailable. The supervisor was not in the facility when the ouside storage space was assigned. The relief supervisor was also not aware that a new storage space that was not routinely used was going to be used. • There were two Warehouse Contractors that performed these pallet moves as a team. One contractor moved the pallets of drums to dock 8a (inside) and the other contractor took the pallets of drums off the dock and moved them into inventory location OUT608 (outside). These moves occurred from 15:40pm to 16:52pm • A third Contractor was picking drums from location OUT606 (two locations down from OUT608) at 16:18 hours and saw no signs of a spill. The forklift being used had unusually long forks that could stick out of the other side of a drum pallet. It is likely that the drum could have been punctured when the operator pushed the pallet while stacking the drums. The long forks were used for maintenance tasks and were not evaluated to determine if apropriate for product pallet movements before being released to the warehouse. 10/21/2010 • WHS Team was in their morning RIT meeting from 6am - 6:20am • At 6:10am Blending Operator was driving by the warehouse and noticed a large pool of product on the asphalt and he attempted to call the HES Specialist on the radio. The HES Specialist was giving training at that time and had their radio turned off and did not hear the call. • At 6:15am Blending Operator went inside to inform the warehouse team of the spill. Warehouse team immediately began to contain and clean up spill.	NL-Environmental - Spill	(1) 1. 48 gallons of lubricant were spilled to concrete. Why? Bottom of drum was punctured and not detected. Why? It was stabbed with forklift fork while operator was putting drums away Why? Blade was longer than the pallet Why was this blade being used? Forklift was previously assigned to Maintenance then it was transfered to WHS. The operators noticed the forks were longer but the risk of using them was not identified as an issue. Why? Because enforcement of risk identification and reporting of abnormal conditions needs to be improved. 2. Why was the punctured drum not detected earlier? Because frequent inspections of the storage areas are not being required to contain leaks from damaged packages. Why are inspections not being required? Because the risk of having spills from damaged containers had not been identified and addressed. , (2) 3. 48 gallons of lubricants were spilled to concrete. Why? Bottom of drum was punctured Why? It was stabbed with forklift fork while operator was putting drums away Why didn't the operator avoid spearing the drum? Operator did not take the requisite care when putting drums away Why? Operator did not assess the risk of getting too close to the drums when stacking and act to address the risk of bumping a drum and puncturing it. , (3) 4. 48 gallons of lubricant were spilled to concrete. Why? Bottom of drum was punctured Why? It was stabbed with forklift fork while operator was putting drums away Why? Operator bumped the drum on pallet in front of the pallet of drums that he was placing Why? Operator was taught this method of putting away drums and the risk of damaging the drums when bumping a second tier of drums was not properly identified. , (4) 5. Storage area was not inspected prior to being used, to address any unusual conditions (uneven floors, stacking space reduced, etc.). Why? Because supervisor was not available to inspect when storage had to be transfered to this location. Why was supervisor not available
								(1) 1. 48 gallons of lubricant were spilled to concrete. Why?

1368	Richmond, CA - Refinery	10/21/2010 12:00:00 AM	Closed	Loss	Leaking drum at location OUT608	10/20/2010 •CCS generated a replenishment assignment for Warehouse location J-30 to move to location OUT608. This move consisted of 4 pallets of Transultex F. This location is not commonly used, and was assigned when the usual space was unavailable. The supervisor was not in the facility when the ouside storage space was assigned. The relief supervisor was also not aware that a new storage space that was not routinely used was going to be used. • There were two Warehouse Contractors that performed these pallet moves as a team. One contractor moved the pallets of drums to dock 6a (inside) and the other contractor took the pallets of drums off the dock and moved them into inventory location OUT608 (outside). These moves occurred from 15:40pm to 15:52pm • A third Contractor was picking drums from location OUT606 (two locations down from OUT608) at 16:18 hours and saw no signs of a spill. The forklift being used had unusually long forks that could stick out of the other side of a drum pallet. It is likely that the drum could have been punctured when the operator pushed the pallet while stacking the drums. The long forks were used for maintenance tasks and were not evaluated to determine if apropriate for product pallet movements before being released to the warehouse. 10/21/2010 • WHS Team was in their morning RIT meeting from 6am - 6:20am • At 6:10am Blending Operator was driving by the warehouse and noticed a large pool of product on the asphalt and he attempted to call the HES Special st on the radio. The HES Specialist was giving training at that time and had their radio turned off and did not hear the call. • At 6:15am Blending Operator went inside to inform the warehouse team of the spill. Warehouse team immediately began to contain and clean up spill.	Environmental	Bottom of drum was punctured and not detected. Why? It was stabbed with forklift fork while operator was putting drums away Why? Blade was longer than the pallet Why was this blade being used? Forklift was previously assigned to Maintenance then it was transfered to WHS. The operators noticed the forks were longer but the risk of using them was not identified as an issue. Why? Because enforcement of risk identification and reporting of abnormal conditions needs to be improved. 2. Why was the punctured drum not detected earlier? Because frequent inspections of the storage areas are not being required to contain leaks from damaged packages. Why are inspections not being required? Because the risk of having spills from damaged containers had not been identified and addressed. , (2) 3. 48 gallons of lubricants were spilled to concrete. Why? Bottom of drum was punctured Why? It was stabbed with forklift fork while operator was putting drums away Why didn't the operator avoid spearing the drum? Operator did not take the requisite care when putting drums away Why? Operator did not assess the risk of getting too close to the drums when stacking and act to address the risk of bumping a drum and puncturing it. , (3) 4. 48 gallons of lubricant were spilled to concrete. Why? Bottom of drum was punctured Why? It was stabbed with forklift fork while operator was putting drums away Why? Operator bumped the drum on pallet in front of the pallet of drums that he was placing Why? Operator was taught this method of putting away drums and the risk of damaging the drums when bumping a second tier of drums was not properly identified. , (4) 5. Storage area was not inspected prior to being used, to address any unusual conditions (unoven floors, stacking space reduced, etc.). Why? Because supervisor was not available to inspect when storage had to be transfered to this location. Why was supervisor not available
1460	Richmond, CA - Refinery	10/29/2010 12:00:00 AM	Closed	Near Loss	Wharf bus radio is not functioning correctly; radio is not receiving all incoming calls. Due to the radio not working properly there is a risk of delaying key personnel going to and from the RLW.	Captain Bob Quine reported the Wharf Bus radio has not been working for the past 24 hours. Captain Quine is concern with high volume of ships expected to arrival at the RLW, and that crewmember and RLW staff would be left stranded waiting for the Wharf bus.	NL-Business Process - Business Interruption	(1) There was interference from outside sources that was hindering the Wharf bus radio phone. In the interim 3 weeks ago we put some protections on the channel. Those protections were hindering phone operation especially as the environment with the shut downs grew quite busy. The portable radios are fine and the security group did nothing to cause the problem.
1469	Richmond, CA - Refinery	10/30/2010 11:10:00 PM	Closed	Loss	Wiped face and eyes felt irritation	Welltech firewatch setting up for a job in the alleyway in the Alky Plant. EE wiped eyes with gloves and felt an irritation,went to the tool trailer and got an Super Sani-Cloth (Germicidal Disposable Wipe) and wiped face and eyes. Did not feel any better and called his foreman who called Plant Protection. While waiting for there arrival EE's foreman got him to eye wash station to start flushing his eyes. Plant Protection refered EE to the clinc. Released back to work.	Injury/Illness	
1507	Richmond, CA - Refinery	10/31/2010 6:00:00 AM	Closed	Near Loss	citrakleen tote leak in RLOP GRU	citra-kleen tote leaking in GRU.	NL-Environmental - Spill	
1517	Richmond, CA - Refinery	10/31/2010 4:25:00 PM	Closed	Loss	Wedge popped off valve and struck face	A P2S EE was injured while trying to remove PV-851 at the Y-dib boundary.The injury was to his right cheek where a wedge popped out of the flange and struck him in the face, the cut is at least 1 inch in length.	Injury/Illness	(1) One wedge (par flange set) being used vs two stacked wedges, (2) Both EE's perceived the Foreman to be a safe distance outside the line of fire at that moment
1526	Richmond, CA - Refinery	10/31/2010 11:15:00 PM	Closed	Near Loss	Hose failure	14" in diameter and about 80ft long exhaust hose, the hose was tied off at the top of E-133 and suspended about 60ft in the air by crane. The hose separated below the rigging approximately 45ft. The hose was not completely off the ground.The canvas material covering left the spiral wire winding suspended in the air. The area was roped off and lift area secured. After looking at canvas it seemed to be worn and weathered.	NL-Equipment/Property Damage - Equipment Damage	
1529	Richmond, CA - Refinery	11/1/2010 2:30:00 AM	Closed	Near Loss	Personal H2S monitor sounded while worker was inside V-1441.	While inside Vessel, V-1441 in the Alky Unit, a Veolia employee was hydroblasting the inside of the vessel. He felt his personal H2S monitor vibrate. He proceeded to the vessel entry and exited the vessel. He notified the Entry Attendant that his H2S monitor alarm had sounded. The attendant notified their Supervisor, who in turn called the Chevron Safety Representative of the situation.	NL-Operational Process/Procedures - Safety Systems	
						End of period processing, which allows the LeakDAS database to schedule our components for inspections locked up during this process. This is typically a one hour process. The air compliance inspection group cannot create routes and populate to upload to our hand-held devices for inspections. Loss of time		

1546	Richmond, CA - Refinery	11/1/2010 5:30:00 AM	Closed	Near Loss	Compliance database issue	(4 hours) is the main issue and the cause is getting help promptly to fix this issue whenever it may arise. As of time reported, the RIC841Help Desk has not called back to address this problem. Long term, if problem was to continue we could miss inspections and be out of compliance.	NL-Regulatory Compliance - Non Compliance	
1571	Richmond, CA - Refinery	11/1/2010 3:30:00 PM	Closed	Loss	Particle in the eye	Koch EE was tying mesh down with wire at top of C-90. EE wiped eye when felt particle ,EE flushed eye, plant protection was call and sent to clinc for furter evaluation. EE scratched his eye. EE was wearing prescription safety glasses	Injury/Illness	(1) Rubbed Eye
1572	Richmond, CA - Refinery	10/14/2010 9:00:00 AM	Closed	Near Loss	Carrier arrived to deliver product from Grand Prarie Texas and almost couldn't offload due to no pets allowed in Refinery	During BCP carrier showed up to deliver product from Grand Prairie Texas and was delyaed getting into get due to dog on board and guest.	NL-Transportation - Company	
1573	Richmond, CA - Refinery	10/28/2010 10:00:00 AM	Closed	Near Loss	Truck arrived for pick up and had to cases of alcohol in trailer	Trailer arrived to pick up load , FTL went to load and observed to cases of alcohol in back of trailer . EE contacted Supervisor before loading . Supervisor brought the alcohol to the attention of the driver and asked him to remove from trailer so load EE can load. Supervisor advised driver that alcohol was prohibited to come into Refinery . Sales Rep of account was notified as well to enforce Refinery Policy	NL-Regulatory Compliance - Tobacco Non-Compliance	
1574	Richmond, CA - Refinery	11/1/2010 12:00:00 AM	Closed	Loss	Operator twisted ankel on uneven pavement.	Operator twisted ankel on uneven pavement	Injury/Illness	(1) Operator stepped on uneven surface causing ankle injury. On further evaluation detremined operator had exisitng swelling that was contributing factor.
1585	Richmond, CA - Refinery	11/1/2010 7:00:00 PM	Closed	Loss	EE's hand was swollen	Matrix - When EE put his coveralls on he felt a slight itch on the back of his right hand and thought it was a mosquito bite. Later his hand started to swell up and red so he and his safety rep came to the office.	Injury/Illness	
1606	Richmond, CA - Refinery	11/1/2010 2:25:00 PM	Closed	Near Loss	Base Oil B&S	Blending Head Operator reported a high level alarm at approx 14:25 (see high level alarm info below) on Base Oil T-5101 while taking a charge from Base Oil for 5000 Bbls(Order #932917). Order called and was confirmed for 5000 Bbls from both sending (RLOP) and receiving ends(RLP) After high level alarm was set off, Head Operator immediately closed T-5101 inlet valve and verified no product had overflowed tank. Head operator then notified supervisor & operations manager and called Operations at B&S. B&S Operator reported he mistyped the order quantity as 6500 Bbls. Tank Info: Tank level at time of alarm 34.67 feet and the volume is 659429 gallons, High level alarm went off like it is suppose to and no product was lost. High level set point is 34' 8" High high level is 35'1" Tank overfill level is 39'10"	NL-Environmental - Spill	(1) Did not double check amount requested verbally on the phone from RLP -
1628	Richmond, CA - Refinery	11/1/2010 6:00:00 PM	Closed	Loss	Loss of Raman analyzer readings during a Mogas blend	This evening at the start of shift the Raman analyzer PV's all went B/O.	Operational Process/Procedures	(1) M-distance above accepted threshold
1628	Richmond, CA - Refinery	11/1/2010 6:00:00 PM	Closed	Loss	Loss of Raman analyzer readings during a Mogas blend	This evening at the start of shift the Raman analyzer PV's all went B/O.	Business Process	(1) M-distance above accepted threshold
1635	Richmond, CA - Refinery	10/28/2010 2:00:00 PM	Closed	Near Loss	Operator sprayed with hydrocarbon at sample station.	While an operator was attempting to empty T1899 sample sump, the drain valve to sample box was opened and gas oil splashed out of the sample box spraying his coveralls and a few drops on his face. The EE was not injured.	NL-Injury/Illness - Employee Injury	
1652	Richmond, CA - Refinery	11/2/2010 11:30:00 PM	Closed	Loss	EE needed assitance off a ladder after elbow popped	Thorpe EE was chipping refractory inside of the regenerator (V-70). While chipping EE felt a pop in his elbow and need assistance getting down the ladder approx. 20ft. Plant protection was called for assistance. EE had a previous injury to elbow. EE went to his own docter for medical attention.	Injury/Illness	(1) Chipping gun
1652	Richmond, CA - Refinery	11/2/2010 11:30:00 PM	Closed	Loss	EE needed assitance off a ladder after elbow popped	Thorpe EE was chipping refractory inside of the regenerator (V-70). While chipping EE felt a pop in his elbow and need assistance getting down the ladder approx. 20ft. Plant protection was called for assistance. EE had a previous injury to elbow. EE went to his own docter for medical attention.	NL-Injury/Illness - Contractor Injury	(1) Chipping gun
1679	Richmond, CA - Refinery	11/2/2010 1:00:00 PM	Closed	Near Loss	Near Miss - Compliance reporting responsibilty not communicated	A compliance report was not turned over to the responsible person when there was a personnel change and rearranging of responsibilities in the group.	NL-Regulatory Compliance - Non Compliance - Air	(1) Turnover checklist/procedure for LDAR position did not exist or was incomplete
1695	Richmond, CA - Refinery	11/3/2010 1:45:00 PM	Closed	Near Loss	Employee feeling light headed and nauseous	Welltech; Contractor Employee felt light headed and nauseous. Employee went and sat down in shade to drink some water and began vomitting	NL-Injury/Illness - Contractor Injury	(1) De hydration
1700	Richmond, CA - Refinery	11/3/2010 9:20:00 AM	Closed	Near Loss	Visual flare – due to over pressuring relief header	High flow to LSFO relief system when V4098 SRV lifted during modified regen procedure K3950 shut down due to fluctuating suction pressure. Visible flame but NO VISIBLE SMOKE. (Faulty equipment at Penhex to be repaired during next plant shutdown.) Note: there were other relief flows at the time K3950 making suction pressure control erratic (spill back swinging) so PCO had placed it manual to steady flow to 5 H2S.	NL-Regulatory Compliance - Non Compliance - Air	(1) Valve at PHI was leaking by to relief
1701	Richmond, CA - Refinery	11/3/2010 3:35:00 PM	Closed	Near Loss	10 minute loss of signal flow meter indication to Control House	Electrical Contractor was doing conduit demo work at old TX 203/204 MCC. Contractor accidentally cut into conduit which had the live circuit going to Mass Flow meter for the South Iso flare gas.	NL-Business Process - Business Interruption	

1705	Richmond, CA - Refinery	11/3/2010 1:20:00 PM	Closed	Loss	On Nov 3rd 2010 at approximately 13:20 while installing a 14 inch blind into the downstream side of a check valve to FGR, under a live relive permit, vapors were released.	Relief gas from live Relief job installing 14 inch blind downstream of check valve leading to Flare gas Recovery - Tripped several H2S in plant sensors at 18 & 19 Plant and several personal monitors in Hydro and FCC. Hydro report - On Nov 3rd 2010 at approximately 13:20 while installing a 14 inch blind into the downstream side of a check valve to FGR, under a live relive permit, vapors were released. H2S alarms were tripped at RLOP/18 Plant and GRU 19 Plant. 5 Operators surveying 18 plant reported that personal monitors tripped. STL notified CFD and request for them to check H2S levels at Recovery and Channel St. RLOP activated the plant evacuation siren. CFD detected ~ 7 ppm H2S at Channel St, and notified STL that FCC had also begun evacuation. Per FCC area field safety coordinator, Kyle Drach: The following information is a summary of the events that occurred at FCC on November 3rd, 2010: The FCC flare was performing a live relief job under fresh air with approximately 12 persons. It has been assumed that the source of the H2S in this incident occurred during this job. The entire live relief job took 24 minutes. Wind was moving towards the FCC. At approximately 14:00, H2S alarms at RLOP 18 and 19 plant sounded, which was followed by alarms at 3H2S plant, and operators sounding the evacuation alarms for FCC. FCC and Alky shutdown personnel evacuated the plants to the muster points located at the Alky lunch tent, and at the FCC lunch tent (located in #1 parking lot). 31 personal H2S alarms went off at various locations throughout the plant. A majority of the personnel whose alarms sounded were hole watches higher up on the structures in the FCC, and those whose alarms sounded while crossing the bridges towards the Hydro/Cracking Offices heading towards the lunch tent at FCC. The following is a summary of the alarms:	Operational Process/Procedures	(1) WHAT: Personnel exposed to H2S (first aids) WHY1: Plants downwind of live relief job were not evacuated before job began WHY2: HSE and Live Relief permitting participants did not anticipate H2S vapors travelling the distance to affect RLOP & FCC.
1711	Richmond, CA - Refinery	11/3/2010 8:30:00 PM	Closed	Loss	sick and nauseas	Welltech EE was on 4th deck of V-70 fire watching, felt sick and nauseas, Called EE's safety rep, which brought to chevron safety. Plant protection was called and referred EE to the clinic. The fumes were coming from various trucks and equipment under EE. EE was checked out and released back to work.	Injury/Illness	(1) Exhaust fumes
1745	Richmond, CA - Refinery	11/4/2010 9:00:00 AM	Closed	Near Loss	Smoldering trash can FCC operating area	Field Operator discovered smoke coming from a portable trash can in the FCC utilities area. The Operator notified CFD shutdown Firemarshal. CFD responded and extinguished smoldering material.	NL-Fire/Explosion	(1) Materials inside trash can auto ignigted. CFD did find Absorball which was probably soaked with hydrocarbons, determined to be the most likely cause of ignition.
1771	Richmond, CA - Refinery	11/4/2010 11:30:00 PM	Closed	Loss	Overheated while inside V-70	Cat Service EE Had become over heated while inside V-70 on the 7th deck. Had EE remove tyvek, sit down and drink cool water. Plant Protection responded and evaluated	Injury/Illness	
1788	Richmond, CA - Refinery	11/4/2010 4:15:00 PM	Closed	Near Loss	Breakdown in the Bin Releasing Procedure and mis delivered different bin containing different material.	There was a breakdown in the Bin Releasing Procedure when Clean Harbors mis- delivered different bin number containing different material as opposed to what was manifested. The step of comparing the bin number to be delivered offsite to supporting paperwork and weight ticket was not performed.	NL-Business Process - Business Process	
1788	Richmond, CA - Refinery	11/4/2010 4:15:00 PM	Closed	Near Loss	Breakdown in the Bin Releasing Procedure and mis delivered different bin containing different material.	There was a breakdown in the Bin Releasing Procedure when Clean Harbors mis- delivered different bin number containing different material as opposed to what was manifested. The step of comparing the bin number to be delivered offsite to supporting paperwork and weight ticket was not performed.	NL-Quality - Product Mis-Delivery	
1799	Richmond, CA - Refinery	11/4/2010 4:30:00 PM	Closed	Near Loss	particle in the eye	WWW; Two contractor employee's had been working inside V-640 and V-641 welding rings inside vessel and at the end of shift they went home feeling fine.The next day at the beginning of shift both employees felt discomfort in there eyes and reported it to their supervisor.	NL-Injury/Illness - Contractor Injury	(1) Eye lash/ abrasion to cornea, (2)
1801	Richmond, CA - Refinery	11/5/2010 9:59:00 AM	Closed	Loss	EE hit elbow on stag ng	EE hit elbow on staging	Injury/Illness	(1) Staging not built correctly
1829	Richmond, CA - Refinery	11/5/2010 6:15:00 PM	Closed	Near Loss	Mistras EE need assistance to get out of a hole	Mistras EE was in 2nd deck of regen combustor PTing lower nozzles while trying to leave he could not make it to the next swing ladder. Contacted hole watch which got a hold of lead personnel and in touch plant protection. EE was released back to work	NL-Injury/Illness - Contractor Injury	
1840	Richmond, CA - Refinery	11/6/2010 9:05:00 AM	Closed	Loss	Vacuum truck operator slipped and fell causing knee abrasion	Vacuum truck driver was skimming the bioreactor with an oil paddle when his boot contacted a slippery, uneven surface causing him to lose balance and fall. The fall resulted in his knee contacting a small sharp rock which caused an abrasion.	Injury/Illness	(1) Driver took unnecessary risk to extend reach with oil paddle by getting too close to water's edge where surface is sloped and slippery. 5 WHY: 1. Why did vacuum truck operator sustain an injury? He slipped on a sloped, slippery spot near water's edge of the bioreactor inlet. 2. Why did he slip? He lost his balance, and when he stepped to steady himself his step contacted a sloped, slippery surface resulting in fall. 3. Why did his foot come in contact with a sloped, slippery surface? He had gotten too close to the edge. 4. Why did he get too close to the edge? An established limit line boundary had not been in place. Why was a limit line not in place? Previous procedure did not include this aspect.
						Chevron: Operator was witnessing a final closure on the internal manway at		

1842	Richmond, CA - Refinery	11/6/2010 2:24:00 PM	Closed	Loss	Chevron EE struck by falling hammer	bed #5 in C-160, when a hammer sitting on bed #4 was bumped and fell thru 3 manways and made contact with the Operator on the shoulder. The beds are about 18" apart and the estimated height the hammer fell was 8 to 10 ft.	Injury/Illness	(1) Falling hammer
1843	Richmond, CA - Refinery	11/6/2010 2:00:00 AM	Closed	Near Loss	T-1514 filled above SOH from Oregon Voyager discharge	On Saturday, November 6, 2010 at approximately 12:30 pm a Field Operator noticed the secondary seal and a portion of the primary seal was exposed above the top rim of T-1514 (FCC Heavy gasoline). The Field Operator immediately reported the incident and the tank roof was put back to a safe position (i.e. eliminating the exposure of the seals). T- 1514 is normally a rundown tank for FCC Heavy gasoline with a 45 API, and received a Mogas component import (API 67) from the wharf. Although there was no loss of containment or damage to the tank seals, the exposure of the seals allowed for the potential of a more serious incident had the tank overflowed. _____ INITAL DESCRIPTION. 11-06-10 After ship's discharge a 6700 bbl shortage ocurred in T-1514 from the ship's reported discharge bbls. All items checked look ok from Wharf setup, to lines & booster pump used and receiving tank. The ship bbls were on reel gauges. T-1514's bbls were on the auto gauge. No opening or closing reel gauges were obtained on T-1514 still tank (not a running gauge). As day crew was discussing further possibilities, the field operator reported on radio that the roof on T-1514 was sticking up above it's rim. The area operator immeadiately got a reel gauge and confirmed the 2ndary seal was one and a half ft above the shell rim.	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) Failure to follow procedure to recieve import cargo through the fill line., (2) Failure to document the change in tank service via the MOC process., (3) The tank does not yet have a secondary independent high level alarm. , (4) Failure to recognize that tanks with solid gauge well will always have discrepancy on the actual level vs the Saab indication.
1844	Richmond, CA - Refinery	11/6/2010 2:30:00 PM	Closed	Loss	Particle in the Eye, V-70	Wyatt V-70 Deck #5, EE went into the vessel to check a job, and while climbing a ladder felt a draft blowing from ventilation equipment and felt something get in his eye under his spoggles.	Injury/Illness	(1) Ventilation blower
1845	Richmond, CA - Refinery	11/6/2010 3:00:00 PM	Closed	Near Loss	Burning shirt/rag inside V-70	Wyatt/ Wellech; A welder inside V-70 at the 6th deck while working noticed a shirt or rag?? hanging from a scaffold bar smoking and burning. He stopped work and passed the burning clothing though the manway to the entry attendant who promptly extinguished it with a dry chem and water.	NL-Fire/Explosion	
1850	Richmond, CA - Refinery	11/6/2010 8:35:00 PM	Closed	Near Loss	Forklift tapped a staging	The forklift was moving a table from one weld bay to another. Had a spotter. The forks were about 5 feet off the ground While bringing the table into the weldbay the forks hit the top of the weldbay and knocked a staging leg off it's wood support.	NL-Equipment/Property Damage - Equipment Damage	
1864	Richmond, CA - Refinery	11/7/2010 10:25:00 AM	Closed	Near Loss	High level LH1055 on V-1050 shutdown K-1070	High level LH1055 on V-1050 shutdown K-1070. Pumps MP-1050 and MP-1050A had problem with Lite-end/foaming liquid. North, South and Rlop Flares for 8 min.	NL-Operational Process/Procedures - Safety Systems	(1) K-1060/K-1070 suction K.O.'s could not remove level fast enough and caused K-1070 to trip off line due to the high level.
1868	Richmond, CA - Refinery	11/7/2010 11:40:00 AM	Closed	Loss	Contractor EE twisted ankle	Wyatt EE working in the bottom of Regen slipped and twisted ankle.	Injury/Illness	(1) Uneven surface
1869	Richmond, CA - Refinery	11/7/2010 11:30:00 AM	Closed	Loss	#5 Castro fresh water line ruptured behind the refinery scale house.	The #5 Castro fresh water line ruptured, likely due to corrosion and the normal water pressure in the line. Considerable water flow flooded the area and eroded the pipeway beneath the line. The break occurred at approximately 11:30 am and was blocked in at approximately 2:15 pm. The amount of erosion and the size of the break are undetermined at this time due to high muddy water levels in the area. More to come.	Equipment/Property Damage	(1) External corrosion on line
1872	Richmond, CA - Refinery	11/7/2010 4:30:00 PM	Closed	Near Loss	Skin irritation	CSI EE, while performing Eddy current on E-192, liquid came in contact of right wrist and caused irritation.	NL-Injury/Illness - Contractor Injury	
1898	Richmond, CA - Refinery	11/8/2010 8:00:00 AM	Closed	Near Loss	Damage to TWIC Gate	While Nichol Drilling Company approached the TWIC Gate, they did not swipe their badge and instead followed the Power Superintendent throught the gate which resulted in the gate closing on the Nichol Drilling Company vehicle. Minimal damage was done to the truck however, the TWIC gate was also damaged. The gate is still operational and no guard is needed to man the gate.	NL-Equipment/Property Damage - General Liability	
1901	Richmond, CA - Refinery	11/8/2010 10:15:00 AM	Closed	Near Loss	PARTICLE IN THE EYE	WYATT EE WAS ON 7TH DECK OF THE REACTOR REMOVING FULL FACE RESPIRATOR WHEN PARTICLE WENT INTO THEIR EYE.	NL-Injury/Illness - Contractor Injury	
1905	Richmond, CA - Refinery	11/8/2010 10:18:00 AM	Closed	Near Loss	Loss of Instrument Air to 51FC023A (TKC Bypass to E742s)	A test was run within Cracking, isolating the instrument air system so that we could perform some tie-ins. The only issues identified with the test were the SRU, YDIB, and V-475 areas. At this point we looked closer at the isolation of the header and were able to resolve SRU's problem and then installed a portable air compressor to address YDIB and V-475's air needs. During this test, there were no issues identified with 51FC023A (TKC bypass to E-742s) because this is an air-to-open valve and the header was not depressured during the test. It was when the system was isolated today that the header pressure bled off and the control valve then went closed causing TKC to no longer to get out with it's product.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Did not take into consideration that the control valve would fail closed when instrument air pressure was depressured.
1928	Richmond, CA - Refinery	11/8/2010 3:30:00 PM	Closed	Near Loss	Trailer hits scaffold while trying to strengthen up	Superheat while backing up the heating trailer, EE was trying to straighten up trailer and caught the fender of the trailer on scaffolding. The scaffolding was inspected and trailer had minor damage.	NL-Transportation - Contractor	

1942	Richmond, CA - Refinery	11/9/2010 4:40:00 AM	Closed	Loss	Dust from grit blast triggered asthma to flare up	Biggis EE was in the crane when a dust cloud from grit blast enter the cab threw open door that caused asthma to flare up. EE contacted his foreman and they got chevron safety who called plant protection. After evaluation plant protection called AMR for further evaluation, EE was released and returned to work.	Injury/Illness	(1) Airborne Dust
1970	Richmond, CA - Refinery	11/9/2010 9:30:00 AM	Closed	Loss	Slight abrasion to eye lid	EE performing entry attendant duties attempting to move from one side of V-309 to the other suffered a mild abrasion to his left eye lid. Area was very conjested and focusing on his footing didn't see a rope used to keep a tarp over the entry point in place and made contact with the rope which caused the abrasion.	Injury/Illness	(1) Rope
1977	Richmond, CA - Refinery	11/9/2010 12:00:00 AM	Closed	Near Loss	trip the totalizer / no visable flame	DHT shut down cleaning up and popping to relief. PCO didn't Readjust the compressor loading fast enough to catch the totalizer trip.	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	
1996	Richmond, CA - Refinery	11/9/2010 5:30:00 PM	Closed	Near Loss	A LIVE RELIEF WAS PLANNED FOR TURNOVER TIME ON NIGHT SHIFT AND NOT ALL PARTIES WERE INFORMED, OPERATORS WERE ALLOWED TO PROCEED TO THE CONTROL ROOM THROUGH AN EVACUATED AREA WITHOUT KNOWLEDGE OF THE WORK, ALL INVOLVED PERSONNEL HAD NOT MADE IT TO THE CONTROL ROOM FOR TURNOVER	THE LIVE RELIEF WAS SCHEDULED FOR THE MIDDLE OF OPERATIONS NIGHT SHIFT TURNOVER TIME. RLOP WAS NOT NOTIFIED THAT THE EVENT WAS TAKING PLACE UNTIL AFTER THE START, NOT ALL OF THEIR OPERATORS HAD MADE IT TO THE CONTROL ROOM, THE RLOP OPERATORS WERE ALLOWED TO PASS THROUGH AN EVACUATED AREA TO THE CONTROL ROOM AND ALLOWED TO EXIT THE VAN WITHOUT BEING INFORMED OF WHAT THEY WERE WALKING INTO. A SOUTH SIDE OPERATOR HAD TO GO INTO THE EVACUATED AREA TO PROVIDE ADDITIONAL GAS TO THE FGR UNIT TO MANTAIN ADEQUATE SUCTION FLOW TO AVOID COMPRESSOR LOW SUCTION PRESSURE SHUTDOWN. NO ONE ON C CREW WAS INFORMED THAT THIS WAS TO TAKE PLACE. ADEQUATE TIME WAS NOT ALLOWED ACCORDING TO THE DAYSHIFT MEETING WAS SUPPOSED IN PLACE PRIOR TO THE START OF THE JOB AND NOT ALL PERSONNEL WERE PRESENT.	NL-Lessons Learned	
2037	Richmond, CA - Refinery	11/10/2010 11:45:00 AM	Closed	Loss	Particle in the Eye, E-192A	Matrix; EE was working on the channel section of E-192A when he broke for lunch. During lunch he started to feel a irritation to his right eye.	Injury/Illness	(1) Airborne Particle
2040	Richmond, CA - Refinery	11/10/2010 11:15:00 AM	Closed	Loss	Pinched finger during demolition of old Firewater Pipe	Contract employee was working with a co-worker repositioning a piece of 6" pipe for removal. While pulling the pipe his right ring finger was pinched between a scaffold board and the pipe. Contract employee was evaluated by Chevron EMT's and transported to Chevron Medical Clinic for further treatment. Employee was post accident drug tested and returned to work with no limitations.	Injury/Illness	
2043	Richmond, CA - Refinery	11/10/2010 10:00:00 AM	Closed	Near Loss	Operator inadvertently backed into an electrical panel and tripped breaker 2-558 @ #7 Power center.	Utilities operators were working in RLOP power center #7 when a breaker was accidentally tripped. The inadvertent trip occurred when a utility operator bumped into the trip lever of a nearby breaker. The breaker was immediately reset and the affected equipment was put back on line without incident. None of the plant products went off test and there was no environmental impact.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
2066	Richmond, CA - Refinery	11/11/2010 3:25:00 AM	Closed	Loss	Moving a hose and wire jammed in top of right finger	Wyatt EE was moving a ventilation hose in the reactor, the tie up wire penetrated his gloves and pierced his finger. Plant Protections responded and suggested that EE goes to the clinic for further assistance. Clinic cleaned further and gave a tetanus shot for preventive maintenance	Injury/Illness	(1) Piece of Wire
2096	Richmond, CA - Refinery	11/10/2010 4:40:00 PM	Closed	Near Loss	Low point bleeder was opened to check for contaminates	In preparation for a job we needed to know the concentration of contaminates for the job We knew the system was sour so we were going to do the job in fresh air The operator was ask to check the job He found a low point bleeder to check as he opened the bleeder some liquid came out. He checked the bleeder and found that it pegged the LEL sensor and the H2S showed 2ppm then he proceeded to block the bleeder in There was a slight breeze blowing east in the direction of the Bigge crew of four One reported being lightheaded and nauseated his personal H2S sensor did not show any reading of exposure. The other three did not complain of any discomfort. PP was called to assist the employ	NL-Environmental - Release	(1) Low point bleeder was opened to check for contaminates
2122	Richmond, CA - Refinery	11/11/2010 4:10:00 PM	Closed	Loss	Particle in the eye	Wyatt EE, working on the 4th deck of V-80 felt particle in eye.	Injury/Illness	(1) Airborne Particle
2171	Richmond, CA - Refinery	11/12/2010 10:00:00 AM	Closed	Loss	Chevron EE tripped, skinned knee	EE was walking along the road on the west side of the Precipitator, he came up to two ramps over pipe in the walk way, he stepped over the first ramp and tripped while stepping over the second ramp. He fell and skinned his left knee	Injury/Illness	(1) Employee fell in the plant when he tripped over a ¾" pipe installed between tank and process drain, Why did the employee fall? Employee fell because he did not see the pipe installed at ground level, Why did the employee not see the pipe? There was two reasons the employee did not see the pipe, the employee did not have eyes on path and the pipe was not painted to improve visibility.

2182	Richmond, CA - Refinery	11/12/2010 12:40:00 PM	Closed	Loss	Slag burn to hand	Wyatt; EE was cutting on the skirt at the 5th level when some slag fall down into his glove causing two minor burns to the back of his hand and the back of a finger.	Injury/Illness	(1) Slag
2185	Richmond, CA - Refinery	11/12/2010 10:00:00 AM	Closed	Near Loss	Sanitary Sewer Line Leak Off Channel St near Haz. Waste Offices	Fiberglass Sanitary Sewer line cracked at the tie in point from Haz. Waste offices off Channel St.	NL-Environmental - Operational Leak	
2193	Richmond, CA - Refinery	11/12/2010 10:00:00 PM	Closed	Near Loss	Personal H2S Monitor Activation & Loss of Contain. during Maint. cut line procedure	Chevron; After drilling a pilot hole during cut line tape procedure, low tempurature (cold) product escaped from line. Mechanic on the job had part of his coverall (over garments) coated with liquid. H2S monitor activated. No peak reading was availabile ... monitor was reset in the field.	NL-Injury/Illness - Employee Injury	
2196	Richmond, CA - Refinery	11/12/2010 4:45:00 PM	Closed	Loss	Vessel overflowed while loading with fresh carbon	A Calgon driver/technician overfilled one of the B&S carbon vessels while transferring a truck load of fresh carbon to it. This resulted in fresh carbon spilling to the surrounding ground and plugging the area's process drain	Environmental	(1) Why - Too much excess water in the vessel Why- Water drain not opened Why - These vessels require this special procedure (opening of water drain) that was not known to him Why - Calgon Management didn't inform him of and provide him with this procedure / requirement.
2196	Richmond, CA - Refinery	11/12/2010 4:45:00 PM	Closed	Loss	Vessel overflowed while loading with fresh carbon	A Calgon driver/technician overfilled one of the B&S carbon vessels while transferring a truck load of fresh carbon to it. This resulted in fresh carbon spilling to the surrounding ground and plugging the area's process drain	NL-Environmental - Spill	(1) Why - Too much excess water in the vessel Why- Water drain not opened Why - These vessels require this special procedure (opening of water drain) that was not known to him Why - Calgon Management didn't inform him of and provide him with this procedure / requirement.
2206	Richmond, CA - Refinery	11/13/2010 3:45:00 PM	Closed	Near Loss	EE stuck in elevator	Weltech; Elevator Operator was stuck in the elevator below the second level.Tripped the locking device for the door at the second level, had EE put ladder inside elevator in place aand climb out the trap door on the roof and exit though the door.	NL-Business Process - Business Interruption	
2211	Richmond, CA - Refinery	11/13/2010 10:40:00 PM	Closed	Near Loss	Hole watch's position was not the best vantage point	Weltech Hole watch's position was not the best vantage point for keeping 100% eye contact with the individual working in E-135. EE was 20ft away near crane.	NL-Injury/Illness - Contractor Injury	
2222	Richmond, CA - Refinery	11/14/2010 6:00:00 AM	Closed	Near Loss	Plant H2S alarm sounded. Plant Evacuated. Source unknown at this time	During the DHT Turnaround, the plant H2S sounded and personnal working the turnaround were orderly evacuated. The plant alarm cleared quickly. Loss time 30 minutes	NL-Environmental - Release	
2236	Richmond, CA - Refinery	11/15/2010 3:30:00 AM	Closed	Near Loss	Contractor EE hit in shoulder by flash light in cat cooler	Wyatt vs Wyatt; EE was working in cat cooler when flash light from two decks up hit him in the right shoulder. Plant protection responded no medical treatment needed. EE had no pain and signed release waiver	NL-Injury/Illness - Contractor Injury	
2252	Richmond, CA - Refinery	11/15/2010 7:30:00 AM	Closed	Loss	V-80 EE hit with a falling hammer	JT Thorpe. EE was relieving the night shift crew on the V-80 Riser job and was hit by a falling hammer while standing on the scaffolding at the bottom of the riser. The night shift crew were lowering their tools when a brick mason hammer came loose from a refractory bucket being lowered with a rope to the bottom of the riser. Bucket being used was not a black bucket used by Chevron, it was a reinforced refractory bucket with lugs.	Injury/Illness	(1) Being in the line of fire
2256	Richmond, CA - Refinery	11/15/2010 5:45:00 AM	Closed	Loss	EE over-Extended right Tumb at Turnstile when turnstile suddenly stopped when EE was going thru it	EE bagded in at the turnstile in front of Boiler shop, the EE heard the click and started towalk and pushed the turnstile, suddenly the turnstile stopped and came back causing the righ tumb to over-extend	Injury/Illness	(1) sEE hyper extended her thumb. 1. Why? Thumb contacted turnstile bar. 2. Why? Turnstile bar stopped abruptly. 3. Why? Limited Turnstile rotation. 4. Why? Previous EE passing thru turnstile did not complete rotation. 5. Why? Turnstile allows passage without complete rotation. 6. Why? Turnstile Design. We couldn't find a workable solution for this scenario we did start a second branch Why? Second Branch of 5 Why. EE hyper extended her thumb. 1. Why? Thumb contacted turnstile bar. 2. Why? Employee didn't expect the turnstile to stop. We stopped here and we feel a good solution will be a Safety Flash to make every one aware of this incident could happen to them and ask everyone to go slow thru the turnstile and grab a bar to move the turnstile with your hand.
2276	Richmond, CA - Refinery	11/14/2010 12:30:00 PM	Closed	Near Loss	A parked Wharf Safety Operator pickup got bumped by Forklift tire during it's use to hydrotest cargo hoses.	Sunday 11/14 at 12:30 pm: A Wharf Operator backed a forklift into a pickup parked in Berth 4 causing very slight damage to the fender area just below the driver's side brake light - above the rear bumper. Operator reported the incident a day later to his normal crew HO who reported it to the STL.	NL-Transportation - Company	(1) Driver inattention while driving forklift too close to second vehicle allowed forklift to rub against pick up parked close by., (2) Failure to promptly report the vehicle accident during same shift
2279	Richmond, CA - Refinery	11/13/2010 2:00:00 PM	Closed	Loss	Poly tank damage	Saturday, 11/13/10, a Poly tank was found leaking in D&R from the top seam. It was noted at the time that the tank was very warm, (Poly Tank Max operating temperature limit is 140F. It is estimated that <5 gallons of pH 10 Spent Chemical Cleaning solution leaked into the process drain onsite. The material was removed from the Poly tank and it was taken out of service. Two other Poly tanks were also used in this service and will be evaluated for their integrity as well.	Equipment/Property Damage	(1) SOS: Training & Procedures: Valve Cover not Re-installed , (2) SOS: Training & Procedures: Procedure does not Cover Removing & Replacing Valve Cover , (3) SOS: Training & Procedures: No Guidelines for Checking the Tank Rating for Temperature. No Guidelines for Ensuring Tanks on Site meet temperature Ratings for tasks being performed. , (4) SOS: Training & Procedures: •Contract Company was not notified that their equipment had been damaged in a timely fashion.
								(1) SOS: Training & Procedures: Valve Cover not Re-

2279	Richmond, CA - Refinery	11/13/2010 2:00:00 PM	Closed	Loss	Poly tank damage	Saturday, 11/13/10, a Poly tank was found leaking in D&R from the top seam. It was noted at the time that the tank was very warm, (Poly Tank Max operating temperature limit is 140F. It is estimated that <5 gallons of pH 10 Spent Chemical Cleaning solution leaked into the process drain onsite. The material was removed from the Poly tank and it was taken out of service. Two other Poly tanks were also used in this service and will be evaluated for their integrity as well.	Environmental	Installed , (2) SOS: Training & Procedures: Procedure does not Cover Removing & Replacing Valve Cover , (3) SOS: Training & Procedures: No Guidelines for Checking the Tank Rating for Temperature. No Guidelines for Ensuring Tanks on Site meet temperature Ratings for tasks being performed. , (4) SOS: Training & Procedures: -Contract Company was not notified that their equipment had been damaged in a timely fashion.
2282	Richmond, CA - Refinery	11/15/2010 2:00:00 PM	Closed	Near Loss	EE bumped knee on R-1610 Top Head lifting lug	Crane and Rigging Co. EE hit knee on R-1610 Top Head lifting lug while setting up rigging and getting head ready to hoist. Head had to be flipped 180 degrees before hoisting to top of R-1610. EE told leadman that knee got hit and tried to walk it off. At about 2:45 PM knee started to stiffen up, at that point EE was driven to Clinic by Crane and Rigging Co. Red Hat Safety person.	NL-Injury/Illness - Contractor Injury	
2300	Richmond, CA - Refinery	11/15/2010 5:10:00 PM	Closed	Loss	Loss of 5 S/C from LNC to T-3158	LNC 5 S/C lost flow to T-3158. Pump checked out fine. Product was routed off lest to FCC feed tank. Later in shift, B&S operators found small section of steam tracing out of service and line cold. Tracing was turned back on and line heated back up. LNC routed product back to tank with no issue.	Quality	(1) SOS: Design & Engineering--Work on Steam Tracing Is Not Included in the LOTO Process SOS: Training & Procedures--Work on Steam Tracing Not Captured on the Turnover. SOS: Training & Procedures--No One Walked the Line Before Commission-ing It Back Into Service
2303	Richmond, CA - Refinery	11/16/2010 12:30:00 AM	Closed	Loss	Cell phone taken out of office	Smog Busters- A cell phone was taking out of their mobile mini office. Plant Protection was notified and report made.	Security	(1) Theft
2303	Richmond, CA - Refinery	11/16/2010 12:30:00 AM	Closed	Loss	Cell phone taken out of office	Smog Busters- A cell phone was taking out of their mobile mini office. Plant Protection was notified and report made.	NL-Security - Property Loss or Theft - Physical Property	(1) Theft
2378	Richmond, CA - Refinery	11/16/2010 11:30:00 AM	Closed	Loss	T-3220 Primary Seal Fabric Disintigrated	During seal inspection of T-3220 discovered the primary fabric has disintigrated. After search in archives there existed year 1989 version of EF-882 and year 2000 version of EF-882. The year 2000 version of EF-882 is very similar to the 2009 version and in a footnote (not highlighted in table) recommends Teflon material fabric for primary seal of high H2S concentration slop tank. But, the year 1989 version (only one sheet) does not make any recommendation for the high H2S concentrated slop tank application. We began engineering of the T-3220 tank in early 2000 and do not recall what year version of EF-882 (89 or 2000) was available to be used. If the year 2000 version were available, then CBI and HMT and I missed to specify Teflon for the primary seal fabric, although the EF-882 was part of the tank order. If the year 1989 version were available then, the urethane was used as default; urethane has been used broadly as primary seal fabric material in majority of tank applications.	Environmental	(1) Primary seal fabric not best suitable for sour water service
2386	Richmond, CA - Refinery	11/16/2010 10:15:00 PM	Closed	Near Loss	tripped over hose and argon bottle fell between EE legs	P2S EE was unloading argon bottles off forklift and tripped backwards over steam hose and bottle fell between EE legs. EE said he was fine and signed release form from Plant protection.	NL-Injury/Illness - Contractor Injury	
2394	Richmond, CA - Refinery	11/17/2010 1:00:00 AM	Closed	Near Loss	K-1060 #1 cylinder water jacket leak forced the S/D of K-1060 for repairs. K-1070 was also down for maint and LOTO'D. K-1060 was S/D isolated and repaired in 40 minutes with no flaring or flare totalizer trips.	At approximately 1:00A M. The K-1060 water jacket Fitting to # 1 cylinder first stage broke and began Spraying water everywhere. The compressor crew was here working on the K-300 and went over to repair. Operations S/D and isolated the machine and Maint Replaced the broken water jacket fitting. At this time K-1070 in S/D and loto'd for maint. So Neither FGC was running. All sections in Isomax were aware of the issues and monitored the relief headers. Flare gas header pressure is 0 "h20 at this time. No flaring.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Failure of a carbon steel screwed fitting of the water jacket cooling system on K-1060 # 1 cylinder due to apparent corrosion and age.
2440	Richmond, CA - Refinery	11/17/2010 1:45:00 PM	Closed	Loss	Chevron EE taken to Refinery Clinic with chest pain.	Chevron EE Taken to Refinery Clinic with chest pain to be evaluated by Clinic staff.	Injury/Illness	(1) Personal Medical
2447	Richmond, CA - Refinery	11/17/2010 12:00:00 AM	Closed	Near Loss	P-302B pump oil dripped out on to steel deck.	P-302B pump condensate knockout petcock opened slightly. Pump oil (ISO 150) drained onto outlet sump steel deck.	NL-Environmental - Operational Leak	
2449	Richmond, CA - Refinery	11/17/2010 12:00:00 AM	Closed	Loss	NH3 leak at 18pit	RLOP board operator got a high NH3 alarm. RLOP outside operators responded and decided to activate plant evacuation alarm. Outside operators donned Scott Air. It was discovered that the upstream double orbit isolation valve was leaking. This valve isolates the strippers from the scrubbers. Pressure was taken off the system and levels drained to mitigate the NH3 release. Machinists were called to re-pack the valve; along with orbit isolation LC from C1610 to C1820. All clear was given and work was allowed to continue	Operational Process/Procedures	(1) packing leak
						RLOP board operator got a high NH3 alarm. RLOP outside operators responded and decided to activate plant evacuation alarm. Outside operators donned Scott Air. It was discovered that the upstream double orbit isolation valve was leaking. This valve isolates the strippers from the scrubbers.		

2449	Richmond, CA - Refinery	11/17/2010 12:00:00 AM	Closed	Loss	NH3 leak at 18plt	Pressure was taken off the system and levels drained to mitigate the NH3 release. Machinists were called to re-pack the valve; along with orbit isolation LC from C1810 to C1820. All clear was given and work was allowed to continue.	Environmental	(1) packing leak
2462	Richmond, CA - Refinery	11/18/2010 2:00:00 AM	Closed	Loss	Upper back muscle pain	JTThorpe; EE was lifting hex mesh and felt muscle pull. Plant protection responded and sent to clinic for further evaluation.	Injury/Illness	(1) Improper lifting techniques
2469	Richmond, CA - Refinery	11/18/2010 4:50:00 AM	Closed	Near Loss	2 H2S alarms went off	Welltech - Two H2S monitors alarmed. EEs were doing clean up onE1681 Finfan deck. The D&R flare went off and so did their alarms. They didn't smell anything,felt fine, not dizzy, nausea, or headache. Both EEs are fine and returned to work. End of shift.	NL-Injury/Illness - Contractor Injury	
2493	Richmond, CA - Refinery	11/18/2010 6:30:00 AM	Closed	Loss	Pinched Finger, Elevator Door	Welltech; EE was opening one of the double doors to the elevator when another EE closed the opposite door, pinching his right ring finger.	Injury/Illness	(1) Body position, (Hand)
2495	Richmond, CA - Refinery	11/18/2010 11:05:00 AM	Closed	Loss	Twisted Ankle, Wyatt Tool Trailer	Wyatt; EE was coming down the stairs at the west end of tool trailer row, at the North FCC lot, and stepped on the edge of the old F-21 foundation pad and twisted his ankle. The transition from the concrete foundation and the dirt is about two inches with the edge marked with pink flourescent paint.	Injury/Illness	(1) Uneven surface
2511	Richmond, CA - Refinery	11/17/2010 12:00:00 AM	Closed	Near Loss	Plastic, orange industrial Debris bin moved adjacent to the hot exaust of a diesel powered light plant. Hot exaust melted and damaged 2 layers of the bins plastic exterior/appendendges. The lifting slot was damaged.	Orange ID bin, managed by Waste Management contractor through the Haz Waste group was discovered during a Haz Waste audit to have been rolled away from its original drop off point, to a location adjacent to a diesel powered light plant, very near its exaust. The radient heat generated from the exaust pipe melted the bins exterior plastic at the lifting s'ot. In addition to the damage incurred to the bin, the heat radiating into this area of the bin could've easily lit the bin's contents on fire.	NL-Fire/Explosion	
2511	Richmond, CA - Refinery	11/17/2010 12:00:00 AM	Closed	Near Loss	Plastic, orange industrial Debris bin moved adjacent to the hot exaust of a diesel powered light plant. Hot exaust melted and damaged 2 layers of the bins plastic exterior/appendendges. The lifting slot was damaged.	Orange ID bin, managed by Waste Management contractor through the Haz Waste group was discovered during a Haz Waste audit to have been rolled away from its original drop off point, to a location adjacent to a diesel powered light plant, very near its exaust. The radient heat generated from the exaust pipe melted the bins exterior plastic at the lifting slot. In addition to the damage incurred to the bin, the heat radiating into this area of the bin could've easily lit the bin's contents on fire.	NL-Equipment/Property Damage - General Liability	
2527	Richmond, CA - Refinery	11/18/2010 4:40:00 AM	Closed	Near Loss	Flaring event from loss of cooling water pump p-460	4 cat suffered momentary loss of cooling water when P-460 tripped offline for approximatly 10-20 minutes. Loss of cooling caused an excess of LPG to be carried through to the H2 Booster system causing a high level S/D at V-912A which caused K-900A to trip offline. Numerous starts were attempted after the machine went offline but were unsucessful due to an alarm message of a groundfault. Without K-900's online Rhenformer H2 flow was stopped causing a flaring event that lasted @ 1.5 hrs until permissices could be met for a restart of K-900.	NL-Environmental - Release	(1) Wet steam supply to TP460, (2) MP526 Spare pump did not come on line
2547	Richmond, CA - Refinery	11/18/2010 10:30:00 AM	Closed	Loss	Operator was injured while installing a pressure gauge	During precommissioning checks on the new level gauge/transmitter for V734, an operator was installing a pressure gauge onto the top vent of the new gauge glass. The gauge glass is located on the first deck of V734 and the vent valve is overhead and unaccessible for most people. The operator chose to stand on the Vessel manway flanges that are next to the gauge glass to access the vent valve and instal the gauge. As the operator was tightening the gauge, the pipe wrench slipped and caused the operator to lose balance and fall back on to the deck. The fall was approx 2.5-3ft from the top of the manway flange to the deck. The operator landed and rolled his ankle on impact. The operator also struck the railing along the deck with the right side of his chest. The operator felt pain in his leg/ankle and chest. Plant protection was called to come out and attend to the operator. The operator w	Injury/Illness	(1) The operator stood on the manway while installing the pressure gage, (2) An incorrect tool was selected to perform the task of installing the pressure gage, (3) Not all those present at the job site recognized the operator standing on the manway as a high risk task and none used Stop Work Authority to stop the operator from continuing to install the pressure gage
2547	Richmond, CA - Refinery	11/18/2010 10:30:00 AM	Closed	Loss	Operator was injured while installing a pressure gauge	During precommissioning checks on the new level gauge/transmitter for V734, an operator was installing a pressure gauge onto the top vent of the new gauge glass. The gauge glass is located on the first deck of V734 and the vent valve is overhead and unaccessible for most people. The operator chose to stand on the Vessel manway flanges that are next to the gauge glass to access the vent valve and instal the gauge. As the operator was tightening the gauge, the pipe wrench slipped and caused the operator to lose balance and fall back on to the deck. The fall was approx 2.5-3ft from the top of the manway flange to the deck. The operator landed and rolled his ankle on impact. The operator also struck the railing along the deck with the right side of his chest. The operator felt pain in his leg/ankle and chest. Plant protection was called to come out and attend to the operator. The operator w	NL-Injury/Illness - Employee Injury	(1) The operator stood on the manway while installing the pressure gage, (2) An incorrect tool was selected to perform the task of installing the pressure gage, (3) Not all those present at the job site recognized the operator standing on the manway as a high risk task and none used Stop Work Authority to stop the operator from continuing to install the pressure gage

2555	Richmond, CA - Refinery	11/18/2010 11:00:00 PM	Closed	Near Loss	H2S Monitor went off	Wyatt - Boilermaker was working in E-300 holding some plate to be tacked. When the welder started welding the canary went off	NL-Injury/Illness - Contractor Injury	
2591	Richmond, CA - Refinery	11/18/2010 6:30:00 PM	Closed	Near Loss	17 pump station deluge and fire monitor systems activated	17 pump station deluge and fire monitor systems activated and would not shut down when reset. It took quite an effort and time to manually isolate. A couple of valves were stuck and would not operate and one isolation valve had to be staged for access before it could be closed. While the monitors were running they washed mud and rock down into 17 PS and plugged the sump.	NL-Operational Process/Procedures - Safety Systems	
2597	Richmond, CA - Refinery	11/19/2010 8:30:00 PM	Closed	Near Loss	A mortar sample block fell and grazed EE's leg.	Welltech - While helping to clean inside the structure EE was hit by a mortar sample block. The block fell from a mortar bucket (not a black bucket) being used to haul debris out of the regen	NL-Injury/Illness - Contractor Injury	
2598	Richmond, CA - Refinery	11/19/2010 9:30:00 PM	Closed	Loss	Puncture to the palm of the left hand	JTThorpe - While removing loose mortar and debris from S- 300 EE punctured his hand on some of the wire that holds the mortar in place. This was caused by a loss of balance.	Injury/Illness	(1) Loss of balance
2599	Richmond, CA - Refinery	11/19/2010 9:30:00 PM	Closed	Near Loss	Particle in the eye	Welltech - EE was walking up the structure stairs and felt something in his eye. Went to an eyewash and rinsed his eye and the particle was cleaned out. EE thinks it was an eye brow.	NL-Injury/Illness - Contractor Injury	
2610	Richmond, CA - Refinery	11/20/2010 4:10:00 PM	Closed	Loss	Contract EE contact with Dimethyl Disulfide on Leg while handling Flex Hose.	Enterprise Transportation Co. EE came in contact with Dimethyl Disulfide on thigh part of leg while handling flex hose doing final hook-up to system hard piping for DHT Plant Start-up. Flex Hose came off EE Truck and Product in Hose from previous job? EE was removing Brass plug, bending with hose resting on leg while removing plug and that hose was not under pressure as explained by EE co-worker. EE on job at 8:00 AM and this was a final hook-up at about 4:10 PM. MSDS was on job site.	Injury/Illness	(1) Liquid in hose
2618	Richmond, CA - Refinery	11/21/2010 12:15:00 AM	Closed	Loss	K-550 shutdown on high vibes	K-550 shutdown on high vibs. TK-550 train tripped out on vibration on the turbine side All point were at ~.5 mils with vibration shut down limits at 4.2 mils. This was a very quick event The turbine tripped on high vibration .5 seconds after seeing the 1st alert.	Equipment/Property Damage	(1) (Causal Factor #1, Condition #1) Equipment Difficulty - Design - Design Specs - Problem Not Anticipated, (2) (Causal Factor #2, Condition #1) Human Performance Difficulty - Management System - SPAC Needs Improvement - SPAC Incomplete, (3) (Causal Factor #3, Condition #1) Human Performance Difficulty - Management System - SPAC Not Used - Accountability Needs Improvement, (4) (Causal Factor #3, Condition #2) Human Performance Difficulty - Mangement System - SPAC Needs Improvement - SPAC Incomplete, (5) (Causal Factor #4, Condition #1) Equipment Difficulty - Design - Design Review - Hazards Analysis
2655	Richmond, CA - Refinery	11/22/2010 1:30:00 AM	Closed	Near Loss	Pain in the right groin area	Welltech - EE was emptying trash bags on the Rx structure. He felt a little pain in the right groin area around 1:30AM. About 3:30 it had gotten progessively worse so he called his company safety, who called the Chevron safety.	NL-Injury/Illness - Contractor Injury	
2714	Richmond, CA - Refinery	11/21/2010 12:00:00 AM	Closed	Loss	Punctured Finger	JT Thorpe EE, punctured 2 fingers while working on the 5th floor of the Regen removing debris from the Crotch. EE was wearing expando gloves Material being removed was gunite which has needles in the mixture	Injury/Illness	(1) Improper gloves
2729	Richmond, CA - Refinery	11/22/2010 12:30:00 PM	Closed	Loss	QCO cut hand with laboratory glassware while preparing a sample for distillation.	The QCO was setting up a sample for distillation testing by the D86 method. The QCO was preparing and cleaning the glassware in the Distillation area fume hood. A glass distillation receiver broke during preparation. As the QCO prepared to clean the area, she noticed that broken glass had penetrated her gloves and cut her hand. She suffered a 3/8" cut and was sent to the clinic for first aid. The clinic cleaned and dressed the wound. The QCO was sent back to work.	Injury/Illness	(1) Incident was an accident.
2731	Richmond, CA - Refinery	11/22/2010 11:15:00 AM	Closed	Loss	Particle in Eye - First Aid	Employee was walking across parking lot in front of Cracking Area Control Center and a small piece of what appears to be piping insulation got into their eye and wedged itself under the eye lid. Employee was coming from the field and had on proper PPE which included safety glasses.	Injury/Illness	(1) Airborne particle was due to turnaround activities (re-insulation work near-by). Employee had on safety glasses with side shields for basic eye protection.
2737	Richmond, CA - Refinery	11/22/2010 5:00:00 PM	Closed	Loss	Particle in the eye	Welltech - EE was working at S-300 when he felt the wind blow something into his eyes	Injury/Illness	(1) Wind
2747	Richmond, CA - Refinery	11/22/2010 10:45:00 PM	Closed	Loss	Light strained knee	Bigge - EE was going down the stairs on the compressor deck. Saw a hose stretched across some stairs and want to move it. Want to slide the hose off by moving it with his foot. When he did his foot stuck on the grating and his knee continued causing discomfort. After lunch it was stiff so CFD was called	Injury/Illness	(1) Improper body position
	Richmond,	11/23/2010			15# steam commisioning		NL-Quality -	(1) No impact-created 15# steam PSSR package was developed since no work was expected to be on the system. Better oversight on the process to help the Head operator needed., (2) Shutdown Head Operator did not understand the impact of incomplete PSSR's and or not enough systems covered. (ie having a 15# steam system with only 1 item), (3) 1. Operator assumed the line work that was being traced out was 150# steam since the EWO stated 150# steam and did not indicate all of teh lines being worked on (15# steam was

2746	CA - Refinery	2:30:00 AM	Closed	Near Loss	and System not mechanically complete	While commisioning the FCC 15# steam header a welder noticed a wisp of steam coming from the pipe he was welding on.	Paperwork Incorrect/Not Sent	also being worked on). 2.EWO was unclear. Did not clearly define the work that was taking place.
2869	Richmond, CA - Refinery	11/23/2010 12:00:00 AM	Closed	Near Loss	600R product routed off-test	HNF product went off-test for pour spec as result of DMC shutting down during an increase in feed rate to the plant. The work station operator rainabled the DMC and the HNF product was routed off-test when the plant pour spec reached -9. The product was routed off-test for six hours.	NL-Quality - Product Quality (Int)	(1) Operator failed to Notice DMC had tripped during Feed increase
3028	Richmond, CA - Refinery	11/27/2010 1:00:00 PM	Closed	Near Loss	Flu Syptoms	Wyatt; EE suffering from flu like syptoms	NL-Injury/Illness - Contractor Injury	
3162	Richmond, CA - Refinery	11/29/2010 12:45:00 PM	Closed	Near Loss	FCC S/D Numbness; Personal Medical,	Chevron; Personal Medical Condition, Non Industrial	NL-Injury/Illness - Employee Injury	
3165	Richmond, CA - Refinery	11/29/2010 8:30:00 AM	Closed	Loss	Carry deck crane hit overhead warning sign & wooden conduit support	Carry deck crane was parked in Hydro weld bay area. Mechanic was driving it out to the job site with the boom slightly raised and hit an overhead support board and conduit that ran from one sea land trailer to another. It damaged the conduit that was supported by wooden board. Support board was painted yellow with black stripes and had yellow chain hanging down with warning signs saying 8' clearance.	Equipment/Property Damage	(1) Mechanic missed judged height of boom being raised from cradle (standard operating procedure) while traveling
3204	Richmond, CA - Refinery	11/29/2010 8:20:00 PM	Closed	Near Loss	TOP INVESTIGATION; S-75 slide valve opened while staging being removed	TOP INVESTIGATION: FINAL DESCRIPTION IS IN THE INVEST JOURNAL OR SEE THE LINK (LEFT) Original Description: While Chevron Instrumentation, PED, and Walley Stinson (valve comp.)from day shift, Were stoking slide valve, The valve was closed when mechanics began to stroke, gave a command to open and the valve started to open. PED saw a stage rigger was bracing himself by elbows so he would not fall through (approximately 10Ft.). PED yelled to close valve. Valve was closed immediately. The Brand EE was removing scaffold from the 4.5 deck down and then the plug seal. As soon as all material was lifted out, a chain ladder was being dropped down at same time the valve was being opened.	NL-Injury/Illness - Contractor Injury	(1) SOS: Training & Procedures: Stage rigger almost fell. HSE recommendation to visually verify not followed. Thought no one was in the area. Got an all clear by radio. Scaffold rigger working near/ inside slide valve. Stage rigger inside didn't know about the test. Stage Riggers Were Not Included in HSE. No Communications. Not all affected Workers get included in a HSE.
3209	Richmond, CA - Refinery	11/29/2010 10:00:00 PM	Closed	Loss	TOP INVESTIGATION; trolley holding reaction mix blind fell from I-beam	Trolley fell from I-Beam while holding the reaction mix blind. The blind landed on the reaction mix valve. No one was on that immediate deck	Equipment/Property Damage	(1) SOS: Design & Engineering: #3209 Blind Fell Onto Reaction Mix Valve. Trolley Holding the Blind Failed. Frame Assembly Slipped Off I-Beam. Series 632 Trolley was used. Easier to use (one rigger can install). Design of Trolley. , (2) SOS: Maintenance & Inspection: Frame assembly (sides) were installed incorrectly . Install instructions were not visible. Instructions were painted over. Painted to designate as a Chevron rigging device. , (3) SOS: Sidebar Issue. Training & Procedures: • Although disregarded during this incident, company employee attempted to institute their SWA, as encouraged at all levels throughout the refinery. • Although not communicated at the time, there was a need to secure the incident site for safety purposes. • Some equipment involved in the incident was removed/moved shortly after the incident, thus not allowing a proper investigation, given the serious nature. No one was able to take photos of the incident site; visual information could not be gathered.
3220	Richmond, CA - Refinery	11/30/2010 1:00:00 AM	Closed	Loss	The 130A Line stub off from the 262 Line going to T-3196 ruptured under the road going into 15 Pump Station	On 11/30/10 at about 01:00 it was reported that a spill was occuring into 15 Pump Station in the Poleyard area. The Blending and Shipping Shift team Leader, Crude Head Operator, and Crude Field Operator responded to find a gasoil leak gushing out under Bridge #199 at 15 Pump Station. After checks done by the Operators, it was identified that the leaking line was the 130A Line. Prior to the incident, the 130A Line was being used to route the TKC gas oil production to T-3196.	Loss of Containment	(1) The 2003 Inspection Recommendation was not completed as written, (2) The 2009 Inspection did not UT any of the points where damaged insulation was noted in 2003
3220	Richmond, CA - Refinery	11/30/2010 1:00:00 AM	Closed	Loss	The 130A Line stub off from the 262 Line going to T-3196 ruptured under the road going into 15 Pump Station	On 11/30/10 at about 01:00 it was reported that a spill was occuring into 15 Pump Station in the Poleyard area. The Blending and Shipping Shift team Leader, Crude Head Operator, and Crude Field Operator responded to find a gasoil leak gushing out under Bridge #199 at 15 Pump Station. After checks done by the Operators, it was identified that the leaking line was the 130A Line. Prior to the incident, the 130A Line was being used to route the TKC gas oil production to T-3196.	Environmental	(1) The 2003 Inspection Recommendation was not completed as written, (2) The 2009 Inspection did not UT any of the points where damaged insulation was noted in 2003
3243	Richmond, CA - Refinery	11/30/2010 10:00:00 AM	Closed	Loss	FCC S/D EE feeling nausea and light headed	Chevron; EE working in the "Alley" on a crane crew began to feel nauseous after smelling vapors since the beginning of his shift. NGRU was in the process of being prepared for start up the prior shift and Operations went to the area after being notified of the odors and washed the area down. The area sniffed clean, and the odors improved but were still present. After 2 to 3 hours working on the crane next to this area, EE requested medical attention when he started to feel ill.	Injury/Illness	(1) PLant Odors
						This investigation is being conducted by Chevron Shipping. Local incident entry for tracking purposes only. At 12:10 pm the Florida Voyeger overfilled their diesel tank which spilled onto the deck, approximately 3 teaspoons of diesel leaked through a scupper plug in the deck and hit the bay causing an oil		

3326	Richmond, CA - Refinery	11/25/2010 12:10:00 PM	Closed	Loss	Florida Voyager spill	sheen 10' X 10'. Spill response equipment was deployed by the vessels crew. Sheen had dispersed. Ship made immediate notifications as per the response manual checklist. Notifications also made by T&B STL.	Environmental	(1) Investigation & root cause to be provided by Chevron Shipping. (2) To be provided by Chevron Shipping
3372	Richmond, CA - Refinery	12/2/2010 3:30:00 AM	Closed	Loss	particle in eye	P2S EE was helping to guide a part band to hit the cutting line on a pipe and while help guiding piece a metal flew out of the blade and enter into the top of EE safety glasses and entered eye. Plant protection was called and flush EE eye, unable to remove and EE was sent to Clinic. The clinic was able to remove metal particle.	Injury/Illness	(1) Improper PPE, should have also been wearing a face shield.
3406	Richmond, CA - Refinery	11/25/2010 8:00:00 PM	Closed	Near Loss	PLC failure during Jet JP8 injection run	A new grade of Jet (JP8) production required the installation of an injection skid at 21 Pump Station. This skid included a Programmable Logic Controller (PLC) to control the rate of chemical injection during JP8 blends. Soon after commissioning, the PLC faulted during the injection period of a JP8 run.	NL-Business Process - Business Interruption	
3409	Richmond, CA - Refinery	12/2/2010 8:00:00 AM	Closed	Near Loss	Drain pipe tripping hazard in walk way	HYDRO SISO P-360 Drain pipe tripping hazard in walk way	NL-Equipment/Property Damage - General Liability	
3525	Richmond, CA - Refinery	12/2/2010 11:00:00 AM	Closed	Near Loss	EE feeling ill	Chevron; EE while inside the HM trailer, became ill. EE is a traveller that had just arrived from another Chevron Refinery.	NL-Injury/Illness - Employee Injury	
3545	Richmond, CA - Refinery	12/5/2010 7:00:00 AM	Closed	Near Loss	Stripper Water product Off-test	7 am stripper water 60+ yellow and PH 10.2 routed OFF-Test	NL-Quality - Product Quality (Int)	
3596	Richmond, CA - Refinery	12/3/2010 12:10:00 PM	Closed	Loss	contractor slipped and fell	EE was coming out of dishroom and turned the corner and slipped and fell.	Injury/Illness	(1) Immediately after EE fell, Maria Melendez and Kelly Campion investigated the area and found the floor dry and free of debris.
3606	Richmond, CA - Refinery	11/15/2010 12:00:00 AM	Closed	Loss	Non- BAAQMD permitted storage of Custamine in RO Plant	Organic Compound (Custamine) stored on-sight in container with a capacity greater than 260 gallons. Violation of BAAQMD Regulation 2, Rule 1-123.	Regulatory Compliance	(1) Nalco employees not aware of the BAAQMD permitting limit of 260gallons for transportation AND storage of organic compounds, (2) Chevron HES employees not aware that Nalco can transport chemicals in one size tote and transfer to a different size tote for storage and use
3625	Richmond, CA - Refinery	12/6/2010 10:15:00 AM	Closed	Loss	Contract Employee Exposure	Goebel Paving; While a Contract Employee was installing a U Bolt at the Alky Upgraded project, an unknown release occurred causing the employee to become nauseated and light headed. The release may of come from a nearby steam trap, but that was not confirmed. Plant Protection and Operations was immediately informed.	NL-Injury/Illness - Contractor Injury	(1) UNknown vapors
3627	Richmond, CA - Refinery	12/6/2010 2:30:00 PM	Closed	Near Loss	Project electricians were drilling a hole in a PLC junction box for a new conduit; area operations reported to the electricians that they received a high temperature on the Emissions Reduction Device (ERD). Cause of the problem is under investigation	The project electricians were drilling a hole in a Hoffman Junction box that contained a PLC for the ERD. The electricians signed in with the area operators and obtained a non open flame permit for the drill, while they were performing their work the area operator came to them and told them they received a low temp alarm on the ERD. The electricians are not sure what caused the alarm, but they believe the body of the drill may have pushed the fuse holder of the power supply and that may have caused the holder to be pushed in, this may have caused the PLC to power down causing the alarm.	NL-Business Process - Business Interruption	(1) The temperature indication on the Emission Reduction Device (ERD) dropped to 32 degrees while it was in service. Why did the temperature indication drop to 32 degrees? While the electricians were drilling a hole in the bottom of a Hoffman box the drill contacted the side of a 24 volt power supply. Why did contacting the power supply cause a temperature indication drop? The cap on the spring loaded fuse holder was broken; in fact the slightest touch would cause the fuse to come out of the holder killing power to the power supply and causing the loss of the temperature indication
3631	Richmond, CA - Refinery	12/6/2010 3:00:00 PM	Closed	Loss	Particle in the Eye, Z-21 line	P2S: EE had finished cutting off some temporary lugs on the Z-21 line when he heard someone on the deck above him. Other EE's were cleaning the deck above to allow the scaffold to be removed and as he looked up some debris fell and a small metal particle became lodged in his left eye.	Injury/Illness	(1) Falling Particle
3700	Richmond, CA - Refinery	12/7/2010 8:10:00 AM	Closed	Near Loss	Possible strain in Contract employee's lower buttocks.	As 3 sub-contract employees were positioning a piece of rebar weighing approximately 110# into place, the employee on the end felt a pain in his lower left buttocks. It appears the individual was trying to nudge the rebar into the proper location using his body.	NL-Injury/Illness - Contractor Injury	
3710	Richmond, CA - Refinery	12/7/2010 12:36:00 PM	Closed	Near Loss	Lifted PRD on C-170 to Relief - Tripped Totalizer	FCC unit is down for Turnaround but in the process of commissioning equipment and charging levels. A level had been established initially in C-170 and left in a parked condition. The valve ended up leaking by, eventually filling up the column. When steam was commissioned to the reboiler, the vessel overpressured and lifted to relief. Why did C-170 lift to relief? Column was full and when steam was commissioned to reboiler it overpressured. Why was the column full? As part of commissioning, a level was charged to C-170 then blocked in and left in a "parked" condition. The valve leaked by which eventually caused the column to fill up. Why was the column allowed to fill up? Possibly due to the startup mode of the plant and excessive alarms coming in to the CBO, the CBO may have missed the alarms associated with that column.	NL-Regulatory Compliance - Permit Exceedance	(1) With commissiong of several systems from turnaround mode, CBO missed high level condition in C-170 which lead to overpressuring of Column when steam was introduced to reboiler.
						After steaming C-1020 to ensure an oxygen free environment the safety bypass for the ccloumn and the safety bypass on V-1020 were left open to		

3782	Richmond, CA - Refinery	12/8/2010 3:28:00 PM	Closed	Near Loss	Start up of C-1020 caused flow to FCC Flare	relief to prevent forming a vacuum as this equipment cooled. This information was carried in the operators turnover. For start up the field operator was told to close the bypass. The field operator closed the bypass on V-1020 and was unaware the bypass for C-1020 needed to be closed as well. As the coloumn filled with liquid a flow to relief caused flow to the FCC Flare. The flow meter 12FI1251 on V-1251 (relief drum) was inoperative which caused delays in determining the source of flow. Flow to the flare lasted from 3:28PM til 4:16PM. A total of 4502scf noted on totalizer, a sample was triggered. No flame was detected.	NL-Lessons Learned	(1) 12FI1251 along with multiple other flow indicators on the FCC/Alky relief header are inoperative which prevented operations from locating the source
3828	Richmond, CA - Refinery	12/9/2010 7:38:00 AM	Closed	Near Loss	Flow to FCC and Alky flare during F-70 lighting	While lighting off F-70 Natural Gas pressure spiked lifting safety to relief. 302scf at FCC Flare, 47scf at Alky flare. No flame detected, no samples triggered.	NL-Lessons Learned	(1) Operators opened natural gas valve too fast and overpressured safety
3860	Richmond, CA - Refinery	12/2/2010 12:00:00 PM	Closed	Near Loss	Failure to LOTO the 2-12 Diesel Line properly for maintenance work	The 2-12 Diesel Line was LOTO'd on dayshift 12/3/10 in preparation to be taken out of service for maintenance work. On 12/9/10 a LOTO Audit was done and three PRD locations were found on the line to be un-tagged/un-locked, as well as Yellow Operator tags that incorrectly had the wrong line name entered.	NL-Operational Process/Procedures - Safety Systems	(1) Not recognizing the hazard, (2) Did not follow RI 9900 LOTO
3871	Richmond, CA - Refinery	11/16/2010 12:00:00 PM	Closed	Near Loss	Perchloroethelene level not checked at the upstream sample point.	Perchloroethelene level was not checked at the upstream bleeder. Procedure was modified to eliminate this step. It was not known at the time that this was a reg 8 Air Board requirment. Perc is always present at the upstream sample point above PEL. It was felt this sample was not needed and by eliminating it the risk of exposure would be eliminated. All other steps of the procedure were followed.	NL-Regulatory Compliance - Non Compliance - Air	
3888	Richmond, CA - Refinery	12/10/2010 5:00:00 AM	Closed	Near Loss	loss of K900 after K900A would not start	K900 got a high temp alarm on the motor winding. So the standby machine (K900A) was set up to start K900A was started and got electrical fault alarm and immediately shutdown (<1 minute). Electrician was working at the FCC shutdown so he was asked to help us trouble shoot K900A. He found an alarm on K900A that read Time over current C phase trip 86 handle. Around same time K900 shut down . This relay/alarm was reset and K900A was started.	NL-Environmental - Release	(1) K900 - Variable transformer failure, (2) K900 - Possibly bad TEWAC cooling system performance, (3) K900 - Low power factor trip point allowing underexcited operation (leading to high motor temp)., (4) K900A - Bad order/out of spec start up timer relay, (5) K900A - timer relay was incorrect
3923	Richmond, CA - Refinery	12/11/2010 11:45 00 AM	Closed	Loss	Insulation fire at top corner of Precipitator	Repairs were recently made to insulation in that same area of the fire due to wind damage. The plant is currently in the process of starting up and the Precipitator is now heating up to operating temperature (~550 degF) due to the flue gas. There is some sort of blanket that was used during the repair that layed between the outer metal surface and the insulation, it is that blanket that caught fire.	Fire/Explosion	(1) Some sort of paper product was used on the repair to the precipitator insulation during the turnaround. This is what caught on fire.
3924	Richmond, CA - Refinery	12/11/2010 12:30 00 PM	Closed	Near Loss	small fire on top of percipitator	A small insulat on fire on K13-B inlet on top of the percipitator	NL-Fire/Explosion	
3924	Richmond, CA - Refinery	12/11/2010 12:30:00 PM	Closed	Near Loss	small fire on top of percipitator	A small insulat on fire on K13-B inlet on top of the percipitator	NL-Equipment/Property Damage - Equipment Damage	
3925	Richmond, CA - Refinery	12/11/2010 6:30:00 AM	Closed	Near Loss	Exchangers E-1683A/B over pressured and leaked to atmosphere	During startup the distillation section was circulating The line to the reactor loop was blocked in but a sample station was left in circulation mode and unblocked. And it leaked into the Exchanger s E1683A/B tube side the outlet was blocked in to prevent liquid from getting to per procedure reactor. The shell side was circulating H2 and we picked up heat from the discharged of the compressor (K1670) The E1683's were bottle up and we had a check valve on the stream going to the exchanger this check is use if feed pump is lost you don't back H2. It over pressured the exchanger and it leaked to the atmosphere	NL-Environmental - Spill	(1) Start up procedure did not have detail to ensure sample system was blocked in.
3936	Richmond, CA - Refinery	12/12/2010 9:40:00 AM	Closed	Near Loss	Flow to flare while opening Reaction mix valve.	Flow to flare while opening Reaction mix valve. Pressure fron V-80 to C-90 while cross connecting these systems. Less than 1 minute, flame detected, no sample triggered.	NL-Lessons Learned	
3955	Richmond, CA - Refinery	12/12/2010 11:10:00 PM	Closed	Loss	Loss of K-1600 H2 recycle compressor due to high level in V-1616B suction bottle	On 12 December 2010, HNF K-1600 shut down on V-1616B HHL, the shutdown of K-1600 caused F-1610 to go to min. fire on LL H2 flow. F-1610 effected R-1610 cat temp. to drop, R-1610 temp effected C-1650 BTM product 600R to go off test. Routed off test for 3.5 hours.	Operational Process/Procedures	(1) Why did K-1600 shutdown? Shutdown due to high level in V-1616B Why to V-1616B have high level? Unable to determine this cause.
4012	Richmond, CA - Refinery	11/15/2010 10:00:00 AM	Closed	Near Loss	Wrong tensioning head ordered and used	DED work instructions called out for a certain tensioning head to be used on Reactor ells. Whenj field auditing the job it was discovered that the wrong heads were being used. One flange had already been completed at this time. If this had not been caught there is a possibility that the flanges could have leaked on startup, the reactor head could have been stripped out, gaskets and or gasket surfaces could have been ruined or studs could have been damaged.	NL-Lessons Learned	
								(1) SOS:Design & Engineering: Loss Profit Opportunity: Shift (~12 hours) Delay at GHT.K-1670 pressure control valve would not allow turbine to rotate and reach desired RPMs during start up. Insufficient flow: Not enough steam was getting to the compressor.Valve trim was downsized. EWO initiated and approved for valve reconditioning was used for

4019	Richmond, CA - Refinery	12/12/2010 12:00:00 AM	Closed	Loss	GHT TK-1670 PV725 800# steam letdown controller trim undersized	During the 4th Q! 2010 GHT Arsenic Bed Changeout 43PV725 TK-1670 800# steam letdown controller trim was reduced to improve control and prevent the valve from operating on its seat (in short valve was oversized). During GHT startup on Dec 12th K-1670 was tested to max governor while circulating Nitrogen. The new trim was too small to handle the steam requirements for this condition and led to ~1 shift delay to GHT startup.	Operational Process/Procedures	trim change work. EWO was not revised for valve trim changes wanted. Work Group discussing the plan forward for the trim change did not question need for EWO revision or MOC initiation requirements. Work Order was approved for valve trim change. Attempt to adjust for abnormal valve condition. Valve constantly ran close to seat causing Chattering and possible failure. Old trim was too big for the normal process. Engineering Calculations incorrect for Valve Trim Correction. , (2) Sidebar Recommendations & Corrective Actions: Design & Engineering : Documentation: •Aligning IMI, Engineering, Machine Shop, Vendor & Meridian would add immediate value & save time when evaluating future changes. oMachine Shop records do not retain the original valve design which is identified as critical information. oVendor information not aligned with current valve trim kit configuration. Engineers & instrumentation get their specifications/ CV's from vendor information with the original parts. This information is rendered useless when modifications are not tracked/ analyzed/ communicated with vendors or in-house. Note: CV is the flow coefficient for the valve. The flow coefficient is a scale used to describe the flow capacity of a trim. This capacity depends on a number of factors such as pressure, specific gravity, & temperature of the fluid. oSerial numbers imbedded on the valve bonnet/body (from manufacturer) does not always match the outside tracking tag number. Therefore, tracking of changes for the vendor is rendered obsolete when calculating specs/CV's for that particular valve. oThe paper trail disappeared from the
4019	Richmond, CA - Refinery	12/12/2010 12:00:00 AM	Closed	Loss	GHT TK-1670 PV725 800# steam letdown controller trim undersized	During the 4th Q! 2010 GHT Arsenic Bed Changeout 43PV725 TK-1670 800# steam letdown controller trim was reduced to improve control and prevent the valve from operating on its seat (in short valve was oversized). During GHT startup on Dec 12th K-1670 was tested to max governor while circulating Nitrogen. The new trim was too small to handle the steam requirements for this condition and led to ~1 shift delay to GHT startup.	Process Safety Management (PSM)	(1) SOS:Design & Engineering: Loss Profit Opportunity: Shift (~12 hours) Delay at GHT.K-1670 pressure control valve would not allow turbine to rotate and reach desired RPMs during start up. Insufficient flow: Not enough steam was getting to the compressor.Valve trim was downsized. EWO initiated and approved for valve reconditioning was used for trim change work. EWO was not revised for valve trim changes wanted. Work Group discussing the plan forward for the trim change did not question need for EWO revision or MOC initiation requirements. Work Order was approved for valve trim change. Attempt to adjust for abnormal valve condition. Valve constantly ran close to seat causing Chattering and possible failure. Old trim was too big for the normal process. Engineering Calculations incorrect for Valve Trim Correction. , (2) Sidebar Recommendations & Corrective Actions: Design & Engineering : Documentation: •Aligning IMI, Engineering, Machine Shop, Vendor & Meridian would add immediate value & save time when evaluating future changes. oMachine Shop records do not retain the original valve design which is identified as critical information. oVendor information not aligned with current valve trim kit configuration. Engineers & instrumentation get their specifications/ CV's from vendor information with the original parts. This information is rendered useless when modifications are not tracked/ analyzed/ communicated with vendors or in-house. Note: CV is the flow coefficient for the valve. The flow coefficient is a scale used to describe the flow capacity of a trim. This capacity depends on a number of factors such as pressure, specific gravity, & temperature of the fluid. oSerial numbers imbedded on the valve bonnet/body (from manufacturer) does not always match the outside tracking tag number. Therefore, tracking of changes for the vendor is rendered obsolete when calculating specs/CV's for that particular valve. oThe paper trail disappeared from the
4025	Richmond, CA - Refinery	12/13/2010 12:25:00 AM	Closed	Near Loss	Two minor flaring events during start-up	C-160 over pressure causing flow to the flare during start-up	NL-Environmental - Release	
4239	Richmond, CA - Refinery	12/15/2010 4:00:00 AM	Closed	Near Loss	Unable to get out with GHT product due to a closed valve on the 206 Line.	Operations was attempting to route GHT product to T-3180 via the 206 Line. several attempts were made, but to no avail.B&S Refined HO walked the 206 Line and found that a block valve downstream on 43FC941 was in the closed position.	NL•Operational Process/Procedures - Plant Run Out/Slow Down	
								(1) Prior to 2008, there was no consistent practice for managing overdue PRD inspections, documenting them in

4258	Richmond, CA - Refinery	12/13/2010 8:00:00 AM	Closed	Near Loss	Incorrectly Inactive PRD IX-803 (SISO) and Unknown Overdue PRD C5-4 (D&R East)	PRD IX-803 was designated as INACTIVE in the Meridium database; however, when maintenance contacted operations to physically remove it, we learned that it is still in service and should be designated as ACTIVE. This PRD can not be repaired on the run, and is currently overdue for inspection. A separate but similar issue was identified for PRD C5-4 in the 5H2S plant at D&R East. The valve that should have been installed in 2006 was not installed, yet the 705A paperwork was approved and forwarded to RFMS to Meridium. Thus, the last valid inspection is 2002, and currently overdue.	NL-Business Process - Business Process	Meridium, and checking the PRD 705A and 707A forms for accuracy. Current issue occurred prior to RI-609 being followed correctly. An active PRD was incorrectly made inactive in Meridium. A PRD that was not installed was incorrectly updated as having been replaced., (2) The one-time retroactive review in 2007 of 705A forms did not go back beyond 2004 to catch every discrepancy that was entered into Meridium. Similar issues are suspected for the period from 1/2001 to 1/2004. Since 2006, RI-609 processes to correctly manage and update PRD inspection info have been in place.
4258	Richmond, CA - Refinery	12/13/2010 8:00:00 AM	Closed	Near Loss	Incorrectly Inactive PRD IX-803 (SISO) and Unknown Overdue PRD C5-4 (D&R East)	PRD IX-803 was designated as INACTIVE in the Meridium database; however, when maintenance contacted operations to physically remove it, we learned that it is still in service and should be designated as ACTIVE. This PRD can not be repaired on the run, and is currently overdue for inspection. A separate but similar issue was identified for PRD C5-4 in the 5H2S plant at D&R East. The valve that should have been installed in 2006 was not installed, yet the 705A paperwork was approved and forwarded to RFMS to Meridium. Thus, the last valid inspection is 2002, and currently overdue.	NL-Operational Process/Procedures - Safety Systems	(1) Prior to 2006, there was no consistent practice for managing overdue PRD inspections, documenting them in Meridium, and checking the PRD 705A and 707A forms for accuracy. Current issue occurred prior to RI-609 being followed correctly. An active PRD was incorrectly made inactive in Meridium. A PRD that was not installed was incorrectly updated as having been replaced., (2) The one-time retroactive review in 2007 of 705A forms did not go back beyond 2004 to catch every discrepancy that was entered into Meridium. Similar issues are suspected for the period from 1/2001 to 1/2004. Since 2006, RI-609 processes to correctly manage and update PRD inspection info have been in place.
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4260	Richmond, CA - Refinery	12/6/2010 10:00:00 AM	Closed	Near Loss	File maker turnover record from previous date was missing	RLOP OA called at 10:00 am on 12/6/10 and stated that he was unable to locate a turnover record for a date in the middle of November. The reason RLOP OA was looking for this turnover record is they were trying to gather data for an investigation of an incident that occurred in RLOP on that day in November.	NL-Business Process - Business Interruption	
4379	Richmond, CA - Refinery	12/18/2010 10:00:00 PM	Closed	Near Loss	Blend motors F-1 and F-2 taken off line. Could not keep fuel to line side of motors	About a hour into started the blend F-1 and F-2 started giving an alarm for # 4 bowl on F-1 and the numbers were all over the board. The tank field operator was dispatched and found that when the engines switched over to line side for fuel comparison neither engines would keep fuel the bowls would start to drain.	NL-Business Process - Business Interruption	
4391	Richmond, CA - Refinery	12/20/2010 1:12:00 AM	Closed	Loss	Loss of Feed to GHT	P-171 cavitated causing C-170 bottoms level to rise to 100% with the level control valve (54LC170) also at 100% open. When the level turned around and started to drop the control valve also worked itself closed to maintain the level. When the level had dropped to ~ 10%, the C-170 bottoms pump, P-171, cavitated and tripped. This resulted in a loss of flow of heavy gas to GHT and caused them to have to go to minimum fires. Operations were able to restart P-171 and re-establish flow to GHT 6 minutes later.	Operational Process/Procedures	(1) P-171 started to cavitate and tripped off line.
4399	Richmond, CA - Refinery	12/15/2010 9:00:00 AM	Closed	Near Loss	Wire leads to motor not connected but the breaker was energized. Work was done/left from the S/D	Supervisor recieved a call from the Alky HO about a Motor that was put into service but was not pumping. Electrician was sent out on a station fill to troubleshoot P-1404, the electrician found the breaker was on and there was no LOTO box, so EE proceded to the motor and found the wire leads were disconnected, energized and taped. Previous work was performed on this equipment during the S/D.	NL-Equipment/Property Damage - General Liability	(1) SOS: Training & Procedures (Investigations and Lessons Learned): MP-1404 Leads found disconnected. Leads likely disconnected between Nov 26 and Dec 15. Unable to determine who, or why, or exactly when the leads were disconnected during the shutdown period. There was no paperwork trail or any recollection to link to the event. Investigation started 4 weeks after reported incident. Some inaccurate info on preliminary incident report.
4497	Richmond, CA - Refinery	12/20/2010 7:00:00 AM	Closed	Near Loss	Some Gaps were identified in our portable tank air permit monitoring.	A Portable Tank VOC abatement carbon drum inspection was missed earlier this year. A Title V Deviation will be submitted to the BAAQMD. The BAAQMD inspectors stated they would issue a Notice to Comply, (basically a warning to correct a deficiency) for this missed inspection.	NL-Regulatory Compliance - Non Compliance - Air	(1) Carbon drum inspections were not managed/tracked well. Why? Requirements of the regulation regarding breakthrough were not fully understood. Why? The regulation was not written well and was misinterpreted by the Liquid Specialist. This lead to the manner in which the carbon drum inspections were managed that did not capture all of the elements needed for compliance assurance for BAAQMD inspections.
					Since 2001, Permit	Refinery's application in 2000 for VOC component Alternative Monitoring Program (annual inspection vs. quarterly inspection) granted by BAAQMD in Feb. 2001. The letter received from the BAAQMD excepted the FCC Plant		

4526	Richmond, CA - Refinery	12/21/2010 10:00:00 AM	Closed	Near Loss	Conditions not met for FCC Plant 8-18 Components'	from the program for reasons unknown at this time. The NOV issued by the BAAQMD on 12/21/10 alleges our Alternative Monitoring program implemented since that date has errantly included the FCC.	NL-Regulatory Compliance - Non Compliance - Air	
4529	Richmond, CA - Refinery	12/20/2010 3:00:00 PM	Closed	Near Loss	Tx 65/PCC lift did not follow prescibed HSE, RI 390 (Crane and Rigging Practices), and did not involve Operations and Electrically Qualified personnel in new critical lift plan near hi-tension power lines.	Setting of the new Tx65, PCC Building, and steel power pole required crane and rigging expertise. This lift was around 12.5kV power lines near the #1 Power Plant. On Thursday, December 16 a HSE was performed (no record found of that HSE or action items from that HSE) to determine the safe plan of action. At that HSE, a plan was developed that required 450-3 and Yard Loop North to be switched out and deenergized via U&E Operations Switch Cards. On Thursday evening, a communication was put out to U&E Operations and the Project Management team that detailed the work plan for the lift to be executed on Wednesday, December 21. The lift for TX65/PCC was executed on Tuesday, December 20th. A different lift procedure than was discussed in the HSE was used and no lines were deenergized. Operations was not informed or consulted in this change.	NL-Equipment/Property Damage - General Liability	(1) Because of the heated discussion, operations, construction, and safety personnel did not get involved with the decision to proceed with the lift. , (2) The project manager rushed into addressing the situation without stepping back and insuring that all the appropriate personnel were contacted and made aware of the change in plans, (3) This item entered by mistake, (4) Biggs should have, but did not, obtain a general work permit prior to placing the crane and truck / trailer for the lift.
4529	Richmond CA - Refinery	12/20/2010 3:00:00 PM	Closed	Near Loss	Tx 65/PCC lift did not follow prescibed HSE, RI 390 (Crane and Rigging Practices), and did not involve Operations and Electrically Qualified personnel in new critical lift plan near hi-tension power lines.	Setting of the new Tx65, PCC Building, and steel power pole required crane and rigging expertise. This lift was around 12.5kV power lines near the #1 Power Plant. On Thursday, December 16 a HSE was performed (no record found of that HSE or action items from that HSE) to determine the safe plan of action. At that HSE, a plan was developed that required 450-3 and Yard Loop North to be switched out and deenergized via U&E Operations Switch Cards. On Thursday evening, a communication was put out to U&E Operations and the Project Management team that detailed the work plan for the lift to be executed on Wednesday, December 21. The lift for TX65/PCC was executed on Tuesday, December 20th. A different lift procedure than was discussed in the HSE was used and no lines were deenergized. Operations was not informed or consulted in this change.	NL-Injury/Illness - Employee Injury	(1) Because of the heated discussion, operations, construction, and safety personnel did not get involved with the decision to proceed with the lift. , (2) The project manager rushed into addressing the situation without stepping back and insuring that all the appropriate personnel were contacted and made aware of the change in plans, (3) This item entered by mistake, (4) Biggs should have, but did not, obtain a general work permit prior to placing the crane and truck / trailer for the lift.
4529	Richmond CA - Refinery	12/20/2010 3:00:00 PM	Closed	Near Loss	Tx 65/PCC lift did not follow prescibed HSE, RI 390 (Crane and Rigging Practices), and did not involve Operations and Electrically Qualified personnel in new critical lift plan near hi-tension power lines.	Setting of the new Tx65, PCC Building, and steel power pole required crane and rigging expertise. This lift was around 12.5kV power lines near the #1 Power Plant. On Thursday, December 16 a HSE was performed (no record found of that HSE or action items from that HSE) to determine the safe plan of action. At that HSE, a plan was developed that required 450-3 and Yard Loop North to be switched out and deenergized via U&E Operations Switch Cards. On Thursday evening, a communication was put out to U&E Operations and the Project Management team that detailed the work plan for the lift to be executed on Wednesday, December 21. The lift for TX65/PCC was executed on Tuesday, December 20th. A different lift procedure than was discussed in the HSE was used and no lines were deenergized. Operations was not informed or consulted in this change.	NL-Equipment/Property Damage - Equipment Damage	(1) Because of the heated discussion, operations, construction, and safety personnel did not get involved with the decision to proceed with the lift. , (2) The project manager rushed into addressing the situation without stepping back and insuring that all the appropriate personnel were contacted and made aware of the change in plans, (3) This item entered by mistake, (4) Biggs should have, but did not, obtain a general work permit prior to placing the crane and truck / trailer for the lift.
4529	Richmond CA - Refinery	12/20/2010 3:00:00 PM	Closed	Near Loss	Tx 65/PCC lift did not follow prescibed HSE, RI 390 (Crane and Rigging Practices), and did not involve Operations and Electrically Qualified personnel in new critical lift plan near hi-tension power lines.	Setting of the new Tx65, PCC Building, and steel power pole required crane and rigging expertise. This lift was around 12.5kV power lines near the #1 Power Plant. On Thursday, December 16 a HSE was performed (no record found of that HSE or action items from that HSE) to determine the safe plan of action. At that HSE, a plan was developed that required 450-3 and Yard Loop North to be switched out and deenergized via U&E Operations Switch Cards. On Thursday evening, a communication was put out to U&E Operations and the Project Management team that detailed the work plan for the lift to be executed on Wednesday, December 21. The lift for TX65/PCC was executed on Tuesday, December 20th. A different lift procedure than was discussed in the HSE was used and no lines were deenergized. Operations was not informed or consulted in this change.	NL-Injury/Illness - Contractor Injury	(1) Because of the heated discussion, operations, construction, and safety personnel did not get involved with the decision to proceed with the lift. , (2) The project manager rushed into addressing the situation without stepping back and insuring that all the appropriate personnel were contacted and made aware of the change in plans, (3) This item entered by mistake, (4) Biggs should have, but did not, obtain a general work permit prior to placing the crane and truck / trailer for the lift.
4658	Richmond, CA - Refinery	12/23/2010 7:45:00 AM	Closed	Loss	Communication Line Severed during Excavation	During excavation for the new Refinery Quarry Road Alignment Project, a 50 pair copper voice cable was severed near the starting point at Ridge Road. The cable was buried approximately 18in. deep with no indication of its location. The severed cable was inspected by a technician from CITC and was determined to be live, currently supplying phone communications to #34 gates (Rod & Gun) entry. Plant Protection has been notified and a repair ticket has been called in.	Equipment/Property Damage	
4668	Richmond, CA - Refinery	12/23/2010 3:15:00 PM	Closed	Near Loss	Internal odor complaint tracked down by Plant Protection to the WDS area.	Internal odor complaint (mercaptan type odor) off westbound wind, from Admin building, resulted in Plant Protection called to investigate source. The washdown area was identified as the source of the odor. The odors were localized within the refinery. After further investigation, Haz Waste identified that the material coming from the NYCP, neutralized acid, smelled similar to the odor in the washdown sump, however the Vac Truck driver did not notice any odors when he had last offloaded. Additional trucks had offloaded after him that may have contributed to the odor being liberated, one of which was a higher temperature load from a B&S sump.	NL-Regulatory Compliance - Non Compliance - Air	(1) Why were there odor complaints regarding washdown station activities? Because the offloading of high temp. material into the washdown station after other offloads likely contributed to liberating the odors Why? Because the drivers did not notice there were any odors when they offloaded Why? Because the drivers had not routinely checked the downwind side of the washdown station area and high temperature loads had not been of a particular concern. Why? A downwind check had not been a requirement for the drivers and no previous complaints were known to have been registered as a result of this particular activity at the washdown station.
						RLOP steaming flare to V-283 @ 21:43 caused slight flare activity At North and		

4693	Richmond, CA - Refinery	12/20/2010 11:43:00 PM	Closed	Near Loss	slight flare activity	South Flare. Totaliser was not tripped. Proper notifications were made to the RSL prior to flare steam out. Reviewed RLOP job aid (RLP3C18J). Corrective action identified to regulate steam flow when steaming out. RLOP EOM writer notified of corrective actions needed.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
4694	Richmond, CA - Refinery	12/20/2010 10:00:00 PM	Closed	Loss	vapor analyzer needed reseting	Vapor analyzer for the vapor recovery system in berth 3 was out of range when shutdown for the previous ship and could not be started until it could be reset by an instrament person.	NL-Equipment/Property Damage - Equipment Damage	(1) Didn't understand details of new installations
4694	Richmond, CA - Refinery	12/20/2010 10:00:00 PM	Closed	Loss	vapor analyzer needed reseting	Vapor analyzer for the vapor recovery system in berth 3 was out of range when shutdown for the previous ship and could not be started until it could be reset by an instrament person.	Business Process	(1) Didn't understand details of new installations
4694	Richmond, CA - Refinery	12/20/2010 10:00:00 PM	Closed	Loss	vapor analyzer needed reseting	Vapor analyzer for the vapor recovery system in berth 3 was out of range when shutdown for the previous ship and could not be started until it could be reset by an instrament person.	NL-Business Process - Demurrage	(1) Didn't understand details of new installations
4695	Richmond, CA - Refinery	12/24/2010 1:40:00 PM	Closed	Near Loss	blend was inadvertily set to secondary tank while blending primary tank	Operator was asked to set blend from the bottom swing to the top on T-1688 since the blend was showing a heavy gravity. The S.P Hill operator set the lines and didn't notice the valve he set to the top was open on 1687 tk. Approximately 7M bbls was sent to 1687 tk.	NL-Business Process - Business Process	(1) Line to T1687 fill was open when operator switched the swing on T1688
4804	Richmond, CA - Refinery	12/27/2010 12:00:00 PM	Closed	Near Loss	8plt and 18plt hit with HC in the feed causing upset at SRU's	8plt and 18plt got hit with HC in the feed causing upset at the SRU's	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
4847	Richmond, CA - Refinery	12/28/2010 10:46:00 AM	Closed	Near Loss	The safety latch which holds Gate 101 in the open position is missing.	The safety latch which holds Gate 101 open is missing. Gate 101 is the train gate which is located near the Gate 31 entrance to the refinery. The purpose of this latch is to secure the gate in the open position while the train is passing thru. This then allows the officer who is assigned to open the gate to stand clear of the gate and the moving train which is passing. On previous occasions these latches have broken and the gate had moved into the path of the passing train causing extensive damage to the gate itself.	NL-Regulatory Compliance - Non Compliance - Water	
4847	Richmond, CA - Refinery	12/28/2010 10:46:00 AM	Closed	Near Loss	The safety latch which holds Gate 101 in the open position is missing.	The safety latch which holds Gate 101 open is missing. Gate 101 is the train gate which is located near the Gate 31 entrance to the refinery. The purpose of this latch is to secure the gate in the open position while the train is passing thru. This then allows the officer who is assigned to open the gate to stand clear of the gate and the moving train which is passing. On previous occasions these latches have broken and the gate had moved into the path of the passing train causing extensive damage to the gate itself.	NL-Quality - Product Quality (Int)	
4847	Richmond, CA - Refinery	12/28/2010 10:46:00 AM	Closed	Near Loss	The safety latch which holds Gate 101 in the open position is missing.	The safety latch which holds Gate 101 open is missing. Gate 101 is the train gate which is located near the Gate 31 entrance to the refinery. The purpose of this latch is to secure the gate in the open position while the train is passing thru. This then allows the officer who is assigned to open the gate to stand clear of the gate and the moving train which is passing. On previous occasions these latches have broken and the gate had moved into the path of the passing train causing extensive damage to the gate itself.	NL-Equipment/Property Damage - Equipment Damage	
4847	Richmond, CA - Refinery	12/28/2010 10:46:00 AM	Closed	Near Loss	The safety latch which holds Gate 101 in the open position is missing.	The safety latch which holds Gate 101 open is missing. Gate 101 is the train gate which is located near the Gate 31 entrance to the refinery. The purpose of this latch is to secure the gate in the open position while the train is passing thru. This then allows the officer who is assigned to open the gate to stand clear of the gate and the moving train which is passing. On previous occasions these latches have broken and the gate had moved into the path of the passing train causing extensive damage to the gate itself.	NL-Quality - Paperwork Incorrect/Not Sent	
4942	Richmond, CA - Refinery	12/28/2010 10:00:00 AM	Closed	Loss	Expired Cal Gas used in 50AI600A	We used an expired Calibration Gas in V-65 50AI600A from 12/12/2010 until 12/28/2010	Regulatory Compliance	(1) Lack of Skill or knowledge , (2) Lack of Inadecuate Procedures
5177	Richmond, CA - Refinery	1/4/2011 1:04:00 PM	Closed	Near Loss	Excess C3 flow to FCC flare tripped totalizer	The caustic in V-262 (Propane Caustic Treating Vessel) needed to be dumped and charged per Job Aid #FCCQ089J. The outside operator went out and started to perform the steps in this task. The dumping process calls for the operator to fully open a 2" block valve on the dump line to V273, followed by "throttling" open the secondary block valve to control the flow to V263. The block valve was opened too far (no indicators in the field to judge flow) sending enough C3s out of V263's vent to the flare to trip the totalizer.	NL-Regulatory Compliance - Permit Exceedance	(1) Operator Error
5217	Richmond, CA - Refinery	1/4/2011 12:00:00 AM	Closed	Loss	Forklift - 87 has scuff mark on left rear corner .	Forklift - 87 has scuff mark on left rear corner due to contact to an object in dumping area	Equipment/Property Damage	(1) scuffs on fklift, why? Reviewed expected time of incident and spoke to operators and neither remember running into anything or causing minor scrathces on the backside of Fklift, why? EEs did not completely inspect forklift after and before each use this week, why? EEs state they were focused more on production and completing blends and dumping rather than solely focusing on forklift inspection standards.
	Richmond,	11/30/2010			Transfered tank 1488	1488 tank which was high in sulfur was tranfered to 1459 tank without	NL-Business Process	

5236	CA - Refinery	2:00:00 PM	Closed	Near Loss	without sampling to 1459 tk (High Sulfur)	sampling raising the sulfur level in that tank which when used as a blend component threw off the tank spec.	- Business Interruption	
5244	Richmond, CA - Refinery	12/26/2010 12:00:00 AM	Closed	Loss	HSFO from T-1506 was high in Al+Si and loaded onto barges	After lifts on 12/26, and 12/27, sample results of Al + Si in the HSFO on the Washington Voyager (210 PPM) and Drakes Bay (148 PPM) came back high. This makes it difficult to blend the HSFO.	Quality	(1) Investigation team was not able to pinpoint how the FCC catalyst made its way into our T-1506 HSFO tank. Once the issue was found, all other tanks and rundown lines were sampled, and all were on spec. As a result, Ops planning will add frequnt sampling on cutter, HCO, and fuel oil during FCC start up to its 2010 Cracking T/A lessons learned.
5245	Richmond, CA - Refinery	12/22/2010 2:00:00 AM	Closed	Near Loss	Sulfur Analyzer plugging problems	Sulfer Analyzer at gasoline blender started plugging because of the injection valve which failed during a blend causing sulfuer to flud blend system.	NL-Quality - Product Quality (Int)	(1) injection valve failed causing the system to flud with sulfur and coating the lines internals with heavy sulfur. When repaired the fuel had to be run flush through the lines before system could be cleared.
5256	Richmond, CA - Refinery	1/5/2011 5:00:00 PM	Closed	Near Loss	Loss of C-810 level indication	C810 lost liquid level. Both LI's decreased at the same time but no other indications of plant upset were visiable. It looked like 810 was puking but DP's and upper tray temps did not indicate such.	NL-Quality - Product Quality (Int)	(1) SOS: Maintenance & Inspection: C-810 Loss of Level Indication. Both Level Indicators began unparallel tracking. Flow changes during a shutdown can offset the calibration. Calibration of LI's is not verified after a shutdown. Not normally done (or forgotten) , (2) SOS Training & Procedures: C-810 Loss of Level Indication. Both Level Indicators began unparallel tracking. Water flush lines on LI's leads are left open during shutdown to help process excess water.
5279	Richmond, CA - Refinery	1/6/2011 6:15:00 AM	Closed	Loss	EE walking hit a spoke in a Valve Wheel	EE walking hit a spoke in a Valve Wheel, The EE was walking thru a narrow walkway, the Valve wheel has spokes beyond the wheel itself. The EE was writing and walking at the same time.	Injury/Illness	(1) EE was walking and writing at the same time
5286	Richmond, CA - Refinery	1/2/2011 9:54:00 PM	Closed	Near Loss	North hook at berth 4 failed and released two vessel mooring lines	As normal for the beginning of each shift I walk the wharf and check the mooring lines and the alignment of all the loading arms. Upon arrival at berth 4 I seen the vessels south spring lines laying slack on the wharf platform. I went upstairs and checked the vessel alignment with the loading arms, it appeared the vessel moved about two feet south. I requested the berth Operator to inform the vessel to tighten their south springs lines and to watch for any additional movement of the vessel. I then returned to the control room. About 30-45 minutes later I called berth 4 to see if the vessel had all their lines tight and was informed the vessel said the person to tighten the lines was eating and upon completion they would tighten their lines. The berth Operator indicated the vessel did not move. A little later the vessel called on the radio and requested we wait until after they complete the discharge to the 1st shore tank before they tighten their spring lines. The berth Operator advised them to tighten their lines now. The berth Operator advised me a short time later that their lines where now tight. The vessel completed their discharge to the 1st shore tank, began their discharge to the 2nd shore tank and about 2145 advised their head line came off the north spring hook. Three Operators and myself went to berth 4 and found the futher north hook was released and the two bow lines on that hook were laying in the water. I requested the vessel to shut down their discharge. We reset the hook, pulled both bow lines back, had the vessel tighten their lines and the hooks held with no futher problems the rest of the shift.	NL-Equipment/Property Damage - Equipment Damage	(1) problem with the equipment locking mech
5304	Richmond, CA - Refinery	1/6/2011 10:00:00 PM	Closed	Loss	sample ignited in flash unit	Mislabeled gasoline sample as diesel ignited in PM Flash unit, damaging unit. Operator extinguished fire with extinguisher.	Equipment/Property Damage	(1) SOS: Design & Engineering: Sample Ignited. Gravity Results Not Checked. Procedure Not Followed. Operator Was Extra Busy. Crew was at Minimum, so working two rooms. Operator on vacation and no overtime was scheduled. Was scheduled to take the truck run. , (2) SOS: Training & Procedures: Sample Tags Were Switched (Diesel and Gasoline). Unable to Determine. B&S Operator May Have Switched the Tags When Delivering to QCD. Discussing Samples with QCD Operators. QCD Head Operator May Have switched the Tags while breaking down the Samples. Discussing Samples with Operators, Phone Calls and other Distractions. , (3) SOS: Personal Protective Factors: Sample Ignited. Bottles and Samples Look Alike.
5304	Richmond, CA - Refinery	1/6/2011 10:00:00 PM	Closed	Loss	sample ignited in flash unit	Mislabeled gasoline sample as diesel ignited in PM Flash unit, damaging unit. Operator extinguished fire with extinguisher.	Fire/Explosion	(1) SOS: Design & Engineering: Sample Ignited. Gravity Results Not Checked. Procedure Not Followed. Operator Was Extra Busy. Crew was at Minimum, so working two rooms. Operator on vacation and no overtime was scheduled. Was scheduled to take the truck run. , (2) SOS: Training & Procedures: Sample Tags Were Switched (Diesel and Gasoline). Unable to Determine. B&S Operator May Have Switched the Tags When Delivering to QCD. Discussing Samples with QCD Operators. QCD Head Operator May Have switched the Tags while breaking down the Samples. Discussing Samples with Operators, Phone Calls and other Distractions. , (3) SOS: Personal Protective Factors: Sample Ignited. Bottles and Samples Look Alike.

5348	Richmond, CA - Refnery	1/7/2011 3:15:00 PM	Closed	Loss	Gate 121 damage	Bob Powell was returning to the long wharf through gate 121 at the causeway and I, (Bob Kendall) was in the passenger seat. We were hauling a trailer behind the oil spill truck. As the truck passed through, the gate started to close clipping the back end of the trailer. The lower frame of the gate bent slightly but there is no damage to the trailer. There was another worker there on a forklift. The previous time going through the gate he badged us through and waited to assure the gate wouldn't close on us. This time he went through first and we followed.	Equipment/Property Damage	(1) Knows the gate stays open for a long time and figured he would make it through without badging his vehicle
5442	Richmond, CA - Refnery	1/11/2011 1:52:00 AM	Closed	Loss	P-1453 shutdown with possible motor damage.	At 01:52, COS received alarms indicating possible shutdown of the wash water pump, P-1453 . Operators responded and found the pump down. The motor had a burning smell. The switch gear was showing a ground fault.	Equipment/Property Damage	(1) see Journal for investagation..... The only anomaly I found was the trip unit is set to 75% of the tap of the breaker, equal to 300 amps pick up on long time, this pick up exceeds the FLA o f the motor even if you take the service factor in account. While 13 ½ years is not far off of end of life, I cannot rule out the possibility of the motor was allowed to exceed acceptable operating current of the motor. This could allow excess heating of the motor winding and overall shorter life span of the motor.
5482	Richmond, CA - Refnery	1/1/2011 12:00:00 AM	Closed	Loss	Db issue(s) lead to missec quarterly Reg. 8-18 inspections	Late first quarter 2010, new VOC components identified from Shutdown/MOC work - Early 2nd quarter, all new valves entered into LeakDAS database for scheduling. Issue identified with db in the placement of intial rule (first monthly/quarterly inspection frequency) Database administrator requested help from InspectionLogic (LeakDAS) support. The intial rule needed to be manually inputted with a script from LeakDAS support that also needed a daily license key to activate the change. Change was made on an individual basis.- 3rd quarter appears components were scheduled by the db and inspected normally. - 4th quarter, appears that components jumped from 2nd quarterly period (02) to annual inspection frequency (06) thereby not capturing a quarterly inspection on approximately 400 valves. First quarter 1/10/11 discovered missed inspections during QA/QC of LDAR data. Local regulations require 5 consecutive quarterly leak free inspections before component(s) can go on an annual inspection frequency.	Regulatory Compliance	(1) SOS: Design & Engineering: VOC Inspection missed. The database inspection requirements had been changed from quarterly to annually for many components. The Database had an error in it that didn't allow for normal single component changes to be made directly within the Program, (2) SOS: Maintenance & Inspection: VOC Inspection missed. There was no set independent QC progam establishedd, (3) SOS: Training & procedures: VOC Inspection missed. The database inspection requirements had been changed from quarterly to annually for many components. The wrong script had been entered which resulted in a mass change. The database administrator did not fully understand what the script was going to do,, (4) SOS: Training & procedures: VOC Inspection missed. The database inspection requirements had been changed from quarterly to annually for many components. The wrong script had been entered which resulted in a mass change. The database support group did not properly question the request for the script., (5) SIDEBAR: SOS: Training & Procedures: - A large volume of inputs needed to be entered into the system and may have contributed to lack of communication and verification. There are many sets of rules required for different classes of components and step inspection which contributes to the complexity of the process.
5487	Richmond, CA - Refnery	1/11/2011 10:00:00 AM	Closed	Loss	Irritation to left eye caused by wind blown dust	Employee was in process of operating a forklift when gusting winds blew dust in employee's face.	NL-Injury/Illness - Contractor Injury	(1) Employee was performing normal duties in a safe manner and using all due precautions and Proper PPE. Unexpected wind gusts in the area caused sudden dusty condition which ended as suddenly as it started.
5487	Richmond, CA - Refnery	1/11/2011 10:00:00 AM	Closed	Loss	Irritation to left eye caused by wind blown dust	Employee was in process of operating a forklift when gusting winds blew dust in employee's face.	Injury/Illness	(1) Employee was performing normal duties in a safe manner and using all due precautions and Proper PPE. Unexpected wind gusts in the area caused sudden dusty condition which ended as suddenly as it started.
5520	Richmond, CA - Refnery	1/11/2011 2:00:00 AM	Closed	Near Loss	F-1500 furnace HNC RLOPF/G chop	At approximately 2.00 AM the 5 board operator was attempting to bring the Fuel Gas-air ratio back into controlOperator adjusted the Air/fuel ratio controller to allow the TC to increase and the move let the FG valve open VERY quickly causing the FG controller to chop	NL-Operational Process/Procedures - Safety Systems	(1) Move on Gas to air ratio controller caused FG controller to open quickly and chop F/G to F-1500
5529	Richmond, CA - Refnery	9/25/2010 5:00:00 PM	Closed	Loss	IPS Rekey #2036605 South Isomax MEA pump P-332A unexpctedly shutdown resulting in a temporary loss o	IPS Rekey #2036605 South Isomax MEA pump P-332A unexpctedly shutdown resulting in a temporary loss of ~ 70mmscfd of hydrogen product. The motor was electrically isolated and tested on 9/27/2010 by Gerald Norman. Test results indicated grounded windings. Upon visual inspection, there were no signs of water intrusion or moisture damage. The motor space heaters were in good working order drawing about 2 amps, and had been confirmed by analysis 9 months earlier. Also, this 1000 hp Westinghouse motor was tested on 3/19/2009 without any issues.	Equipment/Property Damage	(1) 1 Why did the motor MP-332A fail? It failed becaused the motor windings were grounded. 2 Why were the motor windings grounded? They were grounded because the insulation degraded. 3 Why was the motor insulation degraded? It was degraded due to possible overheating of the windings. 4 Why would the wind ngs overheat? They overheat due to a combination of contamination and mechanical wear. 5 Why would contamination and mechanical wear occur? This normally occurs over many years of operation, and in this case this was the original motor. 6 Why wasn't this motor cleaned/baked or repaired during the A-Train March 2010 shutdown? Planned to retire H2 trains in late-2009 and early-2010, and a recent motor test on 3/19/2009 has good results. This motor was not expected to fail in 2010. Anticipated retiring H2 Trains in late-2009 and early-2010, and recent motor test on 3/19/2009 indicated MP-332A should be serviceable through 2010.
						IPS Rekey #2030270 At about 1000H, P1845 is observed to be gassing off		

5551	Richmond, CA - Refinery	9/17/2010 11:00:00 AM	Closed	Near Loss	IPS Rekey #2030270 At about 1000H, P1845 is observed to be gassing off and this initiated fluctuation of flow swinging from 0 – 160 bph.	and this initiated fluctuation of flow swinging from 0 160 bph. As a result of this fluctuation, C1820 operation was affected 18 plant has had issues all day with P-1845 NH3 scrubber product/reflux pump Cavitating and losing flow. CBOBelieves the NH3 content in the scrubber end of the plant is the cause of the problem. The higher ammonia content in the system may be the causal factor in P-1845 cavitating and losing flow directly affecting C-1850 pressure and causing NH3 to be off test	NL-Quality - Product Contamination (Int)	(1) Pressure problems in 18 pit NH3 scrubber section caused pressure excursion in C-1820 .
5554	Richmond, CA - Refinery	9/12/2010 7:30:00 AM	Closed	Loss	IPS Rekey 2025789 18 PLANT ROUTED OFF TEST DUE TO UNSTABLE OPERATION IN C-820	IPS Rekey 2025789 8 PLANT ROUTED OFF TEST DUE TO UNSTABLE OPERATION IN C-820 12/Sep/2010 09:45 - RLOP 18 Plant was routed off test due to high Selenium results. Feed composition change impacted column profiles. NH3 concentration spiked. Feed reduced and adjustments were made on NH3 stripper to compensate for higher NH3 concentration.	Quality	(1) Increased ammonia feed concentration of the sour water feed - OWS could not reconnize colum instagligy was cause by NH3 % in feedIncreased ammonia feed concentration of the sour water feed - OWS could not recognize column instability was due to increase NH3 % in feed.
5571	Richmond, CA - Refinery	1/12/2011 12:10:00 PM	Closed	Loss	Contractor burns back of hand	Contractor was working at 2A separator steaming a portable tank for cleaning purposes. A 1" steam hose, red/black, was connected with 2" camlocks to the tank fill line. Just before noon the contractors arrived back from lunch and shut the steam off to the tank. About five to ten minutes later the contractors then proceeded to remove the steam line from the tank. When they disconnected the fittings hot condensate splashed out onto one of the contractors "mechanic" style gloves. The hot condensate soaked thru the back of the contractors gloves and burned him. He immediately reported the incident to his supervisor and the Chevron Rep was notified.	Injury/Illness	(1) -Why did the contractor get burned? -Because hot condensate soaked thru his gloves onto his skin. -Why? - Because the contractor was not wearing the proper type of gloves to protect from a splash hazard. -Why? -Because he didn't think there was going to be any splash hazard to be concerned with. -Why? - Because previously the contractor had not seen hot condensate in the line when disconnecting the fittings.
5577	Richmond, CA - Refinery	1/12/2011 2:28:00 PM	Closed	Loss	Diesel Production routed off-test	T-3215 (Diesel Production) was routed off-test for approximately 2 hours after a sulfur spike at the DHT caused by a miscommunication on cold feed routing. At the beginning of dayshift the RSL requested that the off-test jet in T-1518 be routed to T-1492 (DHT Cold Feed). At that time T-1492 was routed to DHT cold feed. T&B protocol is to not transfer material into a DHT cold feed tank while it is being fed to the unit. The T&B STL relayed the request to the crew and instructed that DHT cold feed be switched to T-1493. The crew performed all of those actions without incident. T-1493 contained high sulfur diesel (Normal) that directly led to the sulfur spike at the DHT. The diesel production was then routed off-test. It was later determined that RSL / Ops. Coord believed that T-1518 could be transferred to T-1492 while it was simultaneously being fed to the unit. The T&B STL assumed that the RSL / Ops. Coord knew the T&B protocol.	Quality	(1) Lack of communication between STL & RSL.
5593	Richmond, CA - Refinery	1/12/2011 0:50:00 PM	Closed	Near Loss	Flare gas recovery overpressure tripped FCC totalizer	PC-1050 the recycle valve on the Flare gas recovery machines plugged slightly due to low flows in the Flare gas system. When NISO started to depressurize R-510 low points the Flare gas system pressured up and PC-1050 appeared plugged. This in turn tripped the totalizers on FCC, SISO and NISO flares with visible flame in FCC.	NL-Operational Process/Procedures - Safety Systems	(1) Low flows to FGR caused plugging on the PC-1050 Recycle valve and subsequent poor pressure control
5609	Richmond, CA - Refinery	9/29/2010 8:15:00 AM	Closed	Loss	IPS Rekey # 2041094 FCC flare: fire on piping at side of flare during flare operation.	IPS Rekey # 2041094 FCC flare: fire on piping at side of flare during flare operation. Flames were observed at vertical run of piping (molecular seal drain line) on the side of the flare stack of the FCC Flare. Steam was injected with existing steam out line and flames were extinguished. 5 Why: Why was there flame from the FCC drain line? The line was corroded. Bottom half of the pipe was missing Why was the line corroded and missing? Too much water from steaming out creates acid water mix in high volume daily. Why was there steaming every day and high volume of water? The process creates hydrocarbon in teh molecular seal area that drains out. Operations duty was to steam out daily which created an acid water. According to a contract engineer working on all of teh refinery flares it is not a best practice to steam teh molecular sela daily.	Fire/Explosion	(1) Operations was doing a routine duty daily of steaming the flare which caused a alrge amount of condensate and liquid to build up at high volumes. The liquid due to the presence of sulfur created an acidic environment. The low pH caused corrosion of the pipe., (2) Operations was doing a routine duty daily of steaming the flare which caused a alrge amount of condensate and liquid to build up at high volumes. The liquid due to the presence of sulfur created an acidic environment. The low pH caused corrosion of the pipe.
5618	Richmond, CA - Refinery	0/29/2010 8:15:00 AM	Closed	Near Loss	IPS Rekey # 2040847 FCC flare: Brief flare activity due to high flow from Alky relief drum V-734. Source being investigated, possibly PRD lifting prematurely on C1400 at Alky Plant.	IPS Rekey # 2040847 FCC flare: Brief flare activity due to high flow from Alky relief drum V-734. Source being investigated, possibly PRD lifting prematurely on C1400 at Alky Plant. FIVE WHY'S 1. Why did "above" happen? PRD AL-1424 lifted prematurely on C-1440 at Alky Plant 2. Why did "1" happen? The cause of premature lifting is unknown. Investigation found that this PRD is the same model (JPV-35) as a PRD which had the same failure in 2008. 3. Why did "2" happen? This PRD was not replaced after the same model PRD lifted prematurely in 2008 Interview 4. Why did "3" happen? The 2008 corrective action was to evaluate if replacement of all JPV-35 model PRD was warranted, however it could not be determined that JPV-35 model PRD's had a inherent reliability issue ROOT CAUSE(S): What were the Root Causes of your incident? Replacing all PRDs of this type was not warranted. There was not enough evidence to prove that the model of PRD was the cause of the PRD lifting in 2008.	NL-Regulatory Compliance - Non Compliance - Air	(1) Replacing all PRDs of this type was not warranted. There was not enough evidence to prove that the model of PRD was the cause of the PRD lifting in 2008.
5630	Richmond, CA - Refinery	1/11/2011 9:00:00 AM	Closed	Near Loss	Green Card - Potential for pedestrian-forklift accident near Cracking bus stop	Green Card Two employees walking near Cracking bus stop. Forklift approached along Octane Street. Workers did not see forklift or vice versa. Near miss.	NL-Injury/Illness - Contractor Injury	
5630	Richmond, CA - Refinery	1/11/2011 9:00:00 AM	Closed	Near Loss	Green Card - Potential for pedestrian-forklift accident near Cracking bus stop	Green Card Two employees walking near Cracking bus stop. Forklift approached along Octane Street. Workers did not see forklift or vice versa. Near miss.	NL-Transportation - Company	

5630	Richmond, CA - Refinery	1/11/2011 9:00:00 AM	Closed	Near Loss	Green Card - Potential for pedestrian-forklift accident near Cracking bus stop	Green Card Two employees walking near Cracking bus stop. Forklift approached along Octane Street. Workers did not see forklift or vice versa. Near miss.	NL-Injury/Illness - Employee Injury	
5630	Richmond, CA - Refinery	1/11/2011 9:00:00 AM	Closed	Near Loss	Green Card - Potential for pedestrian-forklift accident near Cracking bus stop	Green Card Two employees walking near Cracking bus stop. Forklift approached along Octane Street. Workers did not see forklift or vice versa. Near miss.	NL-Transportation - Contractor	
5631	Richmond, CA - Refinery	1/13/2011 12:50:00 PM	Closed	Loss	Recov Oil Spill < 1/2 bbl to Asphalt in Haz Waste Annex Area	Contractor spilled < 1/2 bbl of recovered oil to asphalt surface in Haz Waste Annex Processing Area. During transfer of recovered oil between portable tanks it was discovered that a 1/4 turn ball valve bleeder was cracked open, causing oil to leak out of the transfer line and onto the tank and nearby asphalt. Material floated on puddles from previous day's rain, moving under and around portable tanks located in immediate area.	Environmental	(1) Material leaked from an open bleeder line when the handle on a ¼ turn ball valve bleeder was inadvertently bumped to a partially open position. Why? No plug was installed in the open end of the bleeder line. Why? The plugs available for use are for threaded connections, and the bleeder line had a "Thor" coupling installed for which there was not a plug available. Why? The Thor coupling is used to connect to plant compressed air when cleaning the cargo hose after transfer. Thor coupling was left in place on the bleeder between uses of the cargo hose for material transfers. Why? Thor coupling had been left in place in the past (with only valve for protection) without plugs installed, yet no incidents had occurred.
5699	Richmond, CA - Refinery	1/16/2011 2:20:00 AM	Closed	Near Loss	Cracked window on the Cherry Picker while moving gangway	Backing out a Cherry Picker while retrieving the gangway from inside the area were the larger gangway was parked the operator misjudged the clearance he had to clear the area and side window came in contact with the corner of the larger gangway causing it to crack.	NL-Equipment/Property Damage - Equipment Damage	
5700	Richmond, CA - Refinery	1/15/2011 7:10:00 AM	Closed	Near Loss	Tripped totalizer, 102 scf	Preparation for Penhex start up, operator conducting pressure check on recently replaced PSV's. Prior to depressurizing, outside operator notified board operator both K-242/252 running, 50% loaded. Opened valve to relief, pressured up, board operator unable to load up compressors. Tripped totalizer 102 scf.	NL-Lessons Learned	
5706	Richmond, CA - Refinery	1/15/2011 7:10:00 AM	Closed	Near Loss	Tripped totalizer, 102 scf	Preparation for Penhex start up, operator conducting pressure check on recently replaced PSV's. Prior to depressurizing, outside operator notified board operator both K-242/252 running, 50% loaded. Opened valve to relief, pressured up, board operator unable to load up compressors. Tripped totalizer 102 scf	NL-Regulatory Compliance - Permit Exceedance	
5707	Richmond, CA - Refinery	1/15/2011 10:05:00 AM	Closed	Loss	Shop and Pipe Street Feeder Failure	Doubled ended power to 1A Separator and the EOD Control House is supplied by two 3-bay 12kV switches, TX-437 Bay Group and TX-438 Bay Group. Electrical fault initiated in 12-363 Switch for TX-438 Bay. We see evidence of 12 kV tracking between the A phase bus bar, along the insulating micarta board, to the sheet metal. Once the air became ionized, the phase to ground fault escalated into a 3 phase fault. There is a small air space at the top of the two 3-bay 12 kV switches where they connect together. The ionized air traveled from the TX-438 bay group to the TX-437 Bay group and caused a 3 phase fault there as well.	Equipment/Property Damage	(1) Space heat thermostat set too low
5710	Richmond, CA - Refinery	1/15/2011 7:30:00 PM	Closed	Loss	sample pods over filled spilling 1/2 bbl of JP-8 to collection basin.	4 hours after starting to load JP-8 on the vessel Evergreen State the operator making his rounds found the sample pods were full and had started spilling over into the sample box.	Environmental	(1) This is a new system and put is service with minimum training. Operator misunderstood the operation and opened the flush valve on this system which bypassed the in-line pump and allowed full flow from the 16" jet to the sample pods.
5710	Richmond, CA - Refinery	1/15/2011 7:30:00 PM	Closed	Loss	sample pods over filled spilling 1/2 bbl of JP-8 to collection basin.	4 hours after starting to load JP-8 on the vessel Evergreen State the operator making his rounds found the sample pods were full and had started spilling over into the sample box.	Business Process	(1) This is a new system and put is service with minimum training. Operator misunderstood the operation and opened the flush valve on this system which bypassed the in-line pump and allowed full flow from the 16" jet to the sample pods.
5710	Richmond, CA - Refinery	1/15/2011 7:30:00 PM	Closed	Loss	sample pods over filled spilling 1/2 bbl of JP-8 to collection basin.	4 hours after starting to load JP-8 on the vessel Evergreen State the operator making his rounds found the sample pods were full and had started spilling over into the sample box.	NL-Environmental - Operational Leak	(1) This is a new system and put is service with minimum training. Operator misunderstood the operation and opened the flush valve on this system which bypassed the in-line pump and allowed full flow from the 16" jet to the sample pods.
5710	Richmond, CA - Refinery	1/15/2011 7:30:00 PM	Closed	Loss	sample pods over filled spilling 1/2 bbl of JP-8 to collection basin.	4 hours after starting to load JP-8 on the vessel Evergreen State the operator making his rounds found the sample pods were full and had started spilling over into the sample box.	NL-Business Process - Business Interruption	(1) This is a new system and put is service with minimum training. Operator misunderstood the operation and opened the flush valve on this system which bypassed the in-line pump and allowed full flow from the 16" jet to the sample pods.
5725	Richmond, CA - Refinery	1/15/2011 10:00:00 AM	Closed	Loss	Knee injury from trip in grass area	While investigating power failure at #1 Substation operator tripped on some wire fencing that was hidden in the grass and landed on his left knee causing a scrape.	Injury/Illness	(1) Wire located in grass
						The Richmond, the Washington Voyager discharged 128 MB of HSVGO (V1963) and loaded back 100 MB of ULSD and 63 MB of HSFO (V1964). Vessel departed SF Bay for LA on 12/28 @ 0848 From all indications,		

5726	Richmond, CA - Refinery	12/30/2010 12:00:00 AM	Closed	Loss	High H2S on USLD lift on the Washington Voyager	discharge and load operations occurred without any issues. A vessel composite sample of the ULSD after load rendered results that indicated the product to be on-spec. 1.During routine tank atmosphere inspections on 12/28 @ 1600 and 12/29 @ 0800, prior to arrival at Los Angeles, vessel detected high levels of H2S in the ULSD cargo tanks. Notification from the vessel was received the home office late afternoon on 12/29. 2.On 12/29, between 1245 and 1350, vessel purged the ULSD tanks into the atmosphere prior to entering SCAQMD zone. 3.Readings were again taken at 1500 yielding results relatively lower than before, but still relatively high. 4.Vessel arrived LA 169 @ 1924 on 12/29 5.During the pre-transfer conference, the Chief Officer of the Washington Voyager notified terminal personnel of high levels of H2S detected during routine inspections prior to arrival in LA. Vessel was cleared to commence discharge which they did at 0330 on 12/30. 6.During the discharge of ULSD on 12/30, an odor associated with H2S was discovered on deck. Investigation commenced to find the source as discharge continued. It was thought that the a source of the issue was the 63 M/B of HSFO co-loaded on the vessel. That possibility was discounted as analysis of of the vessel composite after load indicated no detection of H2S.Discharge was eventually stopped at 1800 pending analysis testing. 7.Line samples were then pulled for analysis testing by Intertek Caleb Brett. Results indicated a very high level of H2S in the shore lines . We uthorized Intertek Caleb Brett to test the vessel compartment samples pulled prior to the commencing of the discharge. The analysis rendered the same results as those of the shore lines. Samples from shore recieve tanks also returned high H2S.	Quality	(1) No procedure to address a CU strip result greater than 1. (2) Do not have an approved H2S scavenger for use in Richmond Diesel
5734	Richmond, CA - Refinery	1/16/2011 12:00:00 AM	Closed	Near Loss	V-340 CO sample check missed	Missed checking V-340 for CO during cool down of V-340. This is necessary in order to determine the presence of Nickle Carbonyl after equipment is cooled down. Because of this missed step, it required reheating of V-340 above 400 F so sample could be done.	NL-Quality - Paperwork Incorrect/Not Sent	(1) Inadequate procedure, procedure needs update
5740	Richmond, CA - Refinery	1/16/2011 7:16:00 PM	Closed	Loss	DHT feed pump P-1601 trip due to low flow/DSL tail line off test	a dramatic loss of 3 cut product from the 4 Crude unit occurred. The PCO was increasing the 3 cut draw rate from 22.3MBD to 23.5MBD gradually with a target rate of 25MBD, as directed by the RSL. In order to accomplish this, the total Jet make had to be reduced somewhat. 3 cut sidecut stripper level (11LC-030) was approximately 65% and increasing at this time. In addition to these process moves during this time frame the had just completed a V-1102 Desalter Mudwash process. The mudwash process always loads up the C-1100 Atmospheric Distillation Column with additional flash vapor traffic from V-1103 Flash Drum. With the 3 cut draw rate at 23.5MBD, The CPCO experienced a total and compete loss of 3 cut draw flow (11FC-031) with the 3 cut product pump P-1149A continuously in operation. Upon losing the 3 cut draw flow, The CPCO immediately closed the draw controller 11FC-031 to accomplish an immediate pump suction improvement. This draw controller remained in closed position for an instant of approximately 5 seconds then He opened the controller to reestablish the product flow. The 3 cut flow increased from zero to approximately 12MBD and within a short time span the flow increased rapidly approaching the setpoint of 24MBD. Concurrently the DHT reactor feed pump P-1601 immediately shutdown with a loss of 3 cut charge. After establishing 3 cut draw flow, The CPCO opened 11FC045 to excess 3 cut sidecut stripper high level to wash-oil storage tank.	Equipment/Property Damage	(1) Plugging in the 3 S/C region of C-1100 limited the amount of 3 S/C that could be pulled out of 4 S/C. This limited availability on the tray and contributed to losing level in C-1130. The plugging in this section is due to the metal being carbon steel when it would normally be stainless steel based on sulfur content and temperature., (2) There is a suspected leak in the 3 S/C draw tray sump that was identified in a later gamma scan. The true root cause of this leak cannot be identified until the column is entered during the upcoming major shutdown in October.
5777	Richmond, CA - Refinery	9/6/2010 2:10:00 PM	Closed	Near Loss	IPS Rekey #2022359 At Approx. 12:15 K-1400 started surging.	At Approx. 12:15 K-1400 started surging. At approx 14:10 the compressor started surging to the point of NEAR compressor S/D (tube oil control oil header LOW alarm activating numerous times but not triggering the LOW LOW shutdown alarm.). Due to a faulty governor, coupled with the high heat of the day, the Compressor surge is impossible to stop without using a "Kelly Cooler" or continuous utility water spray over the governor, to keep it functional.	NL-Equipment/Property Damage - Equipment Damage	(1) SOS: Maintenance & Inspections: K-1400 Compressor Experienced Speed Swings. Speed Swings were between 500-600RPM during the incident. Control/Lube Turbine Oil Alarms activated. Oil in governor became overheated from direct exposure to sun. CHEVRON 46X Oil (new oil) may not be viscous enough for this equipment.
						IPS Rekey 2038228 TOP INVESTIGATION--DUMPSTER FIRE--At approximately noon on September 27th, 2010, a small smoldering fire was noticed by two employees from the Machine Shop. They had noticed a burning smell and then noticed a dark plastic bag smoldering inside a large clean trash dumpster (wood, paper, food waste, etc) located outside of the Machine Shop. The employees quickly entered the Machine Shop and reported what they saw to their supervisor. The supervisor along with the employees walked back to the trash bin (just a minute after) and noticed that the fire had gotten bigger inside the bin and flames were now visible at the top of the bin. A third employee quickly grabbed a fire extinguisher to put out the flames/fire while calls were made to the Chevron Fire Department (CFD). CFD was at the scene within minutes and quickly put out the fire by flooding the bin with fire water. Once the fire was extinguished, the materials were moved around inside the bin with a stick to thoroughly permeate them with a small amount of Class A foam that was also added (Class A foam is used to penetrate wood, paper material). They also set up fans to ventilate the Machine Shop Area and dissipate any lingering odors/vapor from the fire. The debris in the dumpster, at the time, was varied including paper, styrofoam cups, other plastic material and bags, etc. All considered clean trash. There was also a professional-type		(1) TRAINING & PROCEDURES (COMMUNICATIONS): Varied incompatible/flammable material found/dumped into

5780	Richmond, CA - Refinery	9/27/2010 12:00:00 PM	Closed	Loss	IPS Rekey 2038228 TOP INVESTIGATION--DUMPSTER FIRE	cleaning agent in an aerosol can among the debris, along with a couple of pair of leather work gloves. Notes: During the investigation, it was found that personnel from other areas also dump their debris in this bin: the Richmond Transportation Department (RTD) and the Gasoline Pump Area. It is also accessed by some contractors to dump some of their debris when around the Machine Shop or RTD areas. It was found that normally the Machine Shop uses clear plastic bags in their wastebaskets (totes). And RTD uses black plastic bags in their wastebaskets (totes).	Fire/Explosion	clean trash only dumpster. (2) WARNING DEVICES (LABELS/SIGNS): Current Labels/signage on trash totes and dumpster are not visible enough to raise awareness on improper disposal of material into clean trash. (3) SIDEBAR ISSUE-SOS: Maintenance & Inspections (Maintenance)--Steam trap drain at end of platform (ground level) does not have a splash guard/cover to prevent possible steam flash burn
5790	Richmond, CA - Refinery	1/17/2011 9:05:00 AM	Closed	Near Loss	Scratch to upper right lip when struck by falling scrap metal.	After drilling a hole in the support of a 4 feet high elevated deck, the employee reached up to grab the edge of the deck to pull himself out from underneath. When he grabbed for toe-board of the deck, he mistakenly knocked a piece of scrap angle iron off the deck. As he was looking up, the scrap metal hit the right side of his safety glasses and then scratched his upper right lip as it continued to the ground. Close examination showed that the scrap had left a scratch in the lens of the safety glasses directly above and in line with the scratch on the lip.	NL-Injury/Illness - Contractor Injury	(1) In setting up for the job, the employee focused on the hazards of the job and the ppe that would be needed. The process followed created a hazard that was not recognized or was ignored as the job progressed. , (2) A small job of short duration was not completely thought through and employee went about the task with only min tools for the basic task. LPSA was not continuious.
5797	Richmond, CA - Refinery	1/17/2011 11:10:00 AM	Closed	Near Loss	H2S Monitor Activations (10)	Various, (Chev, JVI, Biggs, Walltech)H2S Monitor Activations, during planned maintenance activities. Two control valves were being removed for repair and equipment isolation, using breathing air equipment. At the start of the job it was foggy and calm wind conditions, but after a short period of time the wind started to blow South toward the crane being used for the job and the standby crew. When the conditions changed, a short time later (10) H2S monitors activated ranging from 8ppm to two monitors registrating <100ppm. All affected workers were offered to be examined by EMT's which was declined, with all of them stating that they all felt fine. Two of the ten monitors were sitting outside the area and belonged to the two workers in breathing air performing the work being done. Monitor readings were included for data only.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
5884	Richmond, CA - Refinery	1/12/2011 10:00:00 AM	Closed	Loss	TX-380 Voltage Drop From Starting P-36	While being fed by TX-380, P-36 was started. Starting P-36 caused a voltage drop in the electrical system which in turn tripped the Long Wart Emmssion Reduction Device to trip off-line. Ships are unable to load or unload when the Long War Emission Reduction Device is not in operation.	Operational Process/Procedures	
5911	Richmond, CA - Refinery	1/13/2011 12:00:00 AM	Closed	Loss	Offtest Diesel Wear Scar Cargo	A Diesel Cargo with an offspec wear scar was relased from Richmond Long wharf	Operational Process/Procedures	(1) The investigation has determined that there is an issue with the VFD drive which is preventing the proper feed back to the PLC system before it times out which causes the alarm. Based on these finding's on-site support personnel will attempt to resolve the condition. The investigation team discussed the requested additions for Wharf board operators to be able to change the lubricity injection set point from the Honeywell console. Because the current communications to the injection system is fully loaded IT would need to eliminate other parameters in the system. To remove these other parameters and add in the requested lubricity amount change functionality PLC code modifications will be required.
5919	Richmond, CA - Refinery	1/16/2011 6:30:00 PM	Closed	Loss	mp501b leak off 1st flange discharge side	OPS initially discovered leak on 1/16. On 1/18 leak appeared to increased dramatically. Decision was made to swap feed pumps at that time	Equipment/Property Damage	(1) Why did D/S flange on P-501B develop a leak. - Flange had loosened Why had flange loosened - Flanged was torque and not tensioned, later found to be the preferred method. Why wasn't flange tensioned - Both methods of tightening flanges are acceptable. Preferred method of tensioning flange wasn't noted in work directions along with past issue with flange leaking. It was left up to mechanics to choose which method to use to tighten flange.
6038	Richmond, CA - Refinery	1/15/2011 12:45:00 PM	Closed	Near Loss	Flaring during depressuring of the LNC	During and attempt to depressure the LNC during a shutdown of the plant, Flare Gas Recovery overpressured and a small flame was observed at the RLOP flare.	NL-Regulatory Compliance - Non Compliance - Air	
6089	Richmond, CA - Refinery	1/20/2011 7:05:00 AM	Closed	Near Loss	Loss of boiler feed water to FCC	In the process of isolating T-1689, boiler feed water to FCC was lost. The boiler feed water tank and the prodution from the RO plant was both blocked to FCC.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) SOS: Design & Engineering: Loss of Boiler Feed Water to FCC. Valve was closed coming from the RO Plant. Miscommunication between B&S and Co-Gen. No Detailed Procedure.Didn't think it was needed. Simple Procedure. No Drawings Attached to the MOC. Thought Drawings Weren't Needed Since Only 1 Valve Would Be Closed. HSE Did Not Include Other Business Units. Felt emails to the other Units Would be sufficient.
6102	Richmond, CA - Refinery	1/20/2011 2:45:00 PM	Closed	Loss	Nausea while grinding inside F-2303	JVI: EE was inside of F-2303 grinding when he started to detect odors inside his respirator. He stopped work and proceeded to exit the equipment, and became nauseous during this time. Due to the noise inside caused by the work he was performing, was unaware that his H2S Monitor had also activated and saw a peak of 48 ppm.	Injury/Illness	(1) PPE Matrix
6152	Richmond, CA - Refinery	1/20/2011 11:30:00 PM	Closed	Near Loss	H2S Monitor alarmed	JVI - Cutting in F-2303 when H2S monitor went off. 28PPM EE felt fine and returned to work	NL-Injury/Illness - Contractor Injury	

6178	Richmond, CA - Refinery	1/20/2011 7:00:00 AM	Closed	Near Loss	Failed to perform a closing gauge on T-3167	Failed to perform a closing gauge on T-3107 for the convience of waiting to gauge more than one tank at a time. Operational needs determined a transfer to the lube division needed to be completed before the inspector had returned to gauge T-3167 thus eliminating a delay to transfer T-3167 to the Lube Division.	NL-Business Process - Business Process	
6211	Richmond, CA - Refinery	1/22/2011 4:30:00 AM	Closed	Near Loss	Hot slag fell on a piece of rope	JVI - While gouging in F -2370 a piece of hot slag fell on a piece of rope.	NL-Fire/Explosion	
6242	Richmond, CA - Refinery	1/23/2011 3:00:00 PM	Closed	Loss	Particle in the eye	A JVI employee received a particle in his eye while carbon arcing on E-2302. Employee lifted his faceshield when he was finished with the job not realizing that the air on his equipment was not completly shut off which caused dust to enter in his eye.	Injury/Illness	(1) Face Shield was removed
6243	Richmond, CA - Refinery	1/23/2011 12:00:00 PM	Closed	Near Loss	Set wrong component to blend tank	An Operator who returned to work after three months and was refreshing the job when he set a component tank which had been switched during his time off to the gasoline blender, and it wasn't discovered till three hours later when they started having problems making set points.	NL-Business Process - Business Interruption	
6245	Richmond, CA - Refinery	1/23/2011 6:00:00 PM	Closed	Loss	Particle in the eye	JVI - Particle in the eye. Refractory work going on though he wasn't doing it. He was just standing there.	Injury/Illness	(1) Improper use of PPE
6304	Richmond, CA - Refinery	1/21/2011 12:15:00 PM	Closed	Near Loss	Lost A/O injection at JHT	Antioxidant chemical pumps S/D on low level at 10% of tank volume on 1/21/11 @12:15Hrs	NL-Business Process - Business Interruption	(1) LI-285 was not calibrated to the bottom of the tank
6304	Richmond, CA - Refinery	1/21/2011 12:15:00 PM	Closed	Near Loss	Lost A/O injection at JHT	Antioxidant chemical pumps S/D on low level at 10% of tank volume on 1/21/11 @12:15Hrs	NL-Lessons Learned	(1) LI-285 was not calibrated to the bottom of the tank
6313	Richmond, CA - Refinery	1/24/2011 8:30:00 AM	Closed	Loss	Mechanic pinched finger between wrench and valve actuator while loosening nuts.	Mechanic was loosening the double 3 1/8" nuts on P-501 discharge flange on the deck above the pump to facilitate tensioning the flange. One nut was sticking and the mechanic was using the wrench to remove it. The nut suddenly turned free causing the wrench to pinch their finger between the wrench and HV5008 valve actuator.	Injury/Illness	(1) (For documentation purpose) Mechanic not aware of placing his finger in a pinch point.
6356	Richmond, CA - Refinery	1/24/2011 3:15:00 PM	Closed	Loss	Back Strain	Two mechincs were moving 4x8 sheets of insulating material, the mechincs were moving the material while in a flat position, while the they were moving the material they needed to adjust the material to the Up & down position to fit it through a door. When they adjusted the material to the new position one of the mechinics felt a pull in his back. Mechinic seen at clinic and return to work with follow up in morning	Injury/Illness	(1) The workers changed position of the material while in motion, causing worker to strain muscle in side
6380	Richmond, CA - Refinery	1/25/2011 12:00:00 AM	Closed	Loss	JP8 leak at pod sampler B/P tubing	At approximately 0200hrs, the SPH Operator was making a visual inspection of the CI/LI injection system and JP8 pod sampler at #7 pump station. The Operator discovered that there was a moderate leak on the fitting directly above the spring loaded bypass valve for the tubing. **The spring loaded valve was installed on dayshift 1/24. The Operator notified the RHO and STL. Plant Protection was summoned and the leak was isolated. The isolation valve is underneath the 16" Jet in the overhead pipeway accessible only via the staging erected at that location. During the attempt to isolate the leak, attempts were made to close the main valve to the pod sampler without success. **This needs to be checked to ensure that no instrumentation was damaged prior to restart.	NL-Environmental - Operational Leak	(1) The stainless steel tubing seperated from the bypass valve because the length was not adjusted properly after the installation of a new spring loaded valve.
6380	Richmond, CA - Refinery	1/25/2011 12:00:00 AM	Closed	Loss	JP8 leak at pod sampler B/P tubing	At approximately 0200hrs, the SPH Operator was making a visual inspection of the CI/LI injection system and JP8 pod sampler at #7 pump station. The Operator discovered that there was a moderate leak on the fitting directly above the spring loaded bypass valve for the tubing. **The spring loaded valve was installed on dayshift 1/24. The Operator notified the RHO and STL. Plant Protection was summoned and the leak was isolated. The isolation valve is underneath the 16" Jet in the overhead pipeway accessible only via the staging erected at that location. During the attempt to isolate the leak, attempts were made to close the main valve to the pod sampler without success. **This needs to be checked to ensure that no instrumentation was damaged prior to restart.	Environmental	(1) The stainless steel tubing seperated from the bypass valve because the length was not adjusted properly after the installation of a new spring loaded valve.
6405	Richmond, CA - Refinery	1/25/2011 8:00:00 AM	Closed	Loss	Flash Burn, R-510	Catalyst Services; EE was working on a inspection cover at the top of R-510 tapping holes on a 6" opening, when a pyrofhoric reaction occurred. Worker was wearing a breathing helmet and blue tyvex coveralls, minimizing the exposure, with minor irritation to his neck area.	Injury/Illness	(1) Change in the process for dumping reactors
	Richmond,	11/9/2010			Loss of Radio		NL-Operational	(1) SOS: Design & Engineering: Radio system is at a maximum capacity during Shutdowns. System updating is overdue. , (2) SOS: Training & procedures: During Shutdowns Contract companies bring in portable repeaters , (3) SOS:Training & procedures: Misunderstanding of radio protocol by users. Personnel have a talk time of 10 seconds

6410	CA - Refinery	10:15:00 AM	Closed	Near Loss	Communication during shutdown	Loss of radio communication during the shutdown. LI1959 was the original incident that was deleted from the system. This is a re-enter of the of the event.	Process/Procedures - Safety Systems	or more. Design of radio allows for emergency button to be pushed accidentally. Lack of training.
6446	Richmond, CA - Refinery	1/25/2011 2:35:00 PM	Closed	Loss	Particle in the Eye 3 SRU	JVI; EE was fitting up a patch on R-2301, welder started grinding when EE felt something hit him in the eye.	Injury/Illness	(1) Did not follow procedures
6450	Richmond, CA - Refinery	1/25/2011 2:23:00 PM	Closed	Near Loss	850 steam safety lifting in FCC	#850 steam safety in the FCC lifted during a slowdown of K-303 Why 59PC851 was closed in the field and showing open on the board (850# steam from FCC to the yard) Side note: Operations was using job aid FFNP-4820 to place K-303 to idle #1	NL-Operational Process/Procedures - Safety Systems	
6477	Richmond, CA - Refinery	1/26/2011 4:10:00 AM	Closed	Near Loss	Fire in F-2301	JVI, Weltech:. Late in the shift tonight we experienced a small fire inside F-2301 which required the assistance of Plant Protection to extinguish. The JVI folks were working cutting out one nozzle and welding one patch on the South end of the furnace. Weltech had 3 firewatch folks working with JVI. At the time the fire was detected JVI had been out of the furnace for 20 minutes waiting for the inspection folks to arrive. Weltech was standing by for the 30 minute required period. Weltech observed smoke coming out the North end of the furnace through the tubes as well as smelled the fumes from the burning Sulfur. Weltech notified the S/D operator who was in the area. Weltech applied water through the hole which had been cut by JVI. When their attempts to extinguish the fire failed Ops called Plant Protection to help. There were no injuries to personal. Plant Protection extinguished the fire.	NL-Fire/Explosion	
6490	Richmond, CA - Refinery	1/25/2011 10:00:00 PM	Closed	Near Loss	JP-8 Finals of load to Evergreen State ship showed bad conditions in all compartments	Upon sampling thre Evergreen State it was found that the compartments of loaded JP-8 had particulates in the samples that caused the condition tests to fail. All other tests passed.	NL-Quality - Product Contamination (Int)	(1) Procedure required running mixers on T1798 and T1799 to blend tank. These mixers had not been operated for an extended period. When started they stirred up tank sediment that had settled to the bottom causing particulate in the product., (2) Ship residual compartment initial condition sample #2248928 failed with a +16 color
6506	Richmond, CA - Refinery	1/8/2011 9:00:00 AM	Closed	Loss	P-302B diesel engine damage	While conducting monthly alarm/operating tests at #13 separator, the area Operator noticed smoke & oil coming from P-302B diesel engine exhaust. Engine has been removed and disassembled to determine extent of damage.	Equipment/Property Damage	(1) Equipment not PM'd according to OEM recommendations., (2) SOS:Maintenance & Inspections: P-302B Diesel Engine Damagad. Piston rattled around inside engine. Push rod had come loose and fell coming in contact with piston. Bridge assembly came loose allowing the push rod to come loose. Internal preventative maintenance was not performed according to OEM.
6516	Richmond, CA - Refinery	1/26/2011 10:15:00 AM	Closed	Near Loss	Damaged contractor company trailer door	A Curran Supervisor asked a Weltech forklift driver to help lift a pallet load onto his trailer. Weltech employee proceeded to put the load onto the trailer and in the process drove onto to the trailer door ramp and broke it. The trailer door/ramp was not built for such a heavy load.	NL-Equipment/Property Damage - General Liability	
6518	Richmond, CA - Refinery	1/25/2011 11:00:00 AM	Closed	Near Loss	Rancid odor release from material being pH adjusted at the North Yard Chem Pad	Caustic rinse solution from the FCC shutdown, V-250, had been stored at 13 Sep lay down area. It had been transferred to the North Yard Chem Pad. It was being pH adjusted for drop purposes. The Portable 500 bbl frac tank had been equipped with vapor carbon drums to mitigate odors from the pH adjustment operation. When the solution had reached a pH of about 10 a pronounced odor started coming from the work area. The contractors were not aware of an increase in odor due to their PPE requirements. An odor complaint from the operations was directed to the EFC and upon his investigation it was determined it was coming from the NYCP. By the time it was reported that there was a problem the pH adjustment had been almost completed. It was later discovered the odor had been leaking though cracked hoses to the carbon drums. When the hoses were replaced the odor was controlled from the frac tank.	NL-Lessons Learned	
6542	Richmond, CA - Refinery	1/26/2011 2:30:00 PM	Closed	Near Loss	A report for a batch of CARB motor gasoline was submitted to CARB Regulators that was generated with an incorrect value for the regulated property of Aromatics in mogas.	OCO SOCO submitted to CARB a predicted model report created with an incorrect value for Aromatics, volume%. The report is an official notification of CARB of the product specification for this specific batch mogas sold in the marketplace as CA reformulated mogas. Any inaccuracy on the report is a Product Quality risk that could lead to a Notice of Violation being issued to the Refinery. The report has been submitted and confirmed received by CARB.	NL-Quality - Paperwork Incorrect/Not Sent	(1) Operator was not alerted to a measurement that was beyond tolerance
6552	Richmond, CA - Refinery	1/26/2011 7:15:00 PM	Closed	Loss	P-713 leak on discharge screwed fitting	TKC Ops discovered a leak on the discharge side of MP-713 at a " threaded nipple going to PSI gauge. Operator put a steam lance on it and called the HO who responded with other operators. There was a block valve in front of where the leak was that could be used to isolate the PSI gauge and the leak however it would be awkward and pose a hazard to personnel to get to it. The decision was made to isolate the pump suction and discharge to safely stop the leak. Good job by Ops to recognize the hazards and take actions to mitigate the hazards associated with this task.	NL-Environmental - Operational Leak	(1) Pump APS spool has a non welded nipple that leaked.
						TKC Ops discovered a leak on the discharge side of MP-713 at a " threaded nipple going to PSI gauge. Operator put a steam lance on it and called the HO who responded with other operators. There was a block valve in front of where		

6552	Richmond, CA - Refinery	1/26/2011 7:15:00 PM	Closed	Loss	P-713 leak on discharge screwed fitting.	the leak was that could be used to isolate the PSI gauge and the leak however it would be awkward and pose a hazard to personnel to get to it. The decision was made to isolate the pump suction and discharge to safely stop the leak. Good job by Ops to recognize the hazards and take actions to mitigate the hazards associated with this task.	Environmental	(1) Pump AFS spool has a non welded nipple that leaked.
6568	Richmond, CA - Refinery	1/26/2011 4:00:00 AM	Closed	Loss	Pain in the back	Welltech - EE thinks the incident may have happened when he was moving a welden pump during the incident the morning of the 26th. Didn't feel it then but when he woke up today (the 27th) around 2 PM he had a little ache. It got progressively worse until he was bent overin pain.	Injury/Illness	(1) Body Position
6568	Richmond, CA - Refinery	1/26/2011 4:00:00 AM	Closed	Loss	Pain in the back	Welltech - EE thinks the incident may have happened when he was moving a welden pump during the incident the morning of the 26th. Didn't feel it then but when he woke up today (the 27th) around 2 PM he had a little ache. It got progressively worse until he was bent overin pain.	NL-Injury/Illness - Contractor Injury	(1) Body Position
6611	Richmond, CA - Refinery	1/27/2011 12:00:00 AM	Closed	Loss	Lacerations due to fall	Bay Valve. EE was walking from the gravel lot on the South side of the 2300 Plant to look at a job and tripped on some uneven asphalt along the edge of the gravel lot.	Injury/Illness	(1) Un-even surface
6655	Richmond, CA - Refinery	1/27/2011 5:30:00 AM	Closed	Near Loss	Green Card - Driver(s) over-taking in parking lot	Green Card While driving in parking lot by Cafeteria, was overtaken by people driving around the speed bumps. This has happened multiple times (3) this week	NL-Transportation - Personal Use	
6656	Richmond, CA - Refinery	1/27/2011 5:30:00 AM	Closed	Near Loss	Green Card - Dangerous Driving in Cafeteria Parking Lot	Green Card Saw driver drive through gap in concrete block parking stops using the crosswalk as a roadway	NL-Transportation - Personal Use	
6778	Richmond, CA - Refinery	1/27/2011 5:45:00 AM	Closed	Loss	Motor vehicle accident	Contract employee pulled up behind a Chevron cart that was stopped at the stop sign at the "Y". The cart started to proceed by rolling forward a few feet then stopped again. The car van behind the cart followed but failed to react when the cart stopped the second time. The van lightly tapped the back of the cart, causing minimal damage.	Equipment/Property Damage	(1) Inatention to car in front of them.
6780	Richmond, CA - Refinery	1/28/2011 5:15:00 PM	Closed	Loss	Particle in the eye	JVI - Particle in the eye while gouging in F - 2301	Injury/Illness	(1) Airborne particles powered by compressed air
6780	Richmond, CA - Refinery	1/28/2011 5:15:00 PM	Closed	Loss	Particle in the eye	JVI - Particle in the eye while gouging in F - 2301	NL-Injury/Illness - Contractor Injury	(1) Airborne particles powered by compressed air
6874	Richmond, CA - Refinery	1/31/2011 4:40:00 AM	Closed	Near Loss	TOP INVESTIGATION; Smoke coming from behind insulation in f-2301	JVI - JV was welding in F 2301 when a smell was noticed. Ops was called. Welders eyes started to burn and he exited the furnace. Upon exit he noticed the smoke coming from a approx. 18 in nozzle on the east side.	NL-Fire/Explosion	(1) SOS: Training & Procedures: Smoke in F-2301. Chemical reaction when Oxygen entered the furnace and reacted with the sulfur dust (behind refractory). Sulfur is impregnated into the refractory over the years. This happens in ALL SRU's. No written contingency plan in place (best practices only). , (2) Sidebar Issues: SOS: Training & Procedures : When combining two incidents closely related to each other, it needs to be documented in both incidents in the database (IMPACT ERM) so that the investigators have full understanding.
7049	Richmond, CA - Refinery	2/1/2011 10:00:00 AM	Closed	Loss	Truck backed off road in main tank field	Employee was out in the main tank field looking for T-3076 tank site. Employee was in the T-234 area and realized that he was not in the correct area. The employee drove up the road and realized he was at a dead end and proceeded to back up ~ 2 feet. Employee felt the rear end of the truck slide ,and then the front also slide to the side of the road. The employee and passanger realized that they were in a steep angle and made the decition to exit the vehicle from the driver side door. The employees called their supervisor and reported the incident.	Equipment/Property Damage	(1) Driver knew he was unable to see the drop off onto the inclined portion of the driveway but looked over his right shoulder and proceeded back anyway. He was also unaware of how close the right tires were to the edge of the pavement. Stop/Pause Work Authority was not exercised., (2) Driver went up a narrow driveway at Tank 234 suspecting he could reach Tank 3076. He relied on incomplete mental notes and relied on an abbreviate tank field map that did not show roads., (3) Driver went forward till he realized the driveway is a dead end even though he knew he was at the wrong location. There was nothing in place to inform visitors that the driveway ends.
7060	Richmond, CA - Refinery	1/31/2011 9:30:00 AM	Closed	Loss	T-3076 SEAL INSPECTION/DAMAGED PRIMARY SHOES	During the seal inspection of T-3076, the primary shoes seals where showing gaps in a 30' area, upon inspection it was discovered that the shoes are corroded and out of compliance with Reg 8 Rule 5 (BAAQMD) in that 30 foot area.	Equipment/Property Damage	(1) SPAC incomplete - No MOC information can be found when sour water was stored in the mid 1990's. The investigation team assumed that there was no MOC conducted., (2) Inspection techniques need improvement - The current inspection program does not cover the integrity of the mechanical shoe
7060	Richmond, CA - Refinery	1/31/2011 9:30:00 AM	Closed	Loss	T-3076 SEAL INSPECTION/DAMAGED PRIMARY SHOES	During the seal inspection of T-3076, the primary shoes seals where showing gaps in a 30' area, upon inspection it was discovered that the shoes are corroded and out of compliance with Reg 8 Rule 5 (BAAQMD) in that 30 foot area.	Regulatory Compliance	(1) SPAC incomplete - No MOC information can be found when sour water was stored in the mid 1990's. The investigation team assumed that there was no MOC conducted., (2) Inspection techniques need improvement - The current inspection program does not cover the integrity of the mechanical shoe
	Richmond,	2/1/2011				Green Card - Power cord from electrical outlet to a BBQ left in walkway.		

7120	CA - Refinery	2:00:00 PM	Closed	Near Loss	Green Card - Electrical Cord in Walkway	Electrical cord was not in use - only used when using BBQ. Potential tripping hazard - many people were stepping over the cord each day.	NL-Injury/Illness - Contractor Injury	
7120	Richmond, CA - Refinery	2/1/2011 2:00:00 PM	Closed	Near Loss	Green Card - Electrical Cord in Walkway	Green Card - Power cord from electrical outlet to a BBQ left in walkway. Electrical cord was not in use - only used when using BBQ. Potential tripping hazard - many people were stepping over the cord each day.	NL-Injury/Illness - Employee Injury	
7151	Richmond, CA - Refinery	2/2/2011 12:30:00 PM	Closed	Loss	Contractor Particle in eye	Foreign particle in right eye.	NL-Injury/Illness - Contractor Injury	(1) Foreign particle in eye ,
7151	Richmond, CA - Refinery	2/2/2011 12:30:00 PM	Closed	Loss	Contractor Particle in eye	Foreign particle in right eye.	Injury/Illness	(1) Foreign particle in eye ,
7152	Richmond, CA - Refinery	2/2/2011 3:02:00 PM	Closed	Near Loss	Momentary loss of Heavy Gas to GHT	Received high level alarm in C-170 bottoms, saw that the flow to GHT had dropped off. Sent outside operator out to check on pump status while calling D&R to check if their valve was open or not. Outside operator confirmed that TP-171 had tripped off fine. All operating parameters were normal and pump looked fine, so re-started pump to re-establish flow to GHT. GHT did not have to go to minimum fires, only effect seen was that the level in V-1690 (surge drum) dropped from 59% to 51%.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) The pump was inspected and found to be in good operating order. After looking at all the variables involved, there were no plant changes at that time. The only conclusion is that some component came through with the heavy gas (water, light end??) and caused the cavitation.
7182	Richmond, CA - Refinery	2/1/2011 12:00:00 PM	Closed	Near Loss	Green Card - Potential MVC	Green Card - Person reporting was driving north on Center Street when a car that was stopped at the Stop sign on the road behind the Cafeteria pulled out and turned left in front of the reporter's car	NL-Transportation - Company	
7187	Richmond, CA - Refinery	12/10/2010 3:00:00 PM	Closed	Loss	FCC Opacity During StartUp	The fines vessel V-13 was put in service and an opacity occured.	Environmental	(1) V-13 was put in service without the precipitator being online., (2) V-13 was put in service without the precipitator being online
7208	Richmond, CA - Refinery	2/2/2011 6:00:00 AM	Closed	Near Loss	Green Card--Almost hit while walking in cafeteria parking lot	Green Card--Daily it is a fight for survival walking from a parking spot to the tech center, especially in the crosswalk. More often than not, people will make u-turns through the crosswalk, endangering those using it. Suggestions: Install yellow bollards in the crosswalk in between the parking spaces to eliminate the ability to dive through. Also install concrete stops in the parking spots missing them to elimainte the ability to drive through.	NL-Transportation - Personal Use	
7208	Richmond, CA - Refinery	2/2/2011 6:00:00 AM	Closed	Near Loss	Green Card--Almost hit while walking in cafeteria parking lot	Green Card--Daily it is a fight for survival walking from a parking spot to the tech center, especially in the crosswalk. More often than not, people will make u-turns through the crosswalk, endangering those using it. Suggestions: Install yellow bollards in the crosswalk in between the parking spaces to eliminate the ability to dive through. Also install concrete stops in the parking spots missing them to elimainte the ability to drive through.	NL-Transportation - Contractor	
7208	Richmond, CA - Refinery	2/2/2011 6:00:00 AM	Closed	Near Loss	Green Card--Almost hit while walking in cafeteria parking lot	Green Card--Daily it is a fight for survival walking from a parking spot to the tech center, especially in the crosswalk. More often than not, people will make u-turns through the crosswalk, endangering those using it. Suggestions: Install yellow bollards in the crosswalk in between the parking spaces to eliminate the ability to dive through. Also install concrete stops in the parking spots missing them to elimainte the ability to drive through.	NL-Injury/Illness - Employee Injury	
7208	Richmond, CA - Refinery	2/2/2011 6:00:00 AM	Closed	Near Loss	Green Card--Almost hit while walking in cafeteria parking lot	Green Card--Daily it is a fight for survival walking from a parking spot to the tech center, especially in the crosswalk. More often than not, people will make u-turns through the crosswalk, endangering those using it. Suggestions: Install yellow bollards in the crosswalk in between the parking spaces to eliminate the ability to dive through. Also install concrete stops in the parking spots missing them to elimainte the ability to drive through.	NL-Transportation - Company	
7211	Richmond, CA - Refinery	1/27/2011 12:00:00 PM	Closed	Near Loss	Green Card--6ft plus hole on the side of Channel Street	Green Card - There is a 6ft plus hole on the side of Channel St that has a 4' x 4' piece of plywood covering the hole. (East of Cahnnel and South of new switch gear by substation #3.) I have told CCE (Contra Costa Electric) safety and Chevron of the issue over a month ago. Need to fill the hole.	NL-Injury/Illness - Contractor Injury	
7211	Richmond, CA - Refinery	1/27/2011 12:00:00 PM	Closed	Near Loss	Green Card--6ft plus hole on the side of Channel Street	Green Card - There is a 6ft plus hole on the side of Channel St that has a 4' x 4' piece of plywood covering the hole. (East of Cahnnel and South of new switch gear by substation #3.) I have told CCE (Contra Costa Electric) safety and Chevron of the issue over a month ago. Need to fill the hole.	NL-Injury/Illness - Employee Injury	
7212	Richmond, CA - Refinery	2/3/2011 1:30:00 PM	Closed	Loss	K1060 low pressure shutdown	66PC1050 (Flare Gas Recovery suction pressure controller) was reading high compared to 66PI1055. An instrument person was in the process of calibrating 66PC1050 and K1060 shutdown from low suction pressure. About two weeks ago as part of the flare gas electrical cutover project the low pressure shutdown (66PL1052) was moved from a field hard wire shutdown to a software shutdown, through the Honeywell computer, which is activated when 66PC1050 drops to below 4PSI. In the past 66PC 1050 could be zeroed without shutting down flare gas.	Environmental	(1) Temporary MOC 22950 reviews to transfer S/D logic to 66PT1050 during FGR control panel cutover did not identify the need to temporarily red tag or red-cap transmitter to identify it as a S/D transmitter, and the MOC training and description did not specifically identify 66PC1050 transmitter as containing a S/D
						Weltech: Entry Attendant left his position with a Entrant still inside of F-2301. EE had been performing Entry Attendant duties for four workers inside of F-2301, three workers exited and informed the Attendant that one worker was		

7243	Richmond, CA - Refinery	2/3/2011 5:00:00 PM	Closed	Near Loss	Entry Point left Unattended	still inside. Bricks were being passed though the manway to a convayor ball and Attendant assisted the other workers from the Entrant's company. The fourth Entrant stuck his head out and told the Attendant that he was going to remain inside for awhile longer.Clean up continued and when they where finished ,started to leave the area for a break. Entry Attendant took some red tape and taped off the manway after the other workers left and also left for a break forgetting about the fourth Entrant. Entrant exited the furnace and noticed that the Attendant was gone and reported this fact to his Supervisor.	NL-Injury/Illness - Contractor Injury	(1) Lack of Mental Awareness, (2) Lack of Mental Awareness
7250	Richmond, CA - Refinery	2/3/2011 3:17:00 PM	Closed	Loss	Gate 31	Contractor (PPS) Vehicle stuck barrier arm causing the barrier arm to break off and a cracked w ndshield on contractor's vehicle.	Transportation	(1) Driver did not follow proper procedures
7250	Richmond CA - Refinery	2/3/2011 3:17:00 PM	Closed	Loss	Gate 31	Contractor (PPS) Vehicle stuck barrier arm causing the barrier arm to break off and a cracked w ndshield on contractor's vehicle.	Equipment/Property Damage	(1) Driver did not follow proper procedures
7253	Richmond, CA - Refinery	2/2/2011 7:00:00 AM	Closed	Near Loss	Tripping hazard created with Public Address system cords in IMPACT tents	The IMPACT tents have public address systems with microphones. The mics are handed off to multiple speakers at the 7AM/7PM tent meetings. The long cords attached to the mics increased trip/fall risks.	NL-Injury/Illness - Employee Injury	(1) Tripping Hazard, Cord
7253	Richmond, CA - Refinery	2/2/2011 7:00:00 AM	Closed	Near Loss	Tripping hazard created with Public Address system cords in IMPACT tents	The IMPACT tents have public address systems with microphones. The mics are handed off to multiple speakers at the 7AM/7PM tent meetings. The long cords attached to the mics increased trip/fall risks.	NL-Injury/Illness - Contractor Injury	(1) Tripping Hazard, Cord
7321	Richmond, CA - Refinery	2/6/2011 7:55:00 PM	Closed	Near Loss	K-1420 trip	At approx 7.55PM breakers 12-704 and 12-710 opened in the Alky sub and caused the LCI VFD to trip. The back-up VFD engaged but the compressor RPM dropped See Journal for details about alarms. Once breakers were reset a second trip occurred and was reset. K-1420 suffered no additional issues the rest of the shift.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Root cause - Double contact electrical switch on a door interlock to high voltage compartment in LCI building failed , (2) Automatic reclose switch on the Harmonic Filter Main Breaker (12-704) was left in the manual position after the S/D and required an operator to go up to the switchgear and manually close the breaker. This was not actually a root cause of the trip but did delay getting the machine back on line
7323	Richmond, CA - Refinery	2/6/2011 2:00:00 PM	Closed	Near Loss	unable to inject Anti-oxidation for JP8 run	Day shift ask to start anti-oxidantion injection. Operators unable to draw down or have any flow indication using P-285 (P-285A unavailable due to pin hole leak on down stream relief valve).	NL-Lessons Learned	
7327	Richmond, CA - Refinery	2/7/2011 4:05:00 AM	Closed	Loss	Scraped finger	Welltech - EE was going up the stairs towards the Ox burners. EE slipped on a glove that had been left on a stair. EE grabbed for something to hold on to and scraped his right pinkie finger	NL-Injury/Illness - Contractor Injury	(1) 360 Awareness
7327	Richmond, CA - Refinery	2/7/2011 4:05:00 AM	Closed	Loss	Scraped finger	Welltech - EE was going up the stairs towards the Ox burners. EE slipped on a glove that had been left on a stair. EE grabbed for something to hold on to and scraped h s right pinkie finger	Injury/Illness	(1) 360 Awareness
7361	Richmond, CA - Refinery	2/7/2011 9:15:00 AM	Closed	Loss	Operator sprayed with sulfuric acid while starting P-1481 transfer pump	Operator was sprayed with sulfuric acid and received a quarter sized acid burn to the back of his neck.	Loss of Containment	(1) Pump was not tagged in the field as inoperable. Operator did not recognize hazards from defective pump as identified in turnover., (2) Temporary MOC was extended from 2005 to 2011 with an HSE-only review. The hazards associated with this installation were not recognized through this review process., (3) No urgency to Repair/Improve Permanent Milton Roy Pumps.
7361	Richmond, CA - Refinery	2/7/2011 9:15:00 AM	Closed	Loss	Operator sprayed with sulfuric acid while starting P-1481 transfer pump	Operator was sprayed with sulfuric acid and received a quarter sized acid burn to the back of his neck.	Equipment/Property Damage	(1) Pump was not tagged in the field as inoperable. Operator did not recognize hazards from defective pump as identified in turnover., (2) Temporary MOC was extended from 2005 to 2011 with an HSE-only review. The hazards associated with this installation were not recognized through this review process., (3) No urgency to Repair/Improve Permanent Milton Roy Pumps.
7361	Richmond, CA - Refinery	2/7/2011 9:15:00 AM	Closed	Loss	Operator sprayed with sulfuric acid while starting P-1481 transfer pump	Operator was sprayed with sulfuric acid and received a quarter sized acid burn to the back of his neck.	Injury/Illness	(1) Pump was not tagged in the field as inoperable. Operator did not recognize hazards from defective pump as identified in turnover., (2) Temporary MOC was extended from 2005 to 2011 with an HSE-only review. The hazards associated with this installation were not recognized through this review process., (3) No urgency to Repair/Improve Permanent Milton Roy Pumps.
7367	Richmond, CA - Refinery	1/1/2011 12:00:00 AM	Closed	Near Loss	Overdue Inspections	Required TML inspection points were missed by the required due date in Meridium.	NL-Business Process - Business Process	(1) When the scheduling tool was changed for CML's to be completed by the calendar year, to the actual complete by date. Some of the short cycle CML's were missed.
7418	Richmond, CA - Refinery	2/3/2011 2:00:00 PM	Closed	Near Loss	Green Card - Missing Handrail	North-east of the RVP Analyzer Building at #17 Pump Station, there is a stairway leading up the hill to an elevated landing. The left side handrail at this landing is missing. This has caused an extreme fall hazard.	NL-Equipment/Property Damage - General Liability	

7416	Richmond, CA - Refinery	2/3/2011 2:00:00 PM	Closed	Near Loss	Green Card - Missing Handrail	North-east of the RVP Analyzer Building at #17 Pump Station, there is a stairway leading up the hill to an elevated landing. The left side handrail at this landing is missing. This has caused an extreme fall hazard.	NL-Injury/Illness - Employee Injury	
7416	Richmond, CA - Refinery	2/3/2011 2:00:00 PM	Closed	Near Loss	Green Card - Missing Handrail	North-east of the RVP Analyzer Building at #17 Pump Station, there is a stairway leading up the hill to an elevated landing. The left side handrail at this landing is missing. This has caused an extreme fall hazard.	NL-Injury/Illness - Contractor Injury	
7448	Richmond, CA - Refinery	2/8/2011 9:00:00 AM	Closed	Near Loss	We did not train the appropriate people in a timely manner on RI-9900 changes.	We did not train the appropriate people in a timely manner once the RI-9900 was updated in December 2010. 1. Why did "above" happen? When RI-9900 was revised we did not develop a training plan. 2. Why did "1" happen? RI owner has no written process to develop the plan and assign triggers to ensure the plan is developed and implemented. 3. Why did "2" happen? The need had not been perceived.	NL-Regulatory Compliance - Non Compliance	(1) RI owner has no written process to develop the plan and assign triggers to ensure the plan is developed and implemented.
7449	Richmond, CA - Refinery	2/7/2011 10:00:00 AM	Closed	Near Loss	Green Card--Chain barricades on platform between T-3104 and T-3105 damaged and no longer reach	The chain barricades in front of two valves are rusted and damaged. The chains are no longer long enough to provide a proper safe guard against someone falling. See Raylynn for pictures.	NL-Equipment/Property Damage - General Liability	
7458	Richmond, CA - Refinery	2/8/2011 2:15:00 PM	Closed	Loss	Contract employee tripped on crane outrigger	Contract employee exited cab of draft crane, walked to rear of crane and tripped on outrigger falling to the ground. Employee complained of arm pain, he was seen by Chevron EMT's and released back to work. Employee was taken to Contract company Dr. for follow up evaluation and released to full duty with no restrictions.	Injury/Illness	(1) Complacency
7470	Richmond, CA - Refinery	2/8/2011 10:10:00 PM	Closed	Near Loss	Sore throat from inhaling dust from F-2301	Walltech - EE complains of a sore throat. EE inhaled dust from F-2301 while it was being blasted.	NL-Injury/Illness - Contractor Injury	
7497	Richmond, CA - Refinery	2/9/2011 6:45:00 AM	Closed	Near Loss	Spilled coffee on floor of men's bathroom created slipping hazard.	Upon entering the men's bathroom #125 at Central Maintenance, I noticed a large puddle of coffee on the floor that created a slipping hazard. No one else was in the bathroom at the time.	NL-Injury/Illness - Employee Injury	
7511	Richmond, CA - Refinery	2/5/2011 10:00:00 AM	Closed	Near Loss	Green Card--Delivery Procedures not Followed	Green Card--Contractors are signing for materials for the shutdown on Fri, Sat, & Sun. Paperwork does not get processed through Procurement per procedure. Vendors are not getting paid.	NL-Quality - Paperwork Incorrect/Not Sent	
7514	Richmond, CA - Refinery	2/9/2011 8:00:00 AM	Closed	Loss	E-130 safety lifted to grade	E-130 safety lifted to grade as designed.	Environmental	(1) Over pressured safety because equipment was not rated for up stream pressures.
7540	Richmond, CA - Refinery	2/9/2011 12:00:00 AM	Closed	Loss	P124B/cyl, cover gasket failure	While attempting to establish a dry out circulation loop for the C100 module asphalt sytsem P124B recyprocating pump blew out a cylinder gasket on the west end of the pump. We were using LCO (wash oil) as our circulation medium. The LCO sprayed out of the end of the pump toward the ground and splashed back onto an operators legs and boots. The operator was uninjured (two layers of protection). Approximate temperature of the LCO was 140 to 160 deg.	NL-Injury/Illness - Employee Injury	(1) SOS: Maintenance & Inspection: Surfaces were not repaired the last time pump was taken apart., (2) Sidebar Recommendations and Corrective Actions: Design & Engineering : Gasket Used Was Wrong Material. Material is Normal Material to use for normal process but not during Abnormal Process Runs (Short-term Heavy product Runs)., (3) Sidebar Recommendations and Corrective Actions: Training and Procedures: Plug in Line Gauge. Previous pump/plant clean up was insufficient.
7540	Richmond, CA - Refinery	2/9/2011 12:00:00 AM	Closed	Loss	P124B/cyl, cover gasket failure	While attempting to establish a dry out circulation loop for the C100 module asphalt sytsem P124B recyprocating pump blew out a cylinder gasket on the west end of the pump. We were using LCO (wash oil) as our circulation medium. The LCO sprayed out of the end of the pump toward the ground and splashed back onto an operators legs and boots. the operator was uninjured (two layers of protection). Approximate temperature of the LCO was 140 to 160 deg.	Equipment/Property Damage	(1) SOS: Maintenance & Inspection: Surfaces were not repaired the last time pump was taken apart., (2) Sidebar Recommendations and Corrective Actions: Design & Engineering : Gasket Used Was Wrong Material. Material is Normal Material to use for normal process but not during Abnormal Process Runs (Short-term Heavy product Runs)., (3) Sidebar Recommendations and Corrective Actions: Training and Procedures: Plug in Line Gauge. Previous pump/plant clean up was insufficient.
7542	Richmond, CA - Refinery	2/2/2011 12:00:00 AM	Closed	Near Loss	Improper Lock Out Tag Out of Electrical Equipment	Capital Project Construction was dismantling TX-221 in SISO Flare Gas Recovery Plant This equipment belongs to Utilities and was not released to construction for dismantling. I discovered this partial equipment dismantling condition this morning, February 09, 2011 and it was not LOTOed correctly for either a Utility equipment LOTO or a inPlant equipment LOTO.	NL-Operational Process/Procedures - Safety Systems	(1) R-9900 LOTO was incomplete due to the absence of a lock box. Equipment was found to in a safe de-energized posture with locks & tags installed at the isolation switch. Equipment under control of Utilities was not identified during process of MCC isolation by project personnel & Hydro Ops. " TO BE OPERATED BY UTILITIES ONLY " nameplates missing at this location.
	Richmond, CA -	2/10/2011 1:45:00		Near	* At approximately 1:45 A.M. 2/10/11 K-300A NG booster compressor shutdown on low lube oil	At approximately 1:45 A.M. 2/10/11 K-300A NG booster compressor shutdown on low lube oil pressure. Operations on arrival to K-300A found L/O pump P-303 shutdown. The normal L/O pump TP-303A removed for Maintenance. Inspection of the lube oil pump and system gave no indication of cause for the	NL-Operational Process/Procedures - Plant Run Out/Slow	(1) K-300A sutdown due to trip of P-303 L/O pump, (2) SOS: Maintenance & Inspection: K300A Shutdown. Low lube Oil Pressure Alarm Activated. Lube Oil got hot/ viscosity got too light/thin. Cooling H2O exchanger had restricted flow. Exchanger fouled. Exchanger not on back-flush Schedule. , (3) SOS: Maintenance & Inspection: K300A Shutdown. Low lube Oil Pressure Alarm Activated. Backup pump not available. TP303 out for repairs for several months. Problems with the governor. SOS: Personal Protective Factors: Based

7553	Refinery	AM	Closed	Loss	pressure.	pump shut down.	Down	on reliability records, P303A was deemed reliable
7563	Richmond, CA - Refinery	2/10/2011 3:45:00 AM	Closed	Loss	T-3128 overflowed with DWOP water for hydro testing	Filling T3128 for hydro test with DWOP water. Overflowed 3128 tank during hydro fill of DWOP	NL-Equipment/Property Damage - Equipment Damage	(1) The Separator Operator did not check the tank level anytime during the shift., (2) Alarms and level indicators did not work as intended., (3) Communication and work direction were less than adequate., (4) No connection made between T-3221 level drop and the filling of T-3128.
7563	Richmond, CA - Refinery	2/10/2011 3:45:00 AM	Closed	Loss	T-3128 overflowed with DWOP water for hydro testing	Filling T3128 for hydro test with DWOP water. Overflowed 3128 tank during hydro fill of DWOP	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) The Separator Operator did not check the tank level anytime during the shift., (2) Alarms and level indicators did not work as intended., (3) Communication and work direction were less than adequate., (4) No connection made between T-3221 level drop and the filling of T-3128.
7563	Richmond, CA - Refinery	2/10/2011 3:45:00 AM	Closed	Loss	T-3128 overflowed with DWOP water for hydro testing	Filling T3128 for hydro test with DWOP water. Overflowed 3128 tank during hydro fill of DWOP	Equipment/Property Damage	(1) The Separator Operator did not check the tank level anytime during the shift., (2) Alarms and level indicators did not work as intended., (3) Communication and work direction were less than adequate., (4) No connection made between T-3221 level drop and the filling of T-3128.
7576	Richmond, CA - Refinery	2/4/2011 10:00:00 AM	Closed	Near Loss	Green Card - Loss of 3 Points of Contact (anonymous report)	Green Card (anonymous report) - While descending stairs in the Admin Building, pulled the sleeve of my coat back to look at watch. This caused reporter to not have 3 points of contact & could have missed a step	NL-Injury/Illness - Employee Injury	
7731	Richmond, CA - Refinery	2/12/2011 1:45:00 AM	Closed	Loss	Driver clipped a bush with the truck mirror breaking the mirror	Driver clipped a bush with the truck mirror breaking the mirror	Equipment/Property Damage	(1) Person was driving sleepy and drifted to edge of road
7731	Richmond, CA - Refinery	2/12/2011 1:45:00 AM	Closed	Loss	Driver clipped a bush with the truck mirror breaking the mirror	Driver clipped a bush with the truck mirror breaking the mirror	Transportation	(1) Person was driving sleepy and drifted to edge of road
7765	Richmond, CA - Refinery	2/13/2011 12:20:00 PM	Closed	Loss	While performing pressure test on 2300 Pit saw elevated pressure, found high level in C-2350	While performing a pressure test on 2300 Plant at SRU, the pressure in #3 train got up to 4 psig. Operations checked over the train to determine cause of pressuring up and found water in C-2350. Operations then proceeded to drain the Quench Column. Working with maintenance to ensure no more water in equipment upstream or downstream of C-2350.	Operational Process/Procedures	(1) This was a new installation and it was found that the Quench Column drain valve (butterfly) was stuck in the closed position, there was not enough clearance to allow it to open. Another factor was that because this was a new installation, the level instrumentation had not been adjusted correctly yet, showing a false level.
7780	Richmond, CA - Refinery	2/14/2011 4:00:00 AM	Closed	Loss	Damage to right side of vehicle	PPS employee side swiped a handrail causing damage down the side of his vehicle	Transportation	(1) Supervisor cut corner too tight causing Passenger side of Vehicle to scrape against metal railing. , (2) Driver did not properly gauge the amount of clearance he had to turn vehicle and avoid striking railing.
7780	Richmond, CA - Refinery	2/14/2011 4:00:00 AM	Closed	Loss	Damage to right side of vehicle	PPS employee side swiped a handrail causing damage down the side of his vehicle	Equipment/Property Damage	(1) Supervisor cut corner too tight causing Passenger side of Vehicle to scrape against metal railing. , (2) Driver did not properly gauge the amount of clearance he had to turn vehicle and avoid striking railing.
7861	Richmond, CA - Refinery	2/10/2011 12:30:00 PM	Closed	Near Loss	Green Card - Trip	Green Card - while walking from turnstile to 136 main, person caught toe on a wooden floorboard that is not nailed down flush. The spot had previously been painted bright green, but the paint has worn off	NL-Injury/Illness - Contractor Injury	
7861	Richmond, CA - Refinery	2/10/2011 12:30:00 PM	Closed	Near Loss	Green Card - Trip	Green Card - while walking from turnstile to 136 main, person caught toe on a wooden floorboard that is not nailed down flush. The spot had previously been painted bright green, but the paint has worn off	NL-Injury/Illness - Employee Injury	
7892	Richmond, CA - Refinery	2/9/2011 8:30:00 AM	Closed	Near Loss	Green card - low pressure on portable eyewash at Hunts	Green card - low pressure on portable eyewash at HWTSF	NL-Injury/Illness - Employee Injury	
7892	Richmond, CA - Refinery	2/9/2011 8:30:00 AM	Closed	Near Loss	Green card - low pressure on portable eyewash at Hunts	Green card - low pressure on portable eyewash at HWTSF	NL-Injury/Illness - Contractor Injury	
7894	Richmond, CA - Refinery	2/8/2011 2:00:00 PM	Closed	Near Loss	Green card - almost trip	Green card - almost trip - corner of steel plate (jagged edge) turned up. Location - Annex Frac Tank Area	NL-Injury/Illness - Employee Injury	
7894	Richmond, CA - Refinery	2/8/2011 2:00:00 PM	Closed	Near Loss	Green card - almost trip	Green card - almost trip - corner of steel plate (jagged edge) turned up. Location - Annex Frac Tank Area	NL-Injury/Illness - Contractor Injury	
7900	Richmond, CA - Refinery	2/15/2011 11:30:00 AM	Closed	Near Loss	Chevron EE stuck in elevator after it abruptly stopped	At 11:30 A.M, While working on TKN-reactor R-530 startup, an operator working on the reactor structure took the elevator down to ground level. About halfway down, he elevator became stuck and would not move. The operator attempted to manually bring the elevator down with no success. Plant protection was called and affected a rescue. The elevator repair company was called to repair.	NL-Operational Process/Procedures - Safety Systems	(1) Elevator cables jumped pully and caused elevator to stop
						At 11:30 A.M, While working on TKN-reactor R-530 startup, an operator working on the reactor structure took the elevator down to ground level. About halfway down, he elevator became stuck and would not move. The operator	NL-	

7900	Richmond, CA - Refinery	2/15/2011 11:30:00 AM	Closed	Near Loss	Chevron EE stuck in elevator after it abruptly stopped	attempted to manually bring the elevator down with no success. Plant protection was called and affected a rescue. The elevator repair company was called to repair.	Equipment/Property Damage - Equipment Damage	(1) Elevator cables jumped pully and caused elveator to stop
7911	Richmond, CA - Refinery	2/15/2011 3:00:00 PM	Closed	Near Loss	Employee reported particle in right eye	A company employee was walking in the SRU plant when a gust of wind blew a particle of dust into his right eye. Employee attempted to remove particle but was unsuccessful. He then reported the incident to his Head Operator who in turn contacted Plant Protection. Plant Protection responded and irrigated his right eye and the particle was removed.	NL-Injury/Illness - Employee Injury	
7912	Richmond, CA - Refinery	2/14/2011 7:30:00 AM	Closed	Near Loss	Green Card - Computer Desk	Green Card - Computer desk / table does not provide for height adjustments for a user. Potential for RSI / MSD risks	NL-Injury/Illness - RSI/MSD Discomfort	
7928	Richmond, CA - Refinery	2/15/2011 4:55:00 PM	Closed	Near Loss	Furnace fires trip on SRU #3 train during start-up	SRU was starting up #3 train per start-up procedure SRUNP2100 after an extended shutdown. Refractory dry-out was ongoing. Operations had reduced fires on F-2301 to meet the temperature requirements for refractory dry-out procedure 23FC306 (natural gas to F-2301) was at 10% valve output and the burner fires were at minimum and flickering at times per operations. 65# steam was also being injected into the furnace box to control furnace temperature. At 16:55 the fire eyes at the MRF tripped the natural gas chopper valve closed when loss of flame was detected. With the front and natural gas chopper valve closed, fires on the 3 front end furnaces went out due to lack of fuel.	NL-Operational Process/Procedures - Safety Systems	
7967	Richmond, CA - Refinery	2/10/2011 7:30:00 AM	Closed	Near Loss	Green Card: Rope access for inspection	Green Card: Requested rope access inspection. Rope access technicians walk job and discover job is 8' to 10'off grade and is accessible by ladder.	NL-Lessons Learned	(1) Communication gap between the work scheduler and the Rope Access Technician. FIVE WHY'S 1. Rope access crew took the rope job request found in the break –in inbox and made a copy with the intent of checking it out as a fill in between the scheduled work they have for the day. 2. Why did '1' happen? The request came in as rope access work and they took initiative to do pre-planning and setting it up. 3. Why did "2" happen? The job requestor assigned the job as Rope Access work. 4. Why did "3" happen? The job requestor was not aware of the criteria for classifying a rope work.
7968	Richmond, CA - Refinery	2/11/2011 12:00:00 AM	Closed	Near Loss	Green Card: Finger pinch	Green Card: Upon opening the discharge valve of K-140, the extension hand wheel of the valve dropped and pinched the end of my glove's left middle finger. Upon noticing the drop of the hand wheel I was able to quickly pull my hand from the full force of the valve handle. Repair broken extension handle and secure the extension handle with a collar attached to the hand rail.	NL-Injury/Illness - Employee Injury	(1) Extension handle was loose (no support) and allowed wheel end of handle to come in contact with existing railing.
7982	Richmond, CA - Refinery	2/16/2011 1:30:00 AM	Closed	Loss	Western Drive approximately 1/2 mile inside Molate Point Gate at railroad tracks between Gates 15 and 16.	S-6 Vehicle was driven into a ditch at the above location when Driver lost bearing on the road while driving in windy rainstorm causing limited visibility. Vehicle was stuck in the mud in the ditch. There appears to be no damage to vehicle. No injury to driver.	Equipment/Property Damage	(1) Driver took vehicle out to make rounds in extremely bad weather that resulted in limited visibility.
7985	Richmond, CA - Refinery	2/15/2011 3:00:00 PM	Closed	Near Loss	Green Card - Gate at Megawatt & Cracking swinging open in wind	Green Card - Steel gate at Megawatt & Cracking singing open in wind (can affect south-bound traffic on Megawatt). Reported by Petrochem	NL-Transportation - Contractor	
7985	Richmond, CA - Refinery	2/15/2011 3:00:00 PM	Closed	Near Loss	Green Card - Gate at Megawatt & Cracking swinging open in wind	Green Card - Steel gate at Megawatt & Cracking singing open in wind (can affect south-bound traffic on Megawatt). Reported by Petrochem	NL-Transportation - Company	
7997	Richmond, CA - Refinery	2/16/2011 10:25:00 AM	Closed	Loss	EE pinch fingers while closing Stellar box	EE was emptying a Stellar box. After box was emptied, EE was attempting to close the coors on the box. The doors were binding and when closing, the "T" lock dropped down and pinched EE left two middle fingers.	NL-Injury/Illness - Employee Injury	(1) EE not paying attention to hand placement
7997	Richmond, CA - Refinery	2/16/2011 10:25:00 AM	Closed	Loss	EE pinch fingers while closing Stellar box	EE was emptying a Stellar box. After box was emptied, EE was attempting to close the coors on the box. The doors were binding and when closing, the "T" lock dropped down and pinched EE left two middle fingers.	Injury/Illness	(1) EE not paying attention to hand placement
8032	Richmond, CA - Refinery	2/17/2011 5:30:00 AM	Closed	Near Loss	Green Card - Driving Wrong Way on One Way Street	Green Card - By 91 Gate, Toluene Street is a one-way street with signs. There are still people going the wrong way (Green Card reporter saw this every day this week).	NL-Transportation - Contractor	
8041	Richmond, CA - Refinery	2/17/2011 8:00:00 AM	Closed	Near Loss	Tank field rd way approaching T-1459 has eroded away to the point in certain areas that it has become dangerous for Vacuum Trucks to drive on it	Green Card: Vac truck driver working in tank field reported that areas of the narrow access road to T-1459 has eroded and considered dangerous for vac trucks to utilize. Access requires backing uphill a great distance(reportedly ~200 ft. or more)	NL-Transportation - Company	
	Richmond,	2/7/2011			On 2 occasions, cars turned left on Center St. from behind the Tech Center narrowly missing	On Monday, I was heading north on Center Street when the car turning left after stopping behind the Tech Center pulled out in front of me narrowly missing my car. On Wednesday, true story, the same thing happened with another vehicle pulling out from behind the Tech Center. There is a stop sign coming out of the Tech Center. There is a stop sign for traffic heading south on Center St. There is no stop sign for traffic heading north on Center St. On		(1) Why did car 1 pull out into oncoming vehicle? Distracted by cone in the middle of the intersection., (2) Why did cars pull out into oncoming vehicle? Driver 1 said she was not aware there was a stop sign only in 1 direction. There is no

8048	CA - Refinery	12:00:00 PM	Closed	Near Loss	my car heading north on Center St.	Monday, there was a 3 foot cone in the middle of the street marking a pot hole. The driver said she was partly distracted by the cone	NL-Transportation - Company	sign reminding people that cross traffic from the right doesn't stop.
8055	Richmond, CA - Refinery	2/17/2011 7:30:00 AM	Closed	Near Loss	Vehicle collision	Electrician #1 was on a rental RSC scissor lift (601508) relocating it from underneath the PCC to another area of the job site using Electrician #2 as the spotter in front of the scissor lift. As they approached the UST welding truck the estimated clearance between the scissor lift and the truck was 8-10". Electrician #1 pulled the lift forward and his intention was to clear the truck and turn left in front of the truck to avoid a ramp leading up to a building on his right. As he started forward the left front wheel of the scissor lift went into a depression in the asphalt as the right front wheel was going over a portion of the ramp leading to the building. The scissor lift at this point leaned over and came in contact with the welding truck.	NL-Equipment/Property Damage - Equipment Damage	
8065	Richmond, CA - Refinery	2/17/2011 12:00:00 AM	Closed	Near Loss	Administrative - 2 day EPA Audit revealed Title 22 notification to DTSC of HW shipments to Canada not made as required	Shipments of Haz Waste to foreign countries require notifications to federal EPA according to CFR 40. A similar, requirement exists for Cal EPA - DTSC Title 22 Regs. These Cal EPA notifications were not being made.	NL-Regulatory Compliance - Non Compliance	
8068	Richmond, CA - Refinery	2/17/2011 12:00:00 AM	Closed	Loss	NOV received in the amount of $1,500.00 from the USCG. The Richmond Spill Prevention and Emergency Response Plan (SPERP) was not submitted to the USCG for the required 5 year review in 2010 violating the requirements of Title 33 CFR Part 154.	A NOV was received in the amount of $1,500.00 from the USCG. The Richmond Spill Prevention and Emergency Response Plan (SPERP) was not submitted to the USCG for the required 5 year review in 2010 violating the requirements of Title 33 CFR Part 154. The last five year review was completed in July 2005 by the USCG. The plan was due for another review in 2010 two months before the prior approval expiration date. This was not completed in violation of the requirements of Title 33 CFR Part 154. Two codes were violated: the first for failure to resubmit the plan for approval, and the second for operating without an approved plan.	Regulatory Compliance	(1) No Procedure/CAP Task was in place to ensure compliance. , (2) Temporary ER coordinator was not formally trained and received a limited turnover.
8102	Richmond, CA - Refinery	2/17/2011 6:25:00 PM	Closed	Loss	74LC551 indication flat lines at 33%. The valve slowing opens up for 11 hours finally causing V-600 safety to lift. This caused a flaring event that lasted 20 munites.	At 18:25, Hydroprocessing had a flaring incident. There was visible flaring from the North Isomax, South Isomax and FCC flared for approximately 20 minutes. It was determined that 74LC551 had been giving a false indication since 09:00 this morning. The indication was stuck at around 33%, with a set point of 31%. LC551 output had been going open so the level could match the set point. The output started at around 43%, and by the time we had our event, was open to 68%. As the valve opened, V-550 started gassing out to V-560, which then sent a large flow to V-660. As V-660 pressured up, this backed out V-640, which then overpressured V-600 causing IX-600C to lift.	Environmental	(1) Plugged up displacer internals on LT551., (2) Operations did not immediately recognize that V550 was gassing out to downstream equipment.
8103	Richmond, CA - Refinery	2/17/2011 6:25:00 PM	Closed	Loss	During a flaring event, the North and South Isomax flare sample were not filled correctly. They were empty when QCD tried to run the GC samples. FCC sample was OK, so information from that sample will be used to make calculation.	During a flaring event on both the North Isomax and South Isomax flares, the vent line on the sample bombs were in the open position causing the bomb to empty after the sample was done filling. This was not noticed when the sample bomb was collected so there was not analysis done on the gases that were sent to the North and South Flare.	Regulatory Compliance	(1) Why was the vent valve on the Flare Sample bomb in the open position. Why confusing? Because there is not job aid to assist with sampling task or bomb setup , (2) Why was the vent valve on the Flare Sample bomb in the open position. Because the tags on the sample station are confusing.
8121	Richmond, CA - Refinery	2/10/2011 7:00:00 AM	Closed	Near Loss	GREEN CARD--Turn over issues	GREEN CARD--NDE Tech who was working non CUI Project doing an Open Vision (Real time Radiography) inspection was assigned to work on the shutdown. When he moved there was no proper hand-off of the work he started and no reports submitted to the ones he finished.	NL-Business Process - Business Process	(1) What Technician did not finalize inspection even though he was only partially complete prior to going to TA. 1. Why did "above" happen? Technician thought he would continue where he left off after the TA was completed. 2. Why did "1" happen? Past practice.
8143	Richmond, CA - Refinery	2/18/2011 12:00:00 AM	Closed	Near Loss	E-130 safety lifted	While making plant rounds Field Operator noticed E-130 safety lifting to sewer. System was in steady state operation lined up to lankage.	NL-Equipment/Property Damage - General Liability	(1) Incident Description: What: E-130 safety FC-72 lifting on HCO system Where (location or where in the process): HCO product out of E-130 When: 2/18/11 15:02 How: Problem Statement (What is the key issue that needs to be addressed?): E-130 HCO system safety lifting from an over pressure situation FIVE WHY'S 1. Why did "above" happen? Verification Pressure in HCO system exceeded setpoint of FC-72 of 180 psig 2. Why did "1" happen? P-114/A HCO product pumps deadhead of 340 psig 3. Why did "2" happen? P-114/A redesigned for unit upgrade to achieve more flow in HCO system but did not take into account higher system pressures which would result from the change 4. Why did "3" happen? Change was made prior to MOC process and did not address associated equipment What was the Root Cause of your incident? Changes were made to the system without considering consequences to all pieces of equipment effected.
8175	Richmond, CA - Refinery	2/19/2011 11:30:00 AM	Closed	Loss	#2 castro fresh water header ruptured along Midway Street.	#1 Castro fresh water line (14") developed an underground leak at the corner of Midway and Division St.. The leak was immediately isolated without any loss to users.	Equipment/Property Damage	(1) External corrosion - underground line

8178	Richmond, CA - Refinery	2/19/2011 11:52:00 PM	Closed	Near Loss	FCC flare seal pressure spike.	While trying to clean up C-1400 column we were steaming it to blow down per procedure when the FCC seal pressure spiked to 19.7"	NL-Environmental - Release	
8189	Richmond, CA - Refinery	2/20/2011 6:30:00 AM	Closed	Near Loss	EE slipped and nearly fell while approaching gate 126T.	While crossing the wooden walkway on the south side of bldg 136 Main EE slipped and nearly fell due to anti-skid being worn off and frost covering the ground.	NL-Injury/Illness - Employee Injury	
8233	Richmond, CA - Refinery	2/10/2011 9:30:00 AM	Closed	Near Loss	Green card - Gate came off hinge	Green card - Gate (located on Office Hill) came off hinge as I was opening it almost falling on me. I was able to move out of its way. This is the third time the gate has fallen. It was supposed to be repaired after the last incident 3 mos ago.	NL-Injury/Illness - Contractor Injury	
8233	Richmond, CA - Refinery	2/10/2011 9:30:00 AM	Closed	Near Loss	Green card - Gate came off hinge	Green card - Gate (located on Office Hill) came off hinge as I was opening it almost falling on me. I was able to move out of its way. This is the third time the gate has fallen. It was supposed to be repaired after the last incident 3 mos ago.	NL-Injury/Illness - Employee Injury	
8235	Richmond, CA - Refinery	2/18/2011 12:00:00 AM	Closed	Near Loss	76FV7309 was out of service to have an Accellerated Downstream Project upgrade performed but the timing of this work did not agree with Refinery Planning needs.	Missed opportunity to put Isomax Jet down the diesel tail line because 76FV7309 was at the shop to install new trim as part of an accellerate downstream project. Planning and the ABU had this week as the original planned date to make this shop repair but a followup email notification to delay the upgrade to this valve was not realized until after the valve was already at the shop. During this period refinery planned asked the ABU to place this valve in service and it was not available. Jet inventories were full and there was a need to send the Isomax Jet to the Diesel Tail Line.	NL-Business Process - Business Interruption	(1) SOS:Training & Procedures: Flow Valve 7309 Unavailable for Normal Routing of Jet. Valve was at Machine Shop. Communication to delay work not read. Delay request was sent late to concerned parties. Request was made only by one-way email. , (2) Sidebar: SOS:Training & Procedures:•There was a financial impact associated with this incident. (The work priority on the upgrade work was increased to a 1 priority and the valve work was immediately completed and installed on Friday, 2/18/2011.) Another cost was that of running jet product through the diesel hydro-treater (DHT).
8235	Richmond, CA - Refinery	2/18/2011 12:00:00 AM	Closed	Near Loss	76FV7309 was out of service to have an Accellerated Downstream Project upgrade performed but the timing of this work did not agree with Refinery Planning needs.	Missed opportunity to put Isomax Jet down the diesel tail line because 76FV7309 was at the shop to install new trim as part of an accellerate downstream project. Planning and the ABU had this week as the original planned date to make this shop repair but a followup email notification to delay the upgrade to this valve was not realized until after the valve was already at the shop. During this period refinery planned asked the ABU to place this valve in service and it was not available. Jet inventories were full and there was a need to send the Isomax Jet to the Diesel Tail Line.	NL-Quality - Late Shipment	(1) SOS:Training & Procedures: Flow Valve 7309 Unavailable for Normal Routing of Jet. Valve was at Machine Shop. Communication to delay work not read. Delay request was sent late to concerned parties. Request was made only by one-way email. , (2) Sidebar: SOS:Training & Procedures:•There was a financial impact associated with this incident. (The work priority on the upgrade work was increased to a 1 priority and the valve work was immediately completed and installed on Friday, 2/18/2011.) Another cost was that of running jet product through the diesel hydro-treater (DHT).
8263	Richmond, CA - Refinery	2/21/2011 11:00:00 AM	Closed	Near Loss	Bin containing "NON RCRA" soil was shipped out as "Treated Wood" but discovered prior to final destination.	Bin containing "NON RCRA" soil was shipped out as "Treated Wood" but discovered prior to final destination. Investigation to follow.	NL-Regulatory Compliance - Non Compliance	(1) Problem with bin contents not addressed and corrected when discovered.
8356	Richmond, CA - Refinery	2/14/2011 10:00:00 AM	Closed	Loss	Sample Cooler/exchanger was lost.	Sample Cooler/exchanger was at the Wash Pad for cleaning and was lost.	Equipment/Property Damage	(1) Mechanic did not sign equipment into the Log book at the wash pad.
8359	Richmond, CA - Refinery	2/10/2011 1:15:00 PM	Closed	Near Loss	Green card - eye wash station located too far away from job site	Green card - Eye wash station located too far away from job site, nearest one exceeded 50' radio distance.	NL-Injury/Illness - Contractor Injury	
8359	Richmond, CA - Refinery	2/10/2011 1:15:00 PM	Closed	Near Loss	Green card - eye wash station located too far away from job site	Green card - Eye wash station located too far away from job site, nearest one exceeded 50' radio distance.	NL-Injury/Illness - Employee Injury	
8432	Richmond, CA - Refinery	2/10/2011 12:00:00 AM	Closed	Near Loss	West side APP 30 failed	Call out from west side ops. DMC shutdown, graphic call up very slow. APP 30 failed in odd state.	NL-Business Process - Business Interruption	
8463	Richmond, CA - Refinery	2/22/2011 7:00:00 AM	Closed	Loss	Drawing and measure up for B/O piping on FCV-18309 in RLOP-18 was incorrect.	Measure up and a drawing for B/O piping on FCV-18309 RLOP-18 was completed 11/24/10 and fabricated in the boiler shop. The installation of the piping was placed on hold until an operational window occurred. The piping was verified the morning it was scheduled to be installed and was found to be inaccurate.	Quality	(1) Human error
8465	Richmond, CA - Refinery	2/15/2011 9:00:00 AM	Closed	Near Loss	Green card - Flagman/spotter needs to be provided when vac trucks are backing into the tank block.	Green card - Vac trucks are required to back into the tank block which requires traffic to be blocked on Channel in both directions. A flagman/spotter must be provided to stop/spot traffic (location - 3128 tank).	NL-Injury/Illness - Contractor Injury	
8466	Richmond, CA - Refinery	2/17/2011 8:00:00 AM	Closed	Near Loss	Green card - Wooden fence/entry door swinging out of control.	Green card - wooden fence/entry door swinging out of control.	NL-Equipment/Property Damage - Equipment Damage	

8466	Richmond CA - Refinery	2/17/2011 8:00:00 AM	Closed	Near Loss	Green card - Wooden fence/entry door swinging out of control.	Green card - wooden fence/entry door swinging out of control.	NL-Injury/Illness - Contractor Injury	
8400	Richmond CA - Refinery	2/17/2011 8:00:00 AM	Closed	Near Loss	Green card - Wooden fence/entry door swinging out of control.	Green card - wooden fence/entry door swinging out of control.	NL-Injury/Illness - Employee Injury	
8545	Richmond CA - Refinery	2/24/2011 9:30:00 AM	Closed	Near Loss	Leak under Standard Rd. near 126 line and 678 line	Leak under standard road into both 2 P/S 2 and 1 P/S going into the big ditch. Looks like it's coming from the area of the 126 line and the 678 line. Initial assesment puts the amount at 1/4 barrel.	NL-Environmental - Operational Leak	
8564	Richmond, CA - Refinery	2/22/2011 12:58:00 AM	Closed	Near Loss	False UPS critical alarm	We have received UPS critical alarm message several times in the past. Almost all of these times, it was a false notification.Want to investigate the underlying issue related to this false notification.	NL-Equipment/Property Damage - General Liability	
8674	Richmond, CA - Refinery	2/25/2011 5:00:00 AM	Closed	Loss	Main Gate Entrance	Rolling Gate located at the entrance of Main Gate rolled into a POV due to high winds. Owner didnt want to report the incident because they did not see any damages at the event when it happened. Later on in the day around lunch the person noticed minor scratches and slight indentations on the right side of their vehicle.	Equipment/Property Damage	(1) Gate was installed without a latch to secure it in the open position.
8674	Richmond, CA - Refinery	2/25/2011 5:00:00 AM	Closed	Loss	Main Gate Entrance	Rolling Gate located at the entrance of Main Gate rolled into a POV due to high winds. Owner didnt want to report the incident because they did not see any damages at the event when it happened. Later on in the day around lunch the person noticed minor scratches and slight indentations on the right side of their vehicle.	Transportation	(1) Gate was installed without a latch to secure it in the open position.
8676	Richmond, CA - Refinery	2/25/2011 1:15:00 PM	Closed	Near Loss	Dead Tree fell onto power lines at T-990	The SP Hill Operator discovered a dead tree that had fallen against live power lines on SP Hill Rd. near T-990. Utilities was notified and confirmed that the dead tree was on live 480volt wires at pole 957. To isolate this wiring both breakers 70-3 & 70-4 will have to be opened. This will result in loss of power to T-990,991,992,979,3215,3217 & 3227. T-979, T-992, T-3215, and T-3227 are moving and will require 2 hour manual gauging once the power is shutdown.	NL-Business Process - Business Interruption	
8699	Richmond, CA - Refinery	2/25/2011 6:00:00 AM	Closed	Near Loss	Offtest JHT C-240 BTMS Jet Flash	JHT C-240 BTMS jet product was routed to product tank T-3190 with -96 DEGF TCC flash for 8 hrs (6AM-2PM). The tank finaled with a 105 DEGF TCC flash, which is the minimum jet flash spec.	NL-Quality - Product Quality (Int)	(1) The jet was off test on flash because operator did not know that the DMC could cut temperature for high draft pressure. , (2) The high draft pressure was due to furnace tuning changes and not corrected in time.
8699	Richmond, CA - Refinery	2/25/2011 6:00:00 AM	Closed	Near Loss	Offtest JHT C-240 BTMS Jet Flash	JHT C-240 BTMS jet product was routed to product tank T-3190 with -96 DEGF TCC flash for 8 hrs (6AM-2PM). The tank finaled with a 105 DEGF TCC flash, which is the minimum jet flash spec.	NL-Equipment/Property Damage - Equipment Damage	(1) The jet was off test on flash because operator did not know that the DMC could cut temperature for high draft pressure. , (2) The high draft pressure was due to furnace tuning changes and not corrected in time.
8749	Richmond, CA - Refinery	2/28/2011 12:00:00 AM	Closed	Loss	ERD-K-2001 motor bearings failed resulting in Ship loading delay	The flame on the ERD went out while the unit was idling after completion of loading the Morro Bay. Successive attempts to restart the ERD were unsuccessful and after consulting with the Control systems technician and the RMC crew (I&E tech) it was determined that a machinist would be needed to replace a possible bad bearing on the motor. An extensive effort to have a machinist come out (after hours) and initiate this repair was unsuccessful. The RMC crew machinists began working on the bearing at start of dayshift (2/27) and the ERD restarted at approximately 1300hrs. This ERD outage resulted in a ~19 hour delay in loading the Florida Voyager.	Equipment/Property Damage	(1) SOS: Design & Engineering: Ship Loading Delayed 19 Hours. No spare ERD or spare parts readily available. No contingency plan in place , (2) SOS: Maintenance & Inspections: Ship Loading Delayed 19 Hours. ERD did not work. Bearings Failed. Scheduled Motor Vibrations Check was not done. Motor Was Not Running. Motor was not needed at the time. Motor was not started to perform the check.
8790	Richmond, CA - Refinery	2/27/2011 5:30:00 PM	Closed	Near Loss	* plant upset stripped water routed off test	At approximately 7:30 PM 2/27/2010 while SISO operators were adjusting to Condensate system to minimize Soft water makeup, we had an 8plant upset. Re boiler temps and tray 4 temp dropped 15 to 20 degrees. Also NISO had issues getting out with Med. pressure condensate. SISO operators working on condensate system slowed down their activities until everything stabilized. Because of Selenium issues in the past based on these upsets it was decided to route 8 plant off test until a good selenium sample was reported from CEL.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Operations manipulating the condensate system to mitigate a problem in another part of the plant Backed out C-810 reboiler and caused an 8 plant upset. (2) SOS: Design & Engineering: No independent level control on E-817 reboiler., (3) SOS:Maintenance & Inspection: Soft Water Problems (Stuck Valves) , (4) SOS: Training & Procedures: No Specific Guidelines on How to make moves.
8914	Richmond, CA - Refinery	2/28/2011 9:00:00 AM	Closed	Loss	Loss of Compressor no loading	Loss of compressor at Vacuum pump house at Wharf. Due to lifting off wiring associated with the control and alarm system. DCS system initiated the trip to the compressor.	Business Process	(1) Not including SME prior to cutover from old system to new system. Had the SME been involved in the cutover we would have been aware of the possible failsafe shutdown.
9014	Richmond, CA - Refinery	3/1/2011 8:21:00 PM	Closed	Loss	Operator tripped and fell resulting in abrasions to forehead and both hands.	The operator was walking back to his vehicle after making a tank switch when he tripped over a raised curb adjacent to T-992. The Operator fell and sustained abrasions to both hands and his forehead. Plant Protection was notified and the Operator was treated and trasnported to the Refinery Clinic where he was treated and released back to work.	Injury/Illness	(1) This incident occurred because the employee did not maintain line of site on the path he was walking., (2) The raised asphalt curb goes directly across the normal walking route and is difficult to see at night., (3) This incident occurred because the employee did not maintain line of site on the path he was walking.
						During C-3590 water wash V-3590 waterboot was drained to relief and increased flare recovery pressure. Tripped totalizer ~147 SCF, but no visible flame. Why did draining waterboot cause totalizer event? Recovery compressors not loaded high enough. Initially K-3590 100%, K-242 100% & K-252 0% Why not loaded enough? Flare recovery compressor operator not informed blowing down, therefore not ready to increase compressor loading.		

9018	Richmond, CA - Refinery	3/1/2011 5:20:00 PM	Closed	Near Loss	D&R Totalizer Event, no visible flame	Why not informed? Operator did not believe draining water to relief would effect flare gas recovery. Corrective actions- (1) Discuss need to inform flare recovery compressor operators when blowing down any material to relief. (2) Preload K242/52 to 50% each to quickly catch incidents instead of K242 100% and K252 0% which requires additional time in the field to start K252.	NL-Environmental - Release	
9022	Richmond, CA - Refinery	3/1/2011 3:42:00 PM	Closed	Near Loss	Tripped FCC totalizer while making outside process moves to the relief system when only 1 FGR machine was I/S	Tripped FCC totalizer while making outside process moves to the relief system when only 1 FGR machine was I/S	NL-Environmental - Release	(1) SOS: Training & Procedures: FCC Totalizer tripped. Flow increase in the relief system. K1060 Couldn't keep up with the sudden increase in flow. Only one compressor was running at the time. Board operator didn't realize the increase in flow was going to require the use of two compressors. Board operator had never experienced that situation before,, (2) Sidebar SOS: Training & Procedures (Investigations and Lessons Learned): • There's a need for enhancad awareness on steps and alternative actions available during increased FGR flow (loading configuration of K-1060/1070, etc) prior to known increases.
9069	Richmond, CA - Refinery	3/2/2011 12:00:00 AM	Closed	Loss	K-501 EBV N2 valves need lotto locks cut off	N.lso, K-501 EBV N2 quarter turn valves have lotto locks with no key.	Operational Process/Procedures	(1) Procedure not followed when removing loto - PRT can be remain isolated with pump inservice., (2) Loto was not audited to very start to finsh.
9109	Richmond, CA - Refinery	3/2/2011 10:00:00 PM	Closed	Near Loss	Chevron EE experienced discomfort in their elbow.	Chevron EE was attempting to extract tools from a large tool box. In order to avoid stressing their back, EE sat on the floor next to the tool box to remove the tools. When EE attempted to get up off the floor, EE noticed discomfort in their elbow while pushing themself off of the lid of the closed tool box into a standing position.	NL-Injury/Illness - Employee Injury	
9122	Richmond, CA - Refinery	3/1/2011 11:30:00 AM	Closed	Near Loss	H2S Bump Station not working.	Green Card--H2S Bump station in front of Bldg #218 is not working. Remove and replace or post a map of other locations to bump test.	NL-Equipment/Property Damage - General Liability	
9188	Richmond, CA - Refinery	3/3/2011 12:30:00 PM	Closed	Near Loss	Flange leak # 1Water Draw	Contractors working on the fire water line project upgrade dectected odors near there work site. It was determined that the fire was only gasoline-saturated debris in the concrete drainage ditch that lit off and was immediately put out by the firewatch once the welder noticed the fire.Contractor made notification to EOD safely Operator and T&B. Plant Protection was notfied by EOD and T&B	NL-Injury/Illness - Contractor Injury	(1) SOS:Training & Procedures: Smoldering Fire in SP Hill. Sparks were fell onto debris/ flammables. Debris near (15' to 20' feet) hot work. It was not anticipated that sparks would travel that far from welding location. , (2) SOS:Maintenance & Inspection: Potential Benzene Exposure to Workers. Water and Hydrocarbon Mixture Leak Occurred from the flange at #1 Water Draw Line. Flange Gasket had Failed. NMI. Unknown Cause of Gasket Failure. , (3) •Sidebar Issue. Training & Procedures: • No radio onsite once the supervisor had left to oversee other jobs. Cell phone used to make notifications.
9191	Richmond, CA - Refinery	3/3/2011 2:00:00 PM	Closed	Near Loss	EE complained of dizziness and irregular heart beat	EE complained of dizziness and irregular heart beat, CFD notified, AMR called out. EE refused transport to hospital, AMR released. EE transported to clinic by supervisor for further evaluation.	NL-Injury/Illness - Employee Injury	
9217	Richmond, CA - Refinery	2/28/2011 12:00:00 AM	Closed	Loss	AT RLP , Door 7 in warehouse was damaged.	Received work order, Found Door 7 damaged..	Equipment/Property Damage	(1) Damaged door why ? Door was closed when driver pulled out why? Ramp raised up and damaged door why? Limit switch on dock adjustment is off why ? ramp needs to be aligned root cause: Alignment was off which caused ramp to raise when truck pulled away.
9217	Richmond, CA - Refinery	2/28/2011 12:00:00 AM	Closed	Loss	AT RLP , Door 7 in warehouse was damaged.	Received work order, Found Door 7 damaged..	NL-Equipment/Property Damage - Equipment Damage	(1) Damaged door why ? Door was closed when driver pulled out why? Ramp raised up and damaged door why? Limit switch on dock adjustment is off why ? ramp needs to be aligned root cause: Alignment was off which caused ramp to raise when truck pulled away.
9219	Richmond, CA - Refinery	3/3/2011 11:00:00 AM	Closed	Near Loss	Green Card--Walking Hazards	Green Card--Mitigate walking hazards. Parking blocks that are rubble. Old post that is in the middle of the thoroughfare cut off at 1" above grade. Metal plate covering hole that is loose and bent up causing potential tripping hazard. All of these hazards are located on Center Street walkway between B&S Maint. and Cafeteria	NL-Injury/Illness - Employee Injury	
9260	Richmond, CA - Refinery	3/3/2011 2:00:00 AM	Closed	Loss	Chevron EE struck hand with hammer.	CVX EE treated at Martinez medical facility Friday 3/5/2011, after injuring left hand / thumb by striking it with a hammer on 3/3/2011.	Injury/Illness	(1) Failed to assess potential hazards while performing LPSA
9270	Richmond, CA - Refinery	3/4/2011 12:00:00 AM	Closed	Loss	UV Flame Detection Alarm Flood	Beginning about noon on Friday and continuing into dayshift Saturday Blending and Shipping experienced an alarm flood on the UV flame detection system at 17 Pump station (Mogas Blender). Plant Protection responded to the alarm and Orr Fire Protection systems was called out on Friday to adjust and reset the system. No false alarm were noted on night shift but the UV Flame detection system once again began to flood alarms on Saturday dayshift. Orr was once again called out to adjust the system and try to determine a cause.	Operational Process/Procedures	(1) Fire Protection System UV detection and system failure - end of life
						At approx. 09:50 today 3/5/2011 South isomax operations, while purging V-		

9271	Richmond, CA - Refinery	3/5/2011 12:00:00 AM	Closed	Near Loss	While starting up PSA module V-2073 while purging N2 to relief	2073 PSA module, to remove the nitrogen in preparation for feed in to V-2073. Outside operator cracked PSV bypass to relief "3 Threads" to displace the N2 in the vessel. This is normally done so N2 is not displaced to K-1900. This could cause K-1900 to operate erratically, But is not in this procedure. At this same time, the OWS 2 was monitoring sagging H2 system pressures on all three stages, erratic draft fan position movement on K300 west that was causing amp override situations on the other three draft fans, troubleshooting K920 by switching loads with K930 which had to be started up and trying to get two valves on bed three to operate with I&E help. The outside operator called to inform OWS2 that the bypass on bed three to relief was cracked open three threads. OWS2 called the HO and asked if opening the 502c valve (feed in) to 10% was adequate, HO responded that it should be. While monitoring the vessel pressure at valve opening the rise was faster than expected and the valve output was put at 2%. OWS2 immediately called the AO4 operator and told him to block in to relief, called the AO2 operator and had him start the standby FGR compressor and called FCC HO and told them of the problem.	NL-Operational Process/Procedures - Safety Systems	
9290	Richmond, CA - Refinery	3/4/2011 10:00:00 AM	Closed	Near Loss	K-300 suction and discharge piping	While removing piping on K-300 B mechanics noticed that one of the spools had an old style "saddle on" branch connection (no longer legal in the refinery) and that there was significant pipe strain on the connection. Also another pipe has a leak seal filling on the flange connection at the compressor head. K-300 A has similar issues, there is a saddle on branch connection, and a leak seal clamp on it as well. K-300 A was reported to operations as a safety concern last year.	NL-Equipment/Property Damage - General Liability	
9290	Richmond, CA - Refinery	3/4/2011 10:00:00 AM	Closed	Near Loss	K-300 suction and discharge piping	While removing piping on K-300 B mechanics noticed that one of the spools had an old style "saddle on" branch connection (no longer legal in the refinery) and that there was significant pipe strain on the connection. Also another pipe has a leak seal filling on the flange connection at the compressor head. K-300 A has similar issues, there is a saddle on branch connection, and a leak seal clamp on it as well. K-300 A was reported to operations as a safety concern last year.	NL-Environmental - Release	
9290	Richmond, CA - Refinery	3/4/2011 10:00:00 AM	Closed	Near Loss	K-300 suction and discharge piping	While removing piping on K-300 B mechanics noticed that one of the spools had an old style "saddle on" branch connection (no longer legal in the refinery) and that there was significant pipe strain on the connection. Also another pipe has a leak seal filling on the flange connection at the compressor head. K-300 A has similar issues, there is a saddle on branch connection, and a leak seal clamp on it as well. K-300 A was reported to operations as a safety concern last year.	NL-Fire/Explosion	
9302	Richmond, CA - Refinery	3/6/2011 7:45:00 PM	Closed	Loss	contractor injured finger	Bigge: Contractor employee was installing a trolley on a beam punctured his finger when he put in a keeper pin. Employee was wearing gloves at the time of the injury.	NL-Injury/Illness - Contractor Injury	(1) Improper locking pin, square ended cotter pins which cannot cause a puncture should have been used , (2) Pre use inspection not performed
9302	Richmond, CA - Refinery	3/6/2011 7:45:00 PM	Closed	Loss	contractor injured finger	Bigge: Contractor employee was installing a trolley on a beam punctured his finger when he put in a keeper pin. Employee was wearing gloves at the time of the injury.	Injury/Illness	(1) Improper locking pin, square ended cotter pins which cannot cause a puncture should have been used , (2) Pre use inspection not performed
9349	Richmond, CA - Refinery	3/3/2011 8:15:00 AM	Closed	Near Loss	Green Card - Office Depot truck speeding	Green Card. Office Depot truck entered Main Gate and drove at least 30 mph on Standard Avenue (15 mph zone). the truck turned on Center Street and appeared to be going 20-25 mph in a 10 mph zone.	NL-Transportation - Contractor	
9360	Richmond, CA - Refinery	3/4/2011 11:00:00 AM	Closed	Near Loss	Green Card - Audit of Turnaround Sign-In Sheets	Green Card - Conducted an audit of the Plant Sign In sheets for the Impact group @ Cogen turnaround. Found the documents used were not following the refinery standard. Further investigation showed only one contract company was in compliance. Discussion with most supervisors found they were unaware of the RI specific requirements.	NL-Business Process - Business Process	
9396	Richmond, CA - Refinery	3/8/2011 3:00:00 AM	Closed	Loss	hot piece of slag landed on contractors face while welding	Contractor employee was welding on the doors on the upper deck of T-1000 when a hot piece of slag landed on his face between his safety glasses and half face respirator. Receiving a small burn on employees cheeck.	Injury/Illness	(1) Hot Slag
9396	Richmond, CA - Refinery	3/8/2011 3:00:00 AM	Closed	Loss	hot piece of slag landed on contractors face while welding	Contractor employee was welding on the doors on the upper deck of T-1000 when a hot piece of slag landed on his face between his safety glasses and half face respirator. Receiving a small burn on employees cheeck.	NL-Injury/Illness - Contractor Injury	(1) Hot Slag
9407	Richmond, CA - Refinery	2/23/2011 12:00:00 AM	Closed	Near Loss	Ordered Ammonia PolySulfide and order was delayed by one week creating an outage of use. Metallurgical issue.	APS (ammonium poly sulfide) was delayed by the supplier because they did not receive their catalog price update prior to shipment and fail to communicate that information to the appropriate personnel at Chevron.	NL-Business Process - Business Interruption	(1) Due to personal changes with the responsible parties supplier catalog information was not updated in a timely fashion. , (2) Supplier fail to inform Chevron of their intentions resulting in product shipment delay.
9407	Richmond, CA - Refinery	2/23/2011 12:00:00 AM	Closed	Near Loss	Ordered Ammonia PolySulfide and order was delayed by one week creating an outage of use. Metallurgical issue.	APS (ammonium poly sulfide) was delayed by the supplier because they did not receive their catalog price update prior to shipment and fail to communicate that information to the appropriate personnel at Chevron.	NL-Business Process - Abnormal Supply Occurrence	(1) Due to personal changes with the responsible parties supplier catalog information was not updated in a timely fashion. , (2) Supplier fail to inform Chevron of their intentions resulting in product shipment delay.
						Sgt. Avila was exiting the door that was located on the outbound side of the		

9411	Richmond, CA - Refinery	3/8/2011 8:50:00 PM	Closed	Loss	Main Gate	guard shack at he end of his shift. Sgt. Avila had both hands full with his personal belongings and attempted kick the door open with his foot. His foot struck the lower glass panel of the door and put a spider web crack on the glass. The glass on the door is still in fact but will need to be replaced.	Equipment/Property Damage	(1) Officer attempted to kick open door to exit with hands full. His foot struck the glass in the door and caused large spider cracks in it.
9519	Richmond, CA - Refinery	3/2/2011 2:00:00 PM	Closed	Near Loss	The use of erroneous data which could have resulted in significant loss in time and money.	The use of erroneous data which could have resulted in significant loss in time and money. The data pulled from the database was incorrect based on a coding in the database. Data was not fully deleted and then re-entered causing duplicate data to build and caused balances to be reported erroneously.	NL-Business Process - Business Process	
9537	Richmond, CA - Refinery	3/9/2011 3:00:00 PM	Closed	Loss	Fcc relief header leak	Odor complaint detected to be relief gas header. Out of service MOV on old 10 inch jumpover line developed a leak.	NL-Environmental - Release	(1) Valve body corroded through as a result of pocketed liquid in a static line, (2) Dead leg was created when valve was left in the closed position for several years resulting in failure due to long term exposure to accumulated process liquid.
9537	Richmond, CA - Refinery	3/9/2011 3:00:00 PM	Closed	Loss	Fcc relief header leak	Odor complaint detected to be relief gas header. Out of service MOV on old 10 inch jumpover line developed a leak.	Environmental	(1) Valve body corroded through as a result of pocketed liquid in a static line, (2) Dead leg was created when valve was left in the closed position for several years resulting in failure due to long term exposure to accumulated process liquid.
9554	Richmond, CA - Refinery	3/9/2011 7:42:00 PM	Closed	Near Loss	18plant upset routed stripped water off test	On 3/9/2011 at 7:42 PM the OWS6 RLOP board operator noticed the Flow off P-1820 reflux pump was dropping off rapidly. The outside operator was dispatched to the plant and noticed the pump discharge was less than normal. He switched pumps and noticed the pressure return to normal at the same time the OWS 6 noticed flow returning to normal. A pressure bounce occurred though out the plant because of this upset. C-1820 bottoms temp dropped below 308 Degrees so the decision was made to route the stripped water of test and wait until morning for a good test result to route back on test.	NL-Quality - Incorrect Product	
9577	Richmond, CA - Refinery	2/28/2011 5:30:00 AM	Closed	Near Loss	Green Card--Parking and Lighting Issues at 91 Gate	Green Card--The lines for parking stalls is worn off and unable to distinguish where the spots are. The parking lot is also very dark due to the fact that there are no lights. Re-stripe the lot and install street lights.	NL-Injury/Illness - Contractor Injury	
9595	Richmond, CA - Refinery	3/10/2011 7:00:00 AM	Closed	Loss	V-1413 udder/deadman valve failure.	Increased flow to relief gas header. Traced flow to be from V-466. Then discovered V-1413 water udder/ deadman valve did not close totally allowing hydrocarbon to go to the relief drum.	Environmental	(1) V-1413 deadman valve bad spring
9597	Richmond, CA - Refinery	3/8/2011 2:20:00 PM	Closed	Near Loss	Sore back	Employee stated his mid-back felt sore after working throughout the day. There was no event or incident that contributed to an injury. EE used LPSA to pause work to avoid injury. Came in next day and reported feeling 100%.	NL-Injury/Illness - Contractor Injury	
9640	Richmond, CA - Refinery	3/10/2011 12:00:00 AM	Closed	Loss	Operator srayed with chemical	While performing a Lab procedure, a QC operator was sprayed with Bromine Titration Solvent on the chest and possibly some into the eyes.	NL-Injury/Illness - Employee Injury	(1) Equipment failure
9645	Richmond, CA - Refinery	3/9/2011 12:00:00 AM	Closed	Near Loss	K-1060 Failed to start.	During a Flaring event on 3/9 Isomax operators were instructed to start the second flare gas compressor.(K-1060. K-1060 would not start	NL-Equipment/Property Damage - General Liability	(1) Water jacket system pressure low because bypass to shotpot open
9659	Richmond, CA - Refinery	3/10/2011 3:00:00 PM	Closed	Near Loss	Green Card--Loose boards and missing hand rail near 95FI593 flow meter	Green Card--Wooden walk way on Midway St by 95FI593 flow meter has loose boards and missing hand rail.	NL-Injury/Illness - Employee Injury	
9724	Richmond, CA - Refinery	3/13/2011 4:36:00 PM	Closed	Loss	K3550 S/D	K3550 S/D and caused the furnaces to trip	NL-Operational Process/Procedures - Safety Systems	(1) SOS: Warning Devices: No vibration monitor in place at the case for K-3550. , (2) SOS:Maintenance & Inspections: To Be Determined: Troubleshooting Efforts Continue
9744	Richmond, CA - Refinery	3/11/2011 6:45:00 AM	Closed	Near Loss	Green Card - Potential MVC on public road	Green Card - A Biggie Crane work truck in the turning lane for I-580 East swerved into the right lane as the light turned green. He cut me off at the intersection. For some unknown reason he stopped in the road and proceeded to reverse his truck, apparently unaware I and several other cars were directly behind him (with nowhere to go). I beeped my horn to catch his attention. He stopped before impacting me, changed directions and then proceeded down E. Standard Ave to Castro Street and eventually turned in headed toward 91 Gate.	NL-Transportation - Company	
9744	Richmond, CA - Refinery	3/11/2011 6:45:00 AM	Closed	Near Loss	Green Card - Potential MVC on public road	Green Card - A Biggie Crane work truck in the turning lane for I-580 East swerved into the right lane as the light turned green. He cut me off at the intersection. For some unknown reason he stopped in the road and proceeded to reverse his truck, apparently unaware I and several other cars were directly behind him (with nowhere to go). I beeped my horn to catch his attention. He stopped before impacting me, changed directions and then proceeded down E. Standard Ave to Castro Street and eventually turned in headed toward 91 Gate.	NL-Transportation - Contractor	
9777	Richmond, CA - Refinery	3/14/2011 12:00:00 AM	Closed	Loss	Rolled left ankle	Firefighter was advancing hose in Project 81 / ship structure when the hose pined his left ankle against the wall, causing a minor sprain.	Injury/Illness	(1) Lack of communication due to normal aspects of drill. Discussed with the team these issues in post drill debriefing, as well as the discussed how to be aware of these issues in the future
					Bird strike on Ortho feeder	Breaker 12-248 opened due to bird strike causing Ortho Feeder to lose power.		

9806	Richmond, CA - Refinery	3/14/2011 8:00:00 PM	Closed	Near Loss	opened breaker 12-248 causing a power outage at BAPL and Hensley Street.	There was also a voltage dip on Chem and Xylene street feeders causing equipment at the RARE plant to trip off line. The RARE Plant auto started with no impact to the Refinery.	NL-Business Process - Business Interruption	
9820	Richmond, CA - Refinery	3/14/2011 12:00:00 AM	Closed	Near Loss	Green Card--Fire extinguishers out of compliance	Green Card--8 of 9 fire extinguishers in the central maintenance building have passed the date of the previous yearly inspection (3-1-10) and are now considered expired. All fire extinguishers appear to otherwise be in good working order. Need to schedule replacements ahead of time.	NL-Equipment/Property Damage - General Liability	
9936	Richmond, CA - Refinery	3/15/2011 6:25:00 AM	Closed	Near Loss	Green card - non-company truck was driving down the wrong side of the road by 31 gate due to poor lighting	Green card - While driving in from Gate 31 on Channel St., I observed a non company pickup truck driving in the middle of the road. I then proceeded to alert them that they were no in the lane by flashing my lights and honking and thay then moved into the other lane now facing the wrong direction completely. Moments late, the driver finally realised they were in the wron lane when oncoming traffic was seen ahead coming at them.	NL-Injury/Illness - Contractor Injury	
9936	Richmond, CA - Refinery	3/15/2011 6:25:00 AM	Closed	Near Loss	Green card - non-company truck was driving down the wrong side of the road by 31 gate due to poor lighting	Green card - While driving in from Gate 31 on Channel St., I observed a non company pickup truck driving in the middle of the road. I then proceeded to alert them that they were no in the lane by flashing my lights and honking and thay then moved into the other lane now facing the wrong direction completely. Moments late, the driver finally realised they were in the wron lane when oncoming traffic was seen ahead coming at them.	NL-Injury/Illness - Employee Injury	
9944	Richmond, CA - Refinery	3/1/2011 12:00:00 AM	Closed	Near Loss	Report not marked Business Confidential	It was discovered that Flare Causal Analysis reports submitted to the Air District by Bay Area refinery are routinely requested by and sent to outside organizations. A recently submitted report included a drawing that was not marked Confidential Business Information (CBI). It is not known whether the drawing was attached to the copy that was released. Future reports needs to be reviewed for CBI before sending.	NL-Lessons Learned	
9944	Richmond, CA - Refinery	3/1/2011 12:00:00 AM	Closed	Near Loss	Report not marked Business Confidential	It was discovered that Flare Causal Analysis reports submitted to the Air District by Bay Area refinery are routinely requested by and sent to outside organizations. A recently submitted report included a drawing that was not marked Confidential Business Information (CBI). It is not known whether the drawing was attached to the copy that was released. Future reports needs to be reviewed for CBI before sending.	NL-Security - Information Protection Loss - Other	
9946	Richmond, CA - Refinery	3/10/2011 12:00:00 AM	Closed	Near Loss	Compliance report attachment was run for incorrect time period	A compliance report was prepared and submitted to a supervisor for signature. On review, it was discovered that the report included an attachment that had been run for the wrong time period. It was after hours, and the responsible individuals were on Fridays off or sick, so the attachment could not be rerun for several days. The cover letter and postage had to be redone, causing unnecessary recycle and submittal at the "last minute".	NL-Regulatory Compliance - Non Compliance - Air	(1) Not having a schedule for development and review of the MACT I Report. , (2) Regulatory requirements are not clearly understood.
9957	Richmond, CA - Refinery	3/16/2011 11:00:00 AM	Closed	Near Loss	#3 boiler running in manual was attempted to put in auto mode	On 3/16/11 @ 11:00, #1 Power Plant's boiler operators were attempting to put #3 boiler on auto control mode. Boiler was lined up (PV vs. Setpoint) ready to put forced draft/fuel gas/boiler master controllers back into the auto position from manual. As soon as fuel and forced draft Moore controllers were set to the auto position, the air controller closed off and the fuel controller opened up. at that point we put boiler back into the manual position, and brought boiler back under control. No smoke alarms , nor NOX exceedence's happened during this boiler upset. #3 boiler stabilized by 11:20. No steam load upset during this time as Cogen's duct burners were already at low loads picked up the boiler upset. The amount of steam #3 boiler lost was around thirty thousand. The boiler is still capable of full load of 105 MLBH.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) O2 Trim controller was closed
9970	Richmond, CA - Refinery	3/15/2011 6:00:00 PM	Closed	Near Loss	K-920 Discharge Bottle ORJ Flange Leak Found During N2 Pressure Test	K-920 N2 Pressure Test was unsuccessful due to 1st stage discharge bottle leak at the ORJ flange.	NL-Lessons Learned	(1) 1. Why did "above" happen? Because the ORJ flange gasket did not properly seal after torque procedure. 2. Why did "1" happen? Because the gasket was reused. 3. Why did "2" happen? Because it is common practice to inspect and reuse if no visual defects are found on the sealing surfaces of the gasket after VT (visual inspection). 4. Why did "3" happen? Past use and installation experience established that the reuse of these ORJ gaskets has not presented any leak path issues. 5. Why did "4" happen? Above standard was not followed and or the standard needs to be modified...
9971	Richmond, CA - Refinery	3/14/2011 12:00:00 AM	Closed	Near Loss	Green Card: Smoking at Innappropriate location.	Green Card: Man smoking at bus stop, this is not a designated smoking post. Location: Bus stop @ main and cold.	NL-Transportation - Contractor	(1) Bus stop looks like a smoking post and there is no No Smoking Sign hung in shack.
9972	Richmond, CA - Refinery	3/9/2011 2:40:00 AM	Closed	Near Loss	Green Card--Improper equipment and rigging personnel used to lift pipe spool	Green Card--While using a telescoping forklift to set a 3" pipe spool on top tier of rack, pipe was open ended with no caps, became sleeved over scaffold vertical pole while being lowered into place at C-1630 New Lube oil pipe rack. Need to use proper equipment and rigging person. Need to leave caps in place to prevent open-end entry of obstacles.	NL-Equipment/Property Damage - General Liability	
						Operations was testing LSHH 5003 V-500 K.O. DrumHigh level shutdown alarm of K-500. Ops used Checklist 74LH5003. Per checklist 2 outside operators lined up the wash water and bridle valves to test this alarm with HO		

9984	Richmond, CA - Refinery	3/16/2011 2:23:00 PM	Closed	Loss	K-500 tripped	observing, K-500 was placed in S/D bypass for test. Valves were manipulated for the test and after 5 minutes when no alarm came in the test was aborted and the valves were place back to normal. The He was called in for a safety meeting along with the operators. 10 minutes into the meeting K-500 S/D on high level in V-500. LSH 5002 the high level alarm never came on before the trip. Levels in V-500 appeared to both track and in the 15- 18 percent lvl LSH 5002 was tested after the plant was stabilized and it did alarm satisfactolly. LSHH still in the HH alarm start and K-500 in safety bypass with safety bypass form filled out. Manual shutdown will be the mode of shutdown if LSH 5002 the high level alarm is activated.	Operational Process/Procedures	(1) Plugged bottom lead on High level shutdow pot caused by level piping internal corrosion caused by test water remaining in the transmitter leads and in the floatchamber
10005	Richmond, CA - Refinery	3/16/2011 8:00:00 AM	Closed	Near Loss	K-1600 unloaed on loss of air signal to loaders	K-1600 recycle compressor unloaded during an air cutover to the New P-1601 project a miscommunication between main and operations lead to the wrong valve being isolated for the tie in and a subsequent loss of air to the loaders on K-1600	NL-Lessons Learned	(1) Inadequate communication as to what valves needed to be loto'd to make the air tie in
10012	Richmond, CA - Refinery	3/16/2011 11:50:00 AM	Closed	Near Loss	Green Card - Potential Trip	Green Card - when walking to cafeteria & descending steps, a co-worker coming the other way reminded me to use the hand-rail. Turned out that I was about to "step over" the last step.	NL-Injury/Illness - Employee Injury	
10031	Richmond, CA - Refinery	3/11/2011 12:30:00 PM	Closed	Near Loss	Virus threat	A virus was detected and quarantined on an engineering GUS station while transferring an image file from a standalone computer to the PCN for storage using a portable USB storage device. The process of storing image files on the Process Control Network for control related computers is a normal part of the sites backup and recovery process.	NL-Business Process - Business Process	(1) What: Virus detected on PCN after using a portable storage device to transfer a backup file from a standalone computer Why: Portable storage device was not scanned on the GIL network prior to connecting to PCN Why: A subsequent scan identified and removed a virus from the standalone computer Why: The standalone computer does not receive regular security patches and anti-virus updates because it is not connected to a secure network , (2) What: Virus detected on PCN after file transfer using a portable storage device from a standalone computer Why: Portable storage device was not scanned on the GIL network prior to connecting to PCN, (3) What: Virus detected on PCN after file transfer using a portable storage device from a standalone computer Why: A subsequent scan identified and removed a virus from the standalone computer Why: The standalone computer does not receive regular security patches and anti-virus updates because it is not connected to a secure network and no work process in place to maintain security
10051	Richmond, CA - Refinery	3/17/2011 7:00:00 AM	Closed	Loss	CVX EE lost their balance while standing up from a kneeling position and fell backward injuring themselves on a wooden crate. EMT's were called and the Clinic is evaluating the EE.	CVX EE lost their balance while standing up from a kneeling position and fell backward onto a wooden crate and injured back.	NL-Injury/Illness - Employee Injury	(1) EE did not brace themselves while standing back up from the kneeling positions which would of prevented the loss of balance and subsequent first aid injury.
10051	Richmond, CA - Refinery	3/17/2011 7:00:00 AM	Closed	Loss	CVX EE lost their balance while standing up from a kneeling position and fell backward injuring themselves on a wooden crate. EMT's were called and the Clinic is evaluating the EE.	CVX EE lost their balance while standing up from a kneeling position and fell backward onto a wooden crate and injured back.	Injury/Illness	(1) EE did not brace themselves while standing back up from the kneeling positions which would of prevented the loss of balance and subsequent first aid injury.
10063	Richmond, CA - Refinery	3/17/2011 1:30:00 PM	Closed	Near Loss	contract employee backed truck into pole	Contract employee backed truck into pole east of Salt house	NL-Transportation - Contractor	
10074	Richmond, CA - Refinery	3/17/2011 3:15:00 PM	Closed	Loss	Diesel Overfill	While filling an 8' tank with diesel, driver was watching the gauge when the tank overfilled. The amount was less than 1/2 gallon that was captured into the containment. Fire department responded.	Environmental	(1) Gauge on tank was not working properly.
10074	Richmond, CA - Refinery	3/17/2011 3:15:00 PM	Closed	Loss	Diesel Overfill	While filling an 8' tank with diesel, driver was watching the gauge when the tank overfilled. The amount was less than 1/2 gallon that was captured into the containment. Fire department responded.	NL-Environmental - Spill	(1) Gauge on tank was not working properly.
10094	Richmond, CA - Refinery	3/17/2011 9:00:00 PM	Closed	Loss	V-1404, Seal Oil Pot, overfilled.	At 20:00, AO2 operator opened the fill line for V-1404 to fill with 220 oil supplied from South Isomax bulk tank. Operator continued on his rounds and checked back 10 minutes later and the level had increased from 70% to 74%. Operator returned to the control room to monitor from the Honeywell console. 10 minutes later the operator got distracted and foget the fill line was open. At around 20:30, CO5 operator received the high level alarm for V-1404. He was not aware that anyone was filling the tank so thought that the level was bouncing off the high level alarm. He did not notify anyone that he received the alarm. At 22:30, operator was making rounds and noticed oil overflowing.	Environmental	(1) Why did V-1404 over fill. Because fill line was left open unattended. Why was the fill line left open unattended. Because operator was not trained to not leave vessel with fill line open. Why was operator not trained to not leave vessel when filling. Because other operators have been doing this and the vessel has not been overfilled.
						At 20:00, AO2 operator opened the fill line for V-1404 to fill with 220 oil		

10094	Richmond, CA - Refinery	3/17/2011 9:00:00 PM	Closed	Loss	V-1404, Seal Oil Pot, overfilled.	supplied from South Isomax bulk tank. Operator continued on his rounds and checked back 10 minutes later and the level had increased from 70% to 74%. Operator returned to the control room to monitor from the Honeywell console. 10 minutes later the operator got distracted and forgot the fill line was open. At around 20:30, CO5 operator received the high level alarm for V-1404. He was not aware that anyone was filling the tank so thought that the level was bouncing off the high level alarm. He did not notify anyone that he received the alarm. At 22:30, operator was making rounds and noticed oil overflowing.	Operational Process/Procedures	(1) Why did V-1404 over fill. Because fill line was left open unattended. Why was the fill line left open unattended. Because operator was not trained to not leave vessel with fill line open. Why was operator not trained to not leave vessel when filling. Because other operators have been doing this and the vessel has not been overfilled.
10125	Richmond, CA - Refinery	3/18/2011 12:00:00 AM	Closed	Near Loss	Green Card - Near use of company credit card for personal business	Green Card - Employee almost paid for lunch using their company travel card instead of their personal credit card (which looked very similar)	NL-Business Process - Business Process	
10148	Richmond, CA - Refinery	3/18/2011 7:00:00 AM	Closed	Near Loss	operator found dent in truck door accorss from door jam	Operator found a minor dent in the Lab Truck door while making his truck inspection.	NL-Equipment/Property Damage - Equipment Damage	
10152	Richmond, CA - Refinery	3/18/2011 8:59:00 PM	Closed	Near Loss	Xylene Feeder 12-244 breaker opened	Xylene Feeder 12-244 opened causing an electrical outage to Castro Street Pump Station, 19 pump station, Light & Lube Oil Area, EOD/Haz Waste Area, Wax Mould Area, 31 Gate, SOSS Station Service(Normal Supply)	NL-Business Process - Business Interruption	
10191	Richmond, CA - Refinery	3/18/2011 10:37:00 PM	Closed	Near Loss	TKN F-510 Furnace inlet TI effected by rain down pour	TKN F-510 Furnace inlet 74TI5006 effected by rain down pour, 74TI5006 was overcome by torrential down pour and causing 74HS501A (Feed forward) to swing F-510 temp control. First heat up quickly and then cool down equally fast. Fuel gas makeup was closed -5%.	NL-Operational Process/Procedures - Safety Systems	
10220	Richmond, CA - Refinery	3/20/2011 12:00:00 PM	Closed	Near Loss	Green Card--Roof Drain Plugged by entry door	Green Card--Roof drain above cafeteria is plugged. Primary drain line is plugged and overflow line is dumping water close to doorway, creating wet slippery conditions inside building. Roof drain needs to be unplugged.	NL-Injury/Illness - Employee Injury	
10256	Richmond, CA - Refinery	3/19/2011 12:00:00 AM	Closed	Near Loss	Signal interrupton from Radio Controller to Centra Com	total of 90 interruptions on a redundant system between radio controler and centra com.	NL-Operational Process/Procedures - Safety Systems	
10259	Richmond, CA - Refinery	3/21/2011 12:00:00 AM	Closed	Near Loss	Radio Communication between portables unreliable at 5am ~ 5:15am	Portable Radios not working relaibly. Busy signals occurred frequently.	NL-Business Process - Business Process	
10279	Richmond, CA - Refinery	3/21/2011 4:00:00 PM	Closed	Loss	EE taken to the clinic for evaluation. EE sat down and felt back pain, may be an existing non work related injury, more to come.	EE taken to the clinic for evaluation. EE sat down and felt back pain, may be an existing non work related injury, more to come.	Injury/Illness	(1) Pre existing condition- back problem.
10283	Richmond, CA - Refinery	3/18/2011 7:30:00 PM	Closed	Loss	BAPL S/D during electrical storm	During the lightning storm on 3/18 the BAPL shuldown due to loss of power. The Pipeline Operator explained that they lost all indications and could not control anything on their end. Additionally, the pipeline operator explained that they were trying to get an update on the power supply from P.G & E. At the time this seemed fairly reasonable and we were busy responding to several other issues associated with the electrical storm and loss of Power on the Kinder Morgan pipelines. On 3/19 a review of the Electrical Distribution map revealed that the BAPL pump station receives its power from the Ortho Feeder. This was confirmed by U&E that sometime after 1995 the power supply to the BAPL station was switched from P.G. & E to the Ortho Feeder. One other point is that our electrical folks do not work on or have access to the BAPL pump station equipment. Chevron Pipeline dispatches their own technicians for any issues on this equipment. This lack of understanding on power supply resulted in a 24+ hour unavailability of the BAPL.	Operational Process/Procedures	(1) The training material (EOM) is less than adequate to meet the requirement since it does not include any description on how the BAPL is powered.
10322	Richmond, CA - Refinery	3/21/2011 8:00:00 AM	Closed	Near Loss	Green Card--Missing Grating	Green Card--Steel grate missing over catch basin along Quarry Rd, 75 yards past TK 3227, in the main tank field. Need new gate over the catch basin.	NL-Injury/Illness - Contractor Injury	(1) When mud slide was fixed with rock to hold back hill, it was felt it at that time replacing the covering on wood drain box with galvenized covering would not be cost effective with out replacing box. Job did not have the money
10334	Richmond, CA - Refinery	3/22/2011 7:00:00 AM	Closed	Loss	Van backed into car @ Kinder-Morgan.	RTD Driver was picking up mail offsite at Kinder-Morgan. Van backed into car. Minor damage. All parties are okay, no injuries.Discussed possibility of parking in lot and walking into warehouse to pick up mail. Area is tight and visibility is minimal. Forces driver to back out if they pull in rather than walking in.	Equipment/Property Damage	(1) Driver did not see vehicle behind him. He admitted that he could have looked over his shoulder instead of using the mirrors. If he had looked over his shoulder he would have avoided the collision. Using the mirrors forced him to look from one side to the other, adding to the opportunity to miss an obstacle.
10357	Richmond, CA - Refinery	3/22/2011 10:45:00 AM	Closed	Loss	Back into trailer denting the passenger side panel on the truck.	While leaving the long wharf backed into a trailer.	Transportation	(1) Did not walk to the back of the vehicle to identify if there were any hazards.
10369	Richmond, CA - Refinery	3/22/2011 8:00:00 AM	Closed	Loss	EMPLOYEE HIT WATER VALVE WITH MANLIFT	EMPLOYEE WAS BACKING OUT OF WORK AREA AND AS HE SWUNG OUT THE BASKET ON THE MANLIFT HE HIT THE WATER VALVE ON GROUND AND BROKE THE HANDLE ON IT.	Equipment/Property Damage	(1) NOT BEING AWARE OF SURROUNDINGS

10415	Richmond, CA - Refinery	3/14/2011 12:00:00 PM	Closed	Near Loss	Green Card--Personnel Walking on Pipes in Overhead Pipe Rack	Green Card--Short service employee was working in pipe rack at RLOP. Person was standing on pipe. He was using same pipe to use as an anchor point. Anchor point was not sufficient size according to RI-380 Section 6.7.3. Need to have all employees that work in elevated conditions know all requirements before putting themselves at risk. More training for these individuals.	NL-Injury/Illness - Contractor Injury	(1) SOS: Training & Procedures: SSE (Short Service Employee) Walking on 2' Pipe in Pipe Way. Did not recognize risky position . Did not recall training for fall protection requirements. No experience working in refinery (First day on job). SSE's foreman (mentor) did not stop SSE. Did not recognize risky position of employee. Did not recall training for fall protection requirements.
10419	Richmond, CA - Refinery	3/22/2011 10:00:00 PM	Closed	Near Loss	Richmond unable to supply commitments on LSVGO to El Segundo (Twice)	1. Richmond committed to being able to supply W220R via Tk3196 to El Segundo. Routing was determined to now work when trying to implement and was not able to produce/ship segregated product as planned. 2. Richmond planned to ship 60 MB of LSVGO from Tk3196 of imported gasoil. Tank heater was broken and tank temperature was approaching 81F pour point (actual temperature was 90F) and did not have 20F dT required to ship gasoil. These two unsuccessful exports reduced the contingency days for El Segundo's VRDS shutdown going long.	NL-Business Process - Business Interruption	(1) Not enough communication around priority on low tank temperature.
10419	Richmond, CA - Refinery	3/22/2011 10:00:00 PM	Closed	Near Loss	Richmond unable to supply commitments on LSVGO to El Segundo (Twice)	1. Richmond committed to being able to supply W220R via Tk3196 to El Segundo. Routing was determined to now work when trying to implement and was not able to produce/ship segregated product as planned. 2. Richmond planned to ship 60 MB of LSVGO from Tk3196 of imported gasoil. Tank heater was broken and tank temperature was approaching 81F pour point (actual temperature was 90F) and did not have 20F dT required to ship gasoil. These two unsuccessful exports reduced the contingency days for El Segundo's VRDS shutdown going long.	NL-Business Process - Abnormal Supply Occurrence	(1) Not enough communication around priority on low tank temperature.
10419	Richmond, CA - Refinery	3/22/2011 10:00:00 PM	Closed	Near Loss	Richmond unable to supply commitments on LSVGO to El Segundo (Twice)	1. Richmond committed to being able to supply W220R via Tk3196 to El Segundo. Routing was determined to now work when trying to implement and was not able to produce/ship segregated product as planned. 2. Richmond planned to ship 60 MB of LSVGO from Tk3196 of imported gasoil. Tank heater was broken and tank temperature was approaching 81F pour point (actual temperature was 90F) and did not have 20F dT required to ship gasoil. These two unsuccessful exports reduced the contingency days for El Segundo's VRDS shutdown going long.	NL-Business Process - Business Process	(1) Not enough communication around priority on low tank temperature.
10468	Richmond, CA - Refinery	3/23/2011 9:45:00 AM	Closed	Loss	Small jet spill to Bay when bleeder left open on pump at Wharf	At 09:45, Chevron employee saw oil in water near Wharf lab and immediately notified the Wharf Safety Operator who found a suckout pump running with it's discharge bleeder open spraying jet fuel into the drain line running to the area sump. He blocked in the bleeder and notified the Wharf HO. The sump backfilled up to a high level and then backflowed into another drain line into the connecting pan area below the walkway gratings. The pan normally catches flange drips and gravity drains in the same area sump. The pan has some pinhole leaks and allowed ~1 barrel of jet fuel to drip through to the bay water below.	Environmental	(1) The Wharf Lab Operator left the area with P-2 running and the bleeder open., (2) The integrity of the Lab Pad Drip Pan was found to be compromised, (3) The drain line from the wharf lab pad to the sump was plugged with foreign objects.
10502	Richmond, CA - Refinery	3/23/2011 12:30:00 PM	Closed	Loss	During the oil spill response on 23 March, two work boats took on water and submerged in the bay with 3 responders entering the water. A rescue workboat with two responders also submerged after coming to aid the first boat. 5 personnel in total entered the water. All personnel were rescued using the larger Munson response boat. There were no injuries to report. Both boats were recovered.	During the oil spill response on 23 March, two work boats took on water and submerged in the bay. The first boat submerged with 3 responders entering the water. A rescue workboat with 2 responders also submerged after coming to aid the first boat. 5 personnel in total entered the water. All personnel were rescued using a larger Munson response boat. All personnel were checked by EMTs at the Command Post and then transferred to the clinic for evaluation. There were no injuries to report. Both boats were recovered.	NL-Injury/Illness - Contractor Injury	(1) No Training or procedures in place , (2) Boat Design Inadquate for Application , (3) Boat Design Inadquate for Application
	Richmond,	3/23/2011			During the oil spill response on 23 March, two work boats took on water and submerged in the bay with 3 responders entering the water. A rescue workboat with two responders also submerged after coming to aid the first boat. 5 personnel in total entered the water. All personnel were rescued using the larger Munson response boat. There were no	During the oil spill response on 23 March, two work boats took on water and submerged in the bay. The first boat submerged with 3 responders entering the water. A rescue workboat with 2 responders also submerged after coming to aid the first boat. 5 personnel in total entered the water. All personnel were rescued using a larger Munson response boat. All personnel were checked by		(1) No Training or procedures in place , (2) Boat Design

10502	CA - Refinery	12:30:00 PM	Closed	Loss	Injuries to report. Both boats were recovered	EMTs at the Command Post and then transferred to the clinic for evaluation There were no injuries to report. Both boats were recovered.	NL-Environmental - Spill	Inadequate for Application , (3) Boat Design Inadequate for Application
10502	Richmond, CA - Refinery	3/23/2011 12:30:00 PM	Closed	Loss	During the oil spill response on 23 March, two work boats took on water and submerged in the bay with 3 responders entering the water. A rescue workboat with two responders also submerged after coming to aid the first boat. 5 personnel in total entered the water. All personnel were rescued using the larger Munson response boat. There were no injuries to report. Both boats were recovered	During the oil spill response on 23 March, two work boats took on water and submerged in the bay. The first boat submerged with 3 responders entering the water. A rescue workboat with 2 responders also submerged after coming to aid the first boat. 5 personnel in total entered the water. All personnel were rescued using a larger Munson response boat. All personnel were checked by EMTs at the Command Post and then transferred to the clinic for evaluation. There were no injuries to report. Both boats were recovered.	NL-Injury/Illness - Employee Injury	(1) No Training or procedures in place , (2) Boat Design Inadequate for Application , (3) Boat Design Inadequate for Application
10502	Richmond, CA - Refinery	3/23/2011 12:30:00 PM	Closed	Loss	During the oil spill response on 23 March, two work boats took on water and submerged in the bay with 3 responders entering the water. A rescue workboat with two responders also submerged after coming to aid the first boat. 5 personnel in total entered the water. All personnel were rescued using the larger Munson response boat. There were no injuries to report. Both boats were recovered.	During the oil spill response on 23 March, two work boats took on water and submerged in the bay. The first boat submerged with 3 responders entering the water. A rescue workboat with 2 responders also submerged after coming to aid the first boat. 5 personnel in total entered the water. All personnel were rescued using a larger Munson response boat. All personnel were checked by EMTs at the Command Post and then transferred to the clinic for evaluation. There were no injuries to report. Both boats were recovered.	Equipment/Property Damage	(1) No Training or procedures in place , (2) Boat Design Inadequate for Application , (3) Boat Design Inadequate for Application
10517	Richmond, CA - Refinery	3/24/2011 10:00:00 AM	Closed	Loss	7' plank dropped inside cwl cell, damage to new filters below.	Employee was removing "dance-floor" Platform inside of a cooling tower cell. They had removed almost the entire platform. When removing the last wood plank, employee lost the grip of the plank because he was in an akward position and due to the fact that it was raining pretty hard at the time. The plank fell approximately 12ft and damaged one section of the filter elements, and area of 1' x 4' was damaged. Removal of these platforms during normal weather conditions, the planks can be slippery because they are wet from the condensate of the cooling tower and they sometimes gather slippery moss. So being that the platform was being removed during rainy conditions, it made the last wood board that much more slippery.	Equipment/Property Damage	(1) Weather conditions were wet and windy, which made it even more slippery. EE did not exercise stop/pause work authority. EE did not get the right people involved
10222	Richmond, CA - Refinery	3/23/2011 3:00:00 PM	Closed	Near Loss	Gate 121 exit gate closed striking contractor truck	gate 121 exit closed striking contractor truck. No damage to truck or gate.	NL-Equipment/Property Damage - Equipment Damage	
10582	Richmond, CA - Refinery	3/23/2011 7:45:00 AM	Closed	Near Loss	Green Card--Unmarked and Loose Grating	Green Card--Was walking by P-23 and encountered unmarked grating and almost twisted my ankle on it due to its highly unbalanced nature. The grating tilted and dipped, causing me to loose footing momentarily. After the close call I noticed that there are similar unmarked cases all along pump row and header rows. Either mark grating with bright paint or replace a.s.a.p. because it is right next to a rotating machine--not good.	NL-Injury/Illness - Contractor Injury	
10583	Richmond, CA - Refinery	3/3/2011 12:00:00 AM	Closed	Near Loss	Green Card--Van didn't stop at stop sign	Green Card--Stopped at stop sign, my turn to go. Someone on cell phone rolled right through stop sign and almost hit me. Van did not have any logos on the side.	NL-Equipment/Property Damage - Equipment Damage	
10591	Richmond, CA - Refinery	3/15/2011 9:15:00 AM	Closed	Loss	Damage to phone booth at "T"	Two contract employees removed the safety cap on a pressurized fire hydrant station launching the safety cap which collided with and shattered the glass on a phone booth approximately 10' away.	Equipment/Property Damage	(1) Manifold design with Cam Lock quick connect connection did not include weep hole or vent in cap., (2) Employee did not understand that manipulation or removal of cap was part of the equipment he was not authorized to handle.
10605	Richmond, CA - Refinery	2/16/2011 12:00:00 AM	Closed	Loss	K-3008 Rotor and Diaphragm Damage Due to Excessive Thrust	K-3008 developed a noise emanating from the gearbox on 2/13 nightshift. Still monitored compressor operation but could not discern an issue. On 2/16, the decision was made to shut down the compressor to inspect the gearbox. Upon inspection, it was found there was excessive movement of the compressor rotor shaft from thrust bearing failure. The rotor impellers had traveled axially into the diaphragms, causing extensive damage.	Equipment/Property Damage	(1) Lack of a good process control system, compressor surge and possibly other events that caused cumulative damage to the thrust bearing from axial displacements exceeding thrust bearing clearance were the root cause of the incident

10608	Richmond, CA - Refinery	3/25/2011 8:55:00 PM	Closed	Near Loss	Loss of K-303 instrument air compressor	Operations responded to loss of instrument air compressor K-303. Compressor shut down on high vibrations for reasons unknown.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Suspected Water in the #8 valve actuator caused valve to seize
10629	Richmond, CA - Refinery	3/26/2011 6:40:00 AM	Closed	Loss	Operator sprayed with Fuel Oil	While attempting to sample P-2 Discharge the operator was sprayed with heavy vis fuel oil.	Environmental	(1) Sample drain line was plugged with resid which caused a high pressure condition which ruptured, (2) SOS:Design & Engineering: Operator Sprayed with Oil. Sample Burped Out of Funnel. Water in the line came in contact with heat on steam traced line and expanded (erupted) along with hot SDA. Funnel Drain Line Plugged. There are restrictions in the line (P-traps). , (3) •Design & Engineering (Design of Process): • Consider Verification and Validation process for completed/ closed out work orders to ensure correct mitigation or solution steps were taken and are in place., (4) -Training & Procedures (Communications/ Emergency Preparedness and Response Training):• Decon (decontamination or clean up of the operator) took approximately 5 to 6 hours in part due to available material did not remove oil (Joy dish washing soap and LAVA scap). •Immediate operator decon efforts by Emergency Responders did not prove efficient in removing the SDA from the skin. Once operator was transported to the refinery clinic, SDA was removed more rapidly with a different material (Dawn).
10694	Richmond, CA - Refinery	3/10/2011 11:15:00 AM	Closed	Near Loss	Green Card--Wrong Turn Behind Cafeteria Onto a One-Way Street	Green Card--A green cart that was traveling south on Center Street made a right turn onto a one-way street that runs in the opposite direction.	NL-Transportation - Contractor	
10697	Richmond, CA - Refinery	3/23/2011 12:00:00 AM	Closed	Near Loss	Green card - trench (located on Standard Ave.) started to cave in taking adjacent surface area with it.	Green card - Trench (located on Standard Ave.) started to cave in taking adjacent surface area with it.	NL-Injury/Illness - Contractor Injury	
10697	Richmond, CA - Refinery	3/23/2011 12:00:00 AM	Closed	Near Loss	Green card - trench (located on Standard Ave.) started to cave in taking adjacent surface area with it.	Green card - Trench (located on Standard Ave.) started to cave in taking adjacent surface area with it.	NL-Injury/Illness - Employee Injury	
10744	Richmond, CA - Refinery	3/28/2011 8:30:00 AM	Closed	Near Loss	Open wrong breaker in lighting panel, shut down compressor	Employees set up Fabrication Table and equipment, used power from local receptacle and began activities. One employee needed additional electrical cord and added a Y-splitter to GFCI and layed out additional extension cord to task area. When he attempted to use power tool he did not have power. Other employee lost power to his tool as well. Employees disconnected added cord and splitter and attempted to power tool at the GFCI without success. GFCI would not reset. Employees then investigated breakers in the lighting panel, no visicle trips were seen. Employee checked the receptacle number and corresponding breaker and attempted a reset to breaker with no results, still no power to GFCI adapter. Employee then plugged into another receptacle with same results no power to GFCI Adapter. Employee checked receptacle number, which was LP-1 and went to Lighting panel. At the time employee had checked panel schedule and read circuit identification then went to corresponding circuit breaker, Circuit 1, employee turned off Circuit 1 and then realized that Circuits 1,3 and 5 were Main Circuit Breakers. Employee notified Operations who happen to be there at the time and Operations took care of resetting Circuit.	NL-Lessons Learned	
10781	Richmond, CA - Refinery	3/29/2011 3:30:00 AM	Closed	Loss	Iso jet: routed off test due to off spec on Flash and freeze	On the night of 3/28 operations noticed C-730 bottoms was full and began to make moves on the Iso's to dry it up and get level on control. First Jet samples where a -42 freeze Spec -40 and a106 flash spec of 108, CO3 made move to turn the jet by cutting draw 300BBLS Through the night freeze and flash continued to move in the wrong direction. At 3:30AM after the 3rd off test sample (102 flash and -38 freeze)and many moves on the jet draw 3MBPD total and Iso reactors CAT to control C-730 M , Iso jet was routed off test and B&S is in the process of running a jet tank sample.	Quality	(1) import feed 90% point increased causing Iso jet flash and freeze to go off test
10959	Richmond, CA - Refinery	2/15/2011 12:00:00 AM	Closed	Near Loss	Battery failure on 63PLC02 for K930/K940 booster compressore alarms	In doing a survey of the RIE3 So Isomax DH+ network, it was discoverd that the battery fault light was on for 63PLC02.	NL-Business Process - Business Process	(1) What: PLC battery found in failed state Why: Suspect battery had been in service for some time and not replaced Why: No work process in place to proactively replace PLC batteries
11003	Richmond, CA - Refinery	3/30/2011 11:45:00 AM	Closed	Loss	MVC	Contractor Employee was backing his truck up from work site at berth 1. Not noticing that another employee had parked behide him. The truck was not visible and he backed into the passanger side of vehicle. No one was hurt.	Equipment/Property Damage	(1) Employee not aware of surroundings. did not conduct a 360 swareness.
	Richmond,	3/30/2011				Contractor Employee was backing his truck up from work site at berth 1. Not	NL-Equipment/Property	

11003	CA - Refinery	11:46:00 AM	Closed	Loss	MVC	noticing that another employee had parked behide him. The truck was not visible and he backed into the passanger side of vehicle. No one was hurt.	Damage - General Liability	(1) Employee not aware of surroundings. did not conduct a 360 awarness.
11004	Richmond, CA - Refinery	1/17/2011 12:00:00 AM	Closed	Near Loss	Delay of ordering TK-550 replacement blades for an emegent repair	Rotor blades for TK-550 were not ordered for over a month despite a high sense of urgency due to the high likelihood TK-550 would fail.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Lack of knowledge/training about writing WRs for parts ordering only., (2) Inconsistency in past situations and in different ABUs with both RER and technical OAs in regards to managing projects and ordering for large equipment repairs that will be completed on the run
11009	Richmond, CA - Refinery	3/30/2011 11:00:00 AM	Closed	Loss	Chipped tooth	Contract employee was securing equipment to flatbed truck with rachet style tie-down straps. The rachet handle snapped back contacting the employee on the front tooth. Impact resulted in a chipped tooth.	Injury/Illness	(1) Defective tie-down ratchet handle.
11013	Richmond, CA - Refinery	3/25/2011 12:00:00 AM	Closed	Near Loss	K-930 Packing Vent VOC Leak - Potential Production Loss due to VOC Leak Repair Deadline	K-930 has a shutdown VOC that will expire at the end of the day on Sunday, 4/3/11. This VOC point monitors the packing vents from the compressor cylinders. These VOC leaks have historically been placed on the shutdown repair list and due in 5 years. Beginning in January, attempts have been made to repair all booster packing leaks within and between regular H2 booster maintenance windows, as all booster compressor S/D VOCs are coming due in 2011-13. K-930 packing VOC leak, however, is still sniffing above the 500 ppm limit (sniffed on 3/28 at 4000ppm). K-940 is currently unavailable due to maintenance, and should it not return to service before K-930 must be shut down to repair VOC leaks, the North Yard must cut around 30 MMSCFD H2 consumption	NL-Business Process - Business Interruption	(1) Plant rates almost impacted due to K-930 VOC deadline for repairs and K-940 ongoing maintenance. 1. K-940 shut down unexpectedly the same week that K-930 was scheduled for maintenance, delaying the K-930 repair by 1 week. 2. K-930 VOC leak repair was not repaired in a timely manner ahead of the hard 5 year repair deadline during routine maintenance windows. Repair was scheduled only 1 week before the VOC due date and did not allow sufficient time to allow for unanticipated additional compressor repairs. 3. Operations did not understand the need to shut down K-930 if it was not repaired by the deadline in order to avoid a scorecard event and permit violation.
11013	Richmond, CA - Refinery	3/25/2011 12:00:00 AM	Closed	Near Loss	K-930 Packing Vent VOC Leak - Potential Production Loss due to VOC Leak Repair Deadline	K-930 has a shutdown VOC that will expire at the end of the day on Sunday, 4/3/11. This VOC point monitors the packing vents from the compressor cylinders. These VOC leaks have historically been placed on the shutdown repair list and due in 5 years. Beginning in January, attempts have been made to repair all booster packing leaks within and between regular H2 booster maintenance windows, as all booster compressor S/D VOCs are coming due in 2011-13. K-930 packing VOC leak, however, is still sniffing above the 500 ppm limit (sniffed on 3/28 at 4000ppm). K-940 is currently unavailable due to maintenance, and should it not return to service before K-930 must be shut down to repair VOC leaks, the North Yard must cut around 30 MMSCFD H2 consumption	NL-Regulatory Compliance - Non Compliance - Air	(1) Plant rates almost impacted due to K-930 VOC deadline for repairs and K-940 ongoing maintenance. 1. K-940 shut down unexpectedly the same week that K-930 was scheduled for maintenance, delaying the K-930 repair by 1 week. 2. K-930 VOC leak repair was not repaired in a timely manner ahead of the hard 5 year repair deadline during routine maintenance windows. Repair was scheduled only 1 week before the VOC due date and did not allow sufficient time to allow for unanticipated additional compressor repairs. 3. Operations did not understand the need to shut down K-930 if it was not repaired by the deadline in order to avoid a scorecard event and permit violation.
11085	Richmond, CA - Refinery	3/31/2011 7:30:00 AM	Closed	Near Loss	Green Card: Wasp nest found in portable bathroom at the hydroblast pad.	Contractors found a wasp nest in a portable bathroom at the hydroblast pad. The wasp's had taken over the bathroom and were attacking anyone who tried to enter it.	NL-Injury/Illness - Contractor Injury	
11094	Richmond, CA - Refinery	3/29/2011 9:15:00 AM	Closed	Near Loss	Green Card. Leg undermined by latest storm. walkway not sturdy. Location: Pole St. below 3160 Tank - FCC	Green Card. Leg undermined by latest storm. Walkway not sturdy. Needs to be secured or replaced before standing on this section over pipeway. Location: Pole St. below 3160 Tank - FCC	NL-Equipment/Property Damage - Equipment Damage	(1) Walkway was undermined due to the rainy weather
11163	Richmond, CA - Refinery	3/23/2011 10:30:00 AM	Closed	Loss	Shoulder discomfort / First Aid	An employee on a workboat retrieving wet absorbent pads from the water felt pain in his right shoulder while lifting one of the pads into the workboat. The employee did not report the possible injury until the next morning when he notified his Head Operator.	Injury/Illness	(1) Not communicating pre-existing medical condition on shoulder
11157	Richmond, CA - Refinery	3/31/2011 6:25:00 AM	Closed	Near Loss	T-957 exceeded safe oil height by 21 bbls (suspect B/O valve)	At 6:25PM the Refined Console Operator recieved a high level alarm on T-957 (Tetramer) - Tag# TK957A2. Production is currently set to T-955 so there should be no rise in T-957. A review of T-957 tank level shows that the tank level increased 74 bbls at a slow rate over the course of 5 hours starting at 12:14pm today. A check of all associated piping, manifolds etc revealed no unusual conditions. No FRD's were detected to be leaking by. The tank fill block was then closed and the level increase stopped. The tank level was lowered to below safe oil height. We suspect the problem may be with the 3" Tetramer twin seal valve #750. This valve was recently identified as not being able to be fully opened. A work request #329452 was issued and the thought is that perhaps this valve is leaking by. Also identified that the T-957 fill twin seal valve at the tank manifold is bad order. This valve has been written up for maintenance to inspect and repair.	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) Did not communicate clear expectation on the use of tank block valves
11209	Richmond, CA - Refinery	3/24/2011 5:15:00 PM	Closed	Loss	K-940 1st Stage #1 Cylinder Damage	K-940 shut down on high motor-end vibration after running approximately 2 hours, following #1 cylinder maintenance work. Initial conditions note K-940 was set up to run Rhen H2 per normal configuration. K-930 was shut down at the time K-940 was started up, until K-940 shut down. #1 cylinder sustained heavy damage on the piston and connecting rod due to suspected liquid contaminnation into 1st stage.	Equipment/Property Damage	(1) Liquid entered K-940 and knocked out in #1 cylinder, causing the piston damage. There is no online high level instrumentation on K-911C filter/coalescer upstream of K-930/940
11219	Richmond, CA - Refinery	3/29/2011 12:00:00 AM	Closed	Near Loss	Link Lines to Centra Com Radio sylem in Refinery outage	The copper wires betwee the radio control in Firehouse and the communication system on high hill experienced another near outaige.	NL-Business Process - Business Interruption	
	Richmond,	3/29/2011			Link Lines to Centra Com		NL-Operational	

11219	CA - Refinery	12:00:00 AM	Closed	Near Loss	Radio sytem in Refinery outage	The copper wires betwee the radio control in Firehouse and the communication system on high hill experienced another near outaige.	Process/Procedures - Safety Systems	
11221	Richmond, CA - Refinery	3/31/2011 12:00:00 AM	Closed	Near Loss	Outside Frequency Interference is occuring	Seeing on channel interference from system outside the refinery, or a radio within the refinery. We are continuing to look for the problem and tracking the interference. This problem can busy the system and make it hard to use radios reliably.	NL-Operational Process/Procedures - Safety Systems	
11221	Richmond, CA - Refinery	3/31/2011 12:00:00 AM	Closed	Near Loss	Outside Frequency Interference is occuring	Seeing on channel interference from system outside the refinery, or a radio within the refinery. We are continuing to look for the problem and tracking the interference. This problem can busy the system and make it hard to use radios reliably.	NL-Business Process - Business Interruption	
11241	Richmond, CA - Refinery	4/1/2011 5:00:00 AM	Closed	Near Loss	K-960 tripped on Low Lube oil pressure	At approximately 05:00 am at shift change the K-940 compressor crew called operations to tell them the lube oil filer for K-960 was spraying oil from the top gasket on filter K-961. Operations switched filters and the compressor shutdown on a transient low lube oil pressure. The compressor was restarted immediately and loaded up with no impact to the operating units.	NL-Operational Process/Procedures - Safety Systems	(1) SOS: Maintenance & Inspection: K-960 Spraying Oil. Lube Oil leaking from the filter (pct) section. Bad O-ring. Wear and Tear Over Time. , (2) SOS: Training & Procedures: K-960 Spraying Oil. Operator switched flow to the leaky filter. Didn't Look Closely at the Handle to see which way the flow was going. Switch Valve's arrow shape can be misinterpreted for position indication versus flow indication. , (3) SOS:Training & Procedures: K-960 Spraying Oil. Operator switched flow to the leaky filter. Was Asked by Mechanics to Switch Filters. Mechanics Didn't Look Closely at the Handle to see which way the flow was going. Switch Valve's arrow shape can be misinterpreted for position indication versus flow indication.
11250	Richmond, CA - Refinery	4/1/2011 1:00:00 PM	Closed	Loss	T-1637 Sales Tank Exceeded Safe Oil Hieght	T-1637 Automatic fill system failed and the tank exceeded Safe Oil hieght. The automatic fill system is being controlled with an L&G level gauge system which is prone to failure because of moving parts.	Environmental	(1) Mechanical failure
11352	Richmond, CA - Refinery	4/4/2011 11:45:00 AM	Closed	Loss	RI technician rolled ankle while stepping over pipe	assistant was carrying camera and equipment. He side stepped over an existing line to cross over it. When he stepped over he placed one foot on a rock. This rock moved when weight was put on it and the assistant rolled his ankle	NL-Injury/Illness - Contractor Injury	(1) technician felt pressure to complete job quickly
11352	Richmond, CA - Refinery	4/4/2011 11:45:00 AM	Closed	Loss	RI technician rolled ankle while stepping over pipe	assistant was carrying camera and equipment. He side stepped over an existing line to cross over it. When he stepped over he placed one foot on a rock. This rock moved when weight was put on it and the assistant rolled his ankle	Injury/Illness	(1) technician felt pressure to complete job quickly
11370	Richmond, CA - Refinery	2/8/2011 12:00:00 AM	Closed	Near Loss	Delay in RLOP Lab Reconstruction	RLOP lab equipment was removed from the current lab forcing samples to be ran at the SISO lab and at QCD. Construction was to begin in early February, and has been delayed. Samples have been sent up to QCD for 2 months and counting with no construction started. They could have been run in the RLOP Lab, in a more timely and cost efficient manner during this delay.	NL-Quality - Product Quality (Int)	
11410	Richmond, CA - Refinery	4/4/2011 4:00:00 PM	Closed	Near Loss	Insect bites	Employee noticed several insect bites located on his arms and head this morning. May have been the mosquito he killed late in the afternoon the previous day.	NL-Injury/Illness - Employee Injury	
11412	Richmond, CA - Refinery	4/4/2011 12:00:00 AM	Closed	Near Loss	Radio Interference Issue	Radio system seeing on channel interfering signal. If strong enough could cause radio system to become unreliable.	NL-Operational Process/Procedures - Safety Systems	
11415	Richmond, CA - Refinery	4/1/2011 12:00:00 AM	Closed	Near Loss	Near total radio communication loss at Firehouse.	Poor Quality of phone lines created near outage of Control Radio Controler in the Firehouse. Got report of poor communication.	NL-Operational Process/Procedures - Safety Systems	
11429	Richmond, CA - Refinery	4/5/2011 9:30:00 AM	Closed	Near Loss	Confirmed Internal and External Odor Complaints From 6" Ballast Line	Draining 6" Ballast line at flange to a vacuum truck with scrubber (liquid alive). under 580. Odors generated from draining line to a kitty pool.	NL-Environmental - Release	(1) Lack of oversight or supervision
11439	Richmond, CA - Refinery	4/5/2011 3:00:00 PM	Closed	Near Loss	Temporary shutdown of gasoline blender	Mechanic working on VOC leaker developed a pin-hole size leak on a bleeder valve connection spraying a small amount of gasoline to the atmosphere.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
11482	Richmond, CA - Refinery	4/6/2011 8:00:00 AM	Closed	Near Loss	Green Card - Nearly Knocked Someone Down	Green Card - As someone was exiting their office without looking they nearly knocked a co-worker over.	NL-Injury/Illness - Employee Injury	
						While deinventorying T3126 of liquids in preparation for tank turnaround, degassing contractor pulled liquids into their temporary exhaust ducting installed on a roof vent on the tank. This necessitated stopping deinventorying activities for a few hours to clean and replace the affected sections of ducting on the roof. Liquids were sucked into the ducting because the degassing contractor's thermal oxidizer was in operation and pulling vacuum in the ducting while the floating roof was still resting on liquid. It is a common practice to start degassing early so that exhaust from the vapor space will be continuous from the moment the roof is landed, in compliance with BAAQMD regulations, but the intent is to time this early start to just prior to when the roof		

11539	Richmond, CA - Refinery	4/6/2011 8:15:00 AM	Closed	Near Loss	Liquids pulled into temporary exhaust ducting	lands to limit the time vacuum is pulled on liquid rather than vapor space. The tank's normal level indicator was known to be questionable, so tank level was being estimated with alternate methods, including having operations manually measure the level, and getting an infrared tank scan of the exterior skin temperature of the tank. Degassing had started because the alternate information indicated roof was close to "High log" height and roof landing was imminent. Following the discovery of liquid in the ducting, the tank level was re-measured manually using a rigid stick gauge. The new measurements confirmed that the tank level was actually over 2 feet above the point where roof logs would land. Since roof landing was not imminent, the degasser ended up pulling too long without a vapor space opening up under a landing roof and pulled liquics into a section of the ducting. The factor is inadequate tools or equipment (faulty tank level instruments), but this was a known factor at the start of activities.	NL-Business Process - Business Interruption	
11542	Richmond, CA - Refinery	4/6/2011 2:00:00 PM	Closed	Loss	Operator felt pain in right hand while opening block valve.	Operator was de-LOTO'ing P-1411 and putting the pump in service when they felt a sharp pain in their right hand. They came into the control room and called plant protection to evaluate.	NL-Injury/Illness - Employee Injury	(1) No cause found. Potential use of body mechanics.
11542	Richmond, CA - Refinery	4/6/2011 2:00:00 PM	Closed	Loss	Operator felt pain in right hand while opening block valve.	Operator was de-LOTO'ing P-1411 and putting the pump in service when they felt a sharp pain in their right hand. They came into the control room and called plant protection to evaluate.	Injury/Illness	(1) No cause found. Potential use of body mechanics.
11602	Richmond, CA - Refinery	4/7/2011 9:30:00 AM	Closed	Loss	Sub Contractor tripped over a piece of rebar and punctured his knee	While off loading a truck with rebar , the forklift operator ran over a stick of # 4 rebar laying on the ground which was parallel to the truck. As a result, the rebar popped up causing the ground person to trip and fall puncturing his knee on a rock.	Injury/Illness	(1) Crew did not remove the excess rebar from the working area.
11621	Richmond, CA - Refinery	4/7/2011 8:56:00 AM	Closed	Loss	SRU #2 & #3 trains tripped off line.	Loss of 2 & 3 SRU trains. Operators were opening the parallel block valve on a back door 500# steam line to the FCC when a sudden drop in SRU plant 450# header pressure caused a loss of horsepower resulting in both #2 & #3 SRU's back end blower trips on low DP. The operators immediately blocked in the steam valve (normal closed position) then returned to the units to execute loss of train stabilization procedures.	Operational Process/Procedures	(1) Loss of 2 out of 3 SRU trains. Operators were commissioning an alternate 500# steam supply line for back up use in preparation for a planned maintenance job in the FCC by tying the SRU in-plant 450# steam hdr to the Yard 500# steam hdr. When the SRU operators began opening the 4" jump over block valve to tie the parallel lines together, a sudden drop (pressure & flow) in the SRU 450# steam hdr occurred which caused an immediate loss of horsepower/RPM's to both K-2231 & 2331 back end blowers resulting in #2200 & 2300 pit train trips on low unit differential pressure. The operators immediately blocked in the Jump over valve (normal closed position) then returned to the plant to execute plant stabilization procedures for loss of both trains. 2100 train remained on-line. Why 1- Both train trips were initiated by low unit differential FSC trips Why 2 - Both TG blowers (K-2231& K-2331) experienced a sudden reduction of RPM's which caused air flow to fall off thereby dropping unit DP below FSC trip points. Why 3- Steam supply to both TG blower turbines were hit with slugs of condensate which significantly slowed both turbines Why 4 - Accumulated condensate was still present in the stagnant steam header being placed in service when the two hdrs were opened up to each other. Why 5 - Several condensate traps on the stagnant steam hdr were later found to not be in working order and also were not checked by operators to confirm all condensate was removed in advance of tying the common hdrs together. Why 6 - Operators did not suspect water would be present and also did not anticipate steam from parallel hdr would flow towards SRU from Yard 500# steam hdr since both steam hdr pressures were presumed to be the same (500# hdr was actually 22 psig higher than in-plant hdr) Why 7- All potential threats were not recognized or discussed during the Pre-Task planning HSE. Why 8 - Not enough attention given to fully recognize/understand the risks before task was performed.
11640	Richmond, CA - Refinery	4/7/2011 6:15:00 PM	Closed	Loss	Possible flange leak at plot limit, discovered while bypassing V-3211	P-3251's level controller (FC-021) needs to be pulled and sent to the shop for repairs. Two attempts at isolating and removing valve from service have been unsuccessful due to major leak by on the controller's isolation valves and both pump discharge check valves and discharge block valves. Plan was to bypass V-3211 directing streams to V-1175 (separator/degasser) in the crude unit, clean up associated piping then release to maintenance for valve replacement. Estimated total time of V-3211 being bypassed would be approximately 48 hrs. During bypass operators responded to an odor coming from 4 Crude's Plot Limit. Upon arrival, operators noticed a possible pipe/flange leak coming from below grade at 4 Crude Plot Limit.	NL-Environmental - Operational Leak	(1) Equipment failed due to enviroment
						P-3251's level controller (FC-021) needs to be pulled and sent to the shop for repairs. Two attempts at isolating and removing valve from service have been unsuccessful due to major leak by on the controller's isolation valves and both		

11640	Richmond, CA - Refinery	4/7/2011 6:15:00 PM	Closed	Loss	Possible flange leak at plot limit, discovered while bypassing V-3211	pump discharge check valves and discharge block valves. Plan was to bypass V-3211 directing streams to V-1175 (separator/degasser) in the crude unit, clean up associated piping then release to maintenance for valve replacement. Estimated total time of V-3211 being bypassed would be approximately 48 hrs. During bypass operators responded to an odor coming from 4 Crude's Plot Limit. Upon arrival, operators noticed a possible pipe/flange leak coming from below grade at 4 Crude Plot Limit.	Injury/Illness	(1) Equipment failed due to enviroment
11640	Richmond, CA - Refinery	4/7/2011 6:15:00 PM	Closed	Loss	Possible flange leak at plot limit, discovered while bypassing V-3211	P-3251's level controller (FC-021) needs to be pulled and sent to the shop for repairs. Two attempts at isolating and removing valve from service have been unsuccessful due to major leak by on the controller's isolation valves and both pump discharge check valves and discharge block valves. Plan was to bypass V-3211 directing streams to V-1175 (separator/degasser) in the crude unit, clean up associated piping then release to maintenance for valve replacement. Estimated total time of V-3211 being bypassed would be approximately 48 hrs. During bypass operators responded to an odor coming from 4 Crude's Plot Limit. Upon arrival, operators noticed a possible pipe/flange leak coming from below grade at 4 Crude Plot Limit.	Environmental	(1) Equipment failed due to enviroment
11668	Richmond, CA - Refinery	4/8/2011 9:30:00 AM	Closed	Loss	Pinched finger causing laceration	Mistras: EE was inside of the 2000 HRSG manway 6N performing inspection duties using a telescoping pole to raise a camera. While raising the camera, one of the sections of the pole was not completely locked allowing it to collapse and pinch his finger. Gloves were worn but a section of skin was peeled from his finger in the process.	Injury/Illness	(1) Improper tool for the job., (2) Inadequate training on tool being used
11732	Richmond, CA - Refinery	4/10/2011 11:05:00 PM	Closed	Loss	K-940 sudden shutdown.	At 23:05hrs K-940 suddenly shut down without triggering any alarms. Upon inspection, the diode ring has come loose and is riding on the motor shaft.	Equipment/Property Damage	(1) 1) Why did diode ring fail? Mount fasteners came loose allowing wiring to fret and ground 2) Why did the fasteners come loose? Based on condition of fasteners that came loose, they were not properly tightened and/or no lock washers/locktite was used during assembly 3) why were fasteners not properly tightened? no written procedure available for assembling diode ring onto motor rotor. 4) Why is there no procedure? In the past there has never been a procedure available and a failure of this type has never occurred.
11747	Richmond, CA - Refinery	4/7/2011 3:30:00 PM	Closed	Near Loss	Green Card - Nail sticking up on handrail	Green Card - There is a wooden handrail on the stairway leading from the Firehouse to the parking lot across the street. On the handrail there is a nail head sticking up slightly less than a half inch on the right handrail as you go down the stair. I saw the nail and moved my hand. I'm worried that others may not and will catch a finger or ring on the nail as they start down the stairs.	NL-Injury/Illness - Contractor Injury	
11747	Richmond, CA - Refinery	4/7/2011 3:30:00 PM	Closed	Near Loss	Green Card - Nail sticking up on handrail	Green Card - There is a wooden handrail on the stairway leading from the Firehouse to the parking lot across the street. On the handrail there is a nail head sticking up slightly less than a half inch on the right handrail as you go down the stair. I saw the nail and moved my hand. I'm worried that others may not and will catch a finger or ring on the nail as they start down the stairs.	NL-Injury/Illness - Employee Injury	
11792	Richmond, CA - Refinery	4/11/2011 7:30:00 AM	Closed	Near Loss	Green Card - potential loss of productive time	Green Card -potential loss of productive time. The IIF 20 proactive event presentation was not posted prior to the meeting time. People had come from different parts of the refinery for a team meeting where this item was to be the safety topic. Fortunately, Team Lead was able to obtain another copy of the presentation from an SME.	NL-Business Process - Business Process	
11821	Richmond, CA - Refinery	4/12/2011 2:40:00 AM	Closed	Loss	C-90 bottoms flange leak	At ~ 2:45 am, 4/11N, a flange off of the P-105A bypass line began to leak (spray) C-90 bottoms to atmosphere coating surrounding piping. Leak was noticed by operator making rounds crew was notified and then the line was isolated.	NL-Environmental - Operational Leak	(1) SOS: Design & Engineering: D/E of Equipment: Valve material failed in this service, (2) SOS: Maintenance & Inspection: Inspection and Testing: Flange is not inspected/ maintained appropriately. Flange is not on a Preventative Maintenance Program. , (3) Sidebar SOS: Training & Procedures (Process Safety Information): History brief for P-105A was found to be incorrect.
11821	Richmond, CA - Refinery	4/12/2011 2:40:00 AM	Closed	Loss	C-90 bottoms flange leak	At ~ 2:45 am, 4/11N, a flange off of the P-105A bypass line began to leak (spray) C-90 bottoms to atmosphere coating surrounding piping. Leak was noticed by operator making rounds, crew was notified and then the line was isolated.	Loss of Containment	(1) SOS: Design & Engineering: D/E of Equipment: Valve material failed in this service, (2) SOS: Maintenance & Inspection: Inspection and Testing: Flange is not inspected/ maintained appropriately. Flange is not on a Preventative Maintenance Program. , (3) Sidebar SOS: Training & Procedures (Process Safety Information): History brief for P-105A was found to be incorrect.
11821	Richmond, CA - Refinery	4/12/2011 2:40:00 AM	Closed	Loss	C-90 bottoms flange leak	At ~ 2:45 am, 4/11N, a flange off of the P-105A bypass line began to leak (spray) C-90 bottoms to atmosphere coating surrounding piping. Leak was noticed by operator making rounds, crew was notified and then the line was isolated.	Environmental	(1) SOS: Design & Engineering: D/E of Equipment: Valve material failed in this service, (2) SOS: Maintenance & Inspection: Inspection and Testing: Flange is not inspected/ maintained appropriately. Flange is not on a Preventative Maintenance Program. , (3) Sidebar SOS: Training & Procedures (Process Safety Information): History brief for P-105A was found to be incorrect.
						While walking from crew van to turnstile #53, following a 12 hour nightshift, employee stepped on a boomerang reboundable surface mount delineator		

11851	Richmond, CA - Refinery	4/12/2011 5:23:00 AM	Closed	Loss	Employee rolled ankle while walking from Crew van to turnstile	base (delineator"orange" was missing and only the stationary base was in place). Employee rolled right ankle, stumble fell striking left knee on asphalt and before coming to rest on right side. The employee felt pain in right ankle and was helped by co-worker to small building near turnstile # 53. A call was made to CFD requesting EMT's to evaluate employees condition. A call was made to on shift STL @ 2-2327. Following CFD review Employee was transported to Hospital via AMR services for medical follow-up.	Injury/Illness	(1) Employee did not look for walking hazard as he exited the van., (2) Partially disassembled delineator base left a tripping hazard.
11873	Richmond, CA - Refinery	4/6/2011 12:00:00 PM	Closed	Near Loss	Green Card. No working telephones within the facility.	Green Card There are no working telephones within the facility (i.e.: where an emergency might occur). If an injury or accident occurred, you could not call 555 or 911 without a mobile phone.	NL-Injury/Illness - Employee Injury	(1) wind and rain caused tree to fall on phone lines, (2) wind and rain caused tree to fall on phone lines
11876	Richmond, CA - Refinery	4/12/2011 11:00:00 AM	Closed	Loss	Sub -Contractor (BCI) slipped in some gravel causing him to fall and injure his left shoulder.	While cleanining up wood and other form materials inside a newly constructed reactor, a BCI employee slipped in some gravel while carrying a couple pieces of wood. The load consisted of a 4x4 and a 4x6 approximately 7' long. When he fell, the contractor landed on the load injuring his left shoulder.	Injury/Illness	(1) Contrctor slipped and fell on loose gravel due to complacency and a unbalanced load.
11881	Richmond, CA - Refinery	4/11/2011 12:00:00 AM	Closed	Near Loss	Loss of P-36 Vibration Monitor	Lost the ability to operate the Mogas blender using P-36 as the Mogas Blender booster pump. This loss accounts for a significant loss of rate from the Mogas blender to finished product tankage.	NL-Business Process - Business Interruption	
12038	Richmond, CA - Refinery	3/23/2011 12:00:00 AM	Closed	Loss	During a JP8 load on the Mississippi Voyager 1st Ins showed signed of particulate and water contamination	During the loading process of the Mississippi Voyager V153 Chevron operations observed JP8 samples that failed workmanship on 1st Ins samples on 6 of 8 vessel compartments.	Quality	(1) Mississippi Voyager loading piping and compartment configuration do not allow for effective cleaning and inspection according to military standards. This increases the potential to contaminate JP8 with particulates, water, and/or prior cargo., (2) Micronic Filtration on 16" line is not compliant with EI 1590 or EI 1596 for micronic filter elements and filter vessels respectively. This could have contributed to the filter vessel not effectivly removing particulates from the finished tanks or upstream piping., (3) Source of contamination was not definitely identified. Though the documentation strongly suggests that the contamination was due to the Mississippi Voyager.
12045	Richmond, CA - Refinery	4/14/2011 12:00:00 AM	Closed	Near Loss	Condensate sump pump not working, overflowing hot condensate to grade	Condensate pump south of V-263 not working Hot condensate is overflowing making access to the pumps hazardous. EE's are using wood planks and pallets for access. Maximo was written for pumps repair. Need staging for the intermediate time.	NL-Equipment/Property Damage - Equipment Damage	
12057	Richmond, CA - Refinery	4/14/2011 8:00:00 AM	Closed	Near Loss	Employee fell abdominal pain most of the morning	Employee reported having a sharp pain in the lower left groin area.	NL-Injury/Illness - Employee Injury	
12077	Richmond, CA - Refinery	4/12/2011 10:00:00 PM	Closed	Near Loss	8 Plant stripped sour water routed off test due to high concentratons of ammonia	The stipped sour water was tested in the field lab at 20:00 with a 35 ppm NH3 result. Steam was increased to C-820 to help strip the NH3 out of the water. At 22:00, the stripped water was tested again with the number over 100 ppm.	NL-Quality - Product Quality (Int)	(1) Why was the SSW routed off test - High in NH3 concentration. Why was the SSW high in NH3 concentration - Steam in C-810 was dropping during the day. Why was the steam to C-810 dropping during the day - Because C-810 Tray 4 controller was put in auto. Why was C-810 tray 4 controller put in auto - Because no one had communicated to the operators not to use it and it had not been removed for the control scheme. Why was this communication to Operations not made - because assigned Process Control resource was not the owner of the plant; therefore, this action was not high on priority list Why - no clear owner of plant was assigned at the time of the incident.
12101	Richmond, CA - Refinery	4/13/2011 4:15:00 PM	Closed	Near Loss	green Card--Fan Blades Broke Off, Equipment not LOTOed	Green Card--Blades on exhaust fan broke off and lodged in guard. Equipment not tagged or de-energized and if switched on could have dislodged blades creating a projectile hazard.	NL-Equipment/Property Damage - Equipment Damage	
12157	Richmond, CA - Refinery	4/17/2011 12:15:00 AM	Closed	Loss	particle in the eye	Capitol Projects P2s contractor employee was grinding on some baffle plates in T-2000 when he felt some irritation in his eye.	NL-Injury/Illness - Contractor Injury	(1) Restricted work space
12157	Richmond, CA - Refinery	4/17/2011 12:15:00 AM	Closed	Loss	particle in the eye	Capitol Projects P2s contractor employee was grinding on some baffle plates in T-2000 when he felt some irritation in his eye.	Injury/Illness	(1) Restricted work space
12224	Richmond, CA - Refinery	2/19/2011 12:02:00 AM	Closed	Loss	C-1400 Flooding Leading to Alky Pit Stop	C-1400 rate limits addressed in February due to flooding that was occurring in lower trays of column. Overall Alky plant rates were limited and a Pit stop was planned to address the flooding issue. Repairs in this area of the column had been done during 4Q2010 shutdown so there was a chance there were issues in the column associated with shutdown work. When the column was opened nothing was found that might be a root cause to the flooding. Recommendations for changes inside the column were made by our distillation experts to prevent flooding. Upon startup no flooding issues at target high rates have been seen.	Business Process	(1) Original column design of liquid down comber clearance wasn't high enough to allow internal reflux at high unit feed rates.
						Green Card - Vehicle (appeared to be a black Dodge Caliber) travelling at		

12235	Richmond, CA - Refinery	4/18/2011 12:45:00 PM	Closed	Near Loss	Green Card - Vehicle Speeding	approximately 25-30 mph drove into Cafeteria parking lot from direction of Main Gate and parked. Assumed to be a personal vehicle (no signs showing affiliation with any company). NOTE - posted speed limit on road from Main Gate is 15 mph; posted speed limit in Cafeteria parking lot is 5 mph.	NL-Transportation - Personal Use	
12236	Richmond, CA - Refinery	4/13/2011 9:30:00 AM	Closed	Near Loss	Green Card. During an evacuation, nobody was assigned to secure doors	Green Card. During a building evacuation at the cafeteria, nobody was assigned to secure doors and prevent someone from entering the building. Everyone was at evacuation location. I stopped someone from entering the building just because I happened to be standing in the vicinity. Location: Tech Center - Cafeteria	NL-Injury/Illness - Employee Injury	
12252	Richmond, CA - Refinery	4/18/2011 4:05:00 PM	Closed	Near Loss	1601	Vehicle contacted the outrigger of a light plant. No damage.	NL-Equipment/Property Damage - Equipment Damage	
12385	Richmond, CA - Refinery	4/20/2011 9:30:00 AM	Closed	Loss	Operator strained left shoulder descening ladder.	As operator was descending ladder at E-551, his foot slipped and as he caught himself, he felt a pain in his left shoulder	Injury/Illness	(1) Why did the operator strain his shoulder - Strained should because he lost his footing. Why did the operator lose his footing - He lost his footing because he was not concentrating on the task of descending the ladder.
12401	Richmond, CA - Refinery	4/18/2011 12:00:00 PM	Closed	Near Loss	Green Card - tripping hazard on wooden bridge	Green Card - Pedestrian bridge near Building Permit Services has one plank sticking up. Employee almost lost their footing.	NL-Injury/Illness - Contractor Injury	
12401	Richmond, CA - Refinery	4/18/2011 12:00:00 PM	Closed	Near Loss	Green Card - tripping hazard on wooden bridge	Green Card - Pedestrian bridge near Building Permit Services has one plank sticking up. Employee almost lost their footing.	NL-Injury/Illness - Employee Injury	
12405	Richmond, CA - Refinery	4/20/2011 3:50:00 PM	Closed	Loss	Lost power to building. Plastic trash can was placed 2' from elec switch, wind blew lid open and down on switch moving it from on to off position.	Lost power to GMG Office Facility. A plastic trash can was placed 2' from electrical switch, the wind blew lid open and down on switch moving it from on to off position causing loss of power to building	NL-Business Process - Business Interruption	(1) Unknown
12456	Richmond, CA - Refinery	4/21/2011 7:10:00 AM	Closed	Near Loss	Loss of radio system due to bad cable from dispatch to High Hill	For the last 20+ years the communications cable between the fire department dispatch center and the High Hill repeater site has line issue causing the dispatch center to unknowing loose of the ability to communicate on the system. Units call into the dispatch center and the audio signal due to communications line loss fails to reach the dispatch consol. Field units call and the dispatcher is unaware ther is an issue with the system until a telephone call is made to the dispatch center.	NL-Business Process - Business Interruption	
12461	Richmond, CA - Refinery	4/20/2011 10:50:00 AM	Closed	Near Loss	Green Card - Survey Work (no FRC)	Green Card - I observed two contract workers performing survey work w/o Fire Resistant Clothing (FRC). I approached them and asked them about their FRC and they were unaware of the requirement. I called their field construction rep who statec they didn't need it bacause they were working in the road. They were not working in the road, and their location was always changing as they were surveying for some cable installation. In other words, they were not a short term visitor, they were escorted by a company rep and they would be doing work at times near our pipeways and process plant plot limits.	NL-Injury/Illness - Contractor Injury	(1) 1. Why did "problem" occur? Workers & Field Construction Rep had perception that did not need to wear FRC outside of process plant areas. 2. Why did "1" happen? Training & RI-314 reinforce that need to wear FRC in process plant areas (white lined). 91 Gate training and RI-314 do not clearly address issue of FRC in pipeways or areas around process plants. 3. Why did "2" happen? 91 Gate Training and RI-314 do not address need to conduct a case-by-case risk assessment Sidebar. Why did "2" happen? RI-314 does not have a clearly defined exception process 4. Why dic "3" happen? Prior risk assessment was focused on FRC and process plant areas due to previous incidents., (2) 1. Why did "problem" occur? Workers & Field Construction Rep had perception that did not need to wear FRC outside of process plant areas. 2. Why did "1" happen? Training & RI-314 reinforce that need to wear FRC in process plant areas (white lined). 91 Gate training and RI-314 do not clearly address issue of FRC in pipeways or areas around process plants. 3. Why did "2" happen? 91 Gate Training and RI-314 do not address need to conduct a case-by-case risk assessment
12467	Richmond, CA - Refinery	4/21/2011 11:50:00 AM	Closed	Near Loss	Green Card - Talking on Cell Phone while driving	Green Card - Observed Driver of Maroon Car Talking on cell phone while driving on Center Street near Midway Intersection.	NL-Transportation - Personal Use	
12467	Richmond, CA - Refinery	4/21/2011 11:50:00 AM	Closed	Near Loss	Green Card - Talking on Cell Phone while driving	Green Card - Observed Driver of Maroon Car Talking on cell phone while driving on Center Street near Midway Intersection.	NL-Transportation - Contractor	
12467	Richmond, CA - Refinery	4/21/2011 11:50:00 AM	Closed	Near Loss	Green Card - Talking on Cell Phone while driving	Green Card - Observed Driver of Maroon Car Talking on cell phone while driving on Center Street near Midway Intersection.	NL-Transportation - Company	
12473	Richmond, CA - Refinery	4/21/2011 2:30:00 PM	Closed	Near Loss	Green Card. Cell phone use while driving	Green Card. There continues to be use of cell phones while driving in the Refinery. This topic was discussed in our work group and several had reported seeing this. Location: D&R	NL-Injury/Illness - Employee Injury	

12519	Richmond, CA - Refinery	4/22/2011 6:21:00 AM	Closed	Loss	Power drop from PG&E caused SRU train trip and misc. equipment trips.	PG&E experienced flash damage (cause unknown) to transmission tower 17/104 resulting in a power drop on the Sobrante #1 line into the refinery. This drop caused breaker #782 and #882 at SOSS to open. The open breakers likely resulted in tripping an SRU train, some hydroprocessing equipment, DWOP pumps, and possibly other miscellaneous equipment.	Operational Process/Procedures	(1) PG&E feeder short
12525	Richmond, CA - Refinery	4/21/2011 1:38:00 PM	Closed	Loss	Security Officer was returning to Gate 91 Guard Shack at exit side when Gate arm was activated by a driver departing refinery. Gate arm rising caught the sleeve of Officer's shirt and broke off as Officer attempted to get free off gate arm.	At the above time, date and location the Officer was returning to Gate 91 Guard house via Turnstile T-91 after picking up some "pink cards" from Pass Control. As he crossed the street in front of the exit- side barrier arm, he stepped between the barrier arm and a stopped vehicle waiting to "badge out." Just as the Officer stepped to the inside of the barrier arm, the driver waiting to exit swiped his badge to exit and the gate arm raised, catching the sleeve of the Officer's shirt as gate raised towards the "open " position. As the Officer attempted to free himself and his shirtsleeve from the raising gate arm, the wooden gate arm broke off. The officer was not injured and the only damage was the broken wooden gate arm.	Equipment/Property Damage	(1) Officer walked within the operating area of the moving barrier arm because there were not markings to show Officers that the operating area of the barrier arm is an unsafe area.
12547	Richmond, CA - Refinery	4/23/2011 10:00:00 AM	Closed	Near Loss	Improper PPE inside of a regulated area	Tank: EE was standing outside of the HRSG 2000 enclosure within the Ceramic Fiber taped area established for material being installed inside with a respirator but not wearing any tyvexs. Fire Marshall on-site to sign a Ignition Source Permit noticed this and contacted Operations and myself to question the situation because it didn't look right to him. Factory Rep was instructed of our procedures and that tyvex is a required part of the PPE to be in the roped off area and offered a pair to put on if he needed to remain inside the tape.	NL-Operational Process/Procedures - Safety Systems	
12548	Richmond, CA - Refinery	4/23/2011 10:00:00 AM	Closed	Near Loss	Near Miss, contact with 120V electrical tracing	Chevron: EE was working on fire eye 929 on top of the combustor for T-2000, when EE inadvertently made contact with a 120V electrical tracing causing it to arc upon contact with a handrail support. EE was working in a very restricted and confined area and the tracing is not visable from above (Located about 6" above the deck) and was hanging below the pipe. No injury occurred but EE had a very deep concern due to the very close proximity of their arm and body to the arc. Unable to determine how long this tracing was in this condition but end was sealed by S/D electrician to prevent a future incident.	NL-Injury/Illness - Employee Injury	
12650	Richmond, CA - Refinery	4/22/2011 6:30:00 AM	Closed	Loss	#3 SRU tripped	SRU # 3 train tripped off line when the refinery experienced a power surge (see L.I.#12519) The unit tripped off with both fire-eyes on F-2330 shutdown. This should not have happened being that one of the fire-eyes is on a UPS. Investigating into the electical started.	Operational Process/Procedures	(1) Why 1: The FSC ordered the trip (correctly per its programming). Why 2: The two fire eyes on F-2330 showed that there was no flame in the furnace for 5 seconds. Why 3: There was no power to the fire eyes. Why 4A: There was a trip at the breaker in U&E. There is a separate incident investigation for this. Why 4B: The UPS should have supplied backup power to one of the fire eyes, but did not. Why 5: The UPS was plugged into the wrong power outlet (an outlet on the same circuit, not to the UPS battery). Why 6: It is unclear when the UPS was unplugged incorrectly, possibly during the SRU #3 Shutdown. The power supply was not clearly labeled and the PM for checking the battery and condition of the UPS's has been deleted during the change from Passport to Maximo. . (2) Why 1: The FSC ordered the trip (correctly per its programming). Why 2: The two fire eyes on F-2330 showed that there was no flame in the furnace for 5 seconds. Why 3: There was no power to the fire eyes. Why 4A: There was a trip at the breaker in U&E. There is a separate incident investigation for this. Why 4B: The UPS should have supplied backup power to one of the fire eyes, but did not. Why 5: The UPS was plugged into the wrong power outlet (an outlet on the same circuit, not to the UPS battery). Why 6: It is unclear when the UPS was unplugged incorrectly, possibly during the SRU #3 Shutdown. The power supply was not clearly labeled and the PM for checking the battery and condition of the UPS's has been deleted during the change from Passport to Maximo.
	Richmond,	4/23/2011			T-2000 - 13.8kv bus cleared when (CGT-2000)	T-2000 - 13.8kv bus cleared when (CGT-2000) 13-4 Breaker closed during start-up. 1.) Started CGT-2000 per start-up procedure. 2.) Fire-in CGT-2000 @ 2133hrs. 3.) T-2000 Generator Breaker 13-4 Closed into 13-8kv bus @ 1233hrs. 4.) @ 1233hrs Phase B Bus Diff (87L T & SI) activated causing the 13-8 bus to open all breakers. 5.) Breakers that Opened: 13-2 Transformer Breaker. This isolated the 13.8 bus from 115kv system. 13-10 Breaker to TX-454. This isolated the 2.4kv bus at Cogen FCC. MP-2850A & MP-1850B. BFW Pumps. 13-12 Breaker to TX-456. This isolated the 480v bus at Cogen FCC. This caused 456-5 breaker to lose power. This breaker provides power to STG/800/MCC. This caused the loss of the oil pump to TG-800. When the steam back-up oil pump came on line, this in turn sent a trip signal and S/D TG-800 opening 13-30 Breaker. 90PC855 Emergency 800# to 150# Letdown valve Opened to control the 150# steam system. This is done automatically when TG-800 Trips. 13-16 Breaker to TX-448 to #3 T/L. to 12-11 Breaker @ #1 Power Plant. This isolated the #3 Tie-Line 12KV power to #1 Power Plant. 12-	NL-Operational Process/Procedures -	

12559	CA - Refinery	12:00:00 AM	Closed	Near Loss	13-4 Breaker closed during start-up	11 Breaker @ #1 Power Plant 12kv bus. This isolated the #1 Power Plant side of the #3 T/L.	Plant Run Out/Slow Down	(1)
12592	Richmond, CA - Refinery	4/24/2011 3:30:00 AM	Closed	Loss	Shut down of FCC by Triconex trip	The reactor/regenerator DP set point was changed (not by an operator) from 5 psi to -1 psi. This caused a sudden drop in regenerator pressure, loss of DP across S-70 slide valve, and unit trip on Triconex. Alarm log showed failures of 2 transmitters: 50PDT70A (rx/rgn DP) and 50PT070 (rgn pressure). Both instruments and transmitters were checked and no issues found. The OIM (operator interface module) was found to be "stuck." The OIM can change setpoints, so it is believed that the failure of the OIM could have caused this issue.	Operational Process/Procedures	(1) 2 Equipment Failure - Issues Root Cause OIM failure. Further investigation and testing is progressing at CCC to simulate the event and or find any other way the setpoint can be changed by the OIM. Secondary Rootcause may be power surge when we lost the "black Box". Further investigation and testing is progressing with the instrumentation group along with Honeywell.
12629	Richmond, CA - Refinery	4/23/2011 12:00:00 AM	Closed	Near Loss	Green Card. Truck drivers on cell phone's and smoking while entering refinery.	Green Card. Have been noticing with my trevells through the refinery that a lot of the truck driver's that are entering the refinery are on cell phone's and some are even smoking. Location: 31 Gate and Refinery area.	NL-Injury/Illness - Contractor Injury	
12631	Richmond, CA - Refinery	4/23/2011 12:00:00 AM	Closed	Near Loss	Green Card. Slippery combo of new paint and oil on booster deck	Green Card. Working on booster deck our work boots get oil on the bottom of them. When we exit the deck down the one stairway, they had put some new paint at the bottome of the stairs to show the uneven surface. The mixture of new pain and oil make for a slipper combo that myself and a few other of my crew have experienced. Location: Booster Deck Stairway	NL-Injury/Illness - Employee Injury	
12634	Richmond, CA - Refinery	4/22/2011 12:00:00 AM	Closed	Near Loss	Green Card. Missing Bakelite tags	Green Card. While filling out JHA for work to be performed on MOV-856, it was noticed that the switch gear (electrical disconnect) had most of the Bakelite tags that identify the equipment missing making it difficult to determine with certainty which equipment was actually de-energized. As we waited the tank field, we noticed that other boxes had their Bakelite identification tags missing. Location: T-3105	NL-Injury/Illness - Employee Injury	
12794	Richmond, CA - Refinery	4/21/2011 2:00:00 PM	Closed	Near Loss	Green Card--Contractor vehicle ran three stop signs	Green Card--Yellow Freight Line Truck #115818 was seen running three stop signs.	NL-Transportation - Contractor	
12798	Richmond, CA - Refinery	4/26/2011 8:00:00 AM	Closed	Near Loss	Green Card--Gap in Concrete	Green Card--Gap in concrete where 2 raised manway covers are located, RLOP, 19 Pit, Halfway between the plot limit and Channel St. Can see liquid where gap is located. Liquid is of unknown depth. Need to barricade off the area to prevent access until it is fixed.	NL-Equipment/Property Damage - Equipment Damage	(1) It appears that something kicked these manhole covers off to one side, exposing the hole beneath.
12813	Richmond, CA - Refinery	4/26/2011 11:00:00 AM	Closed	Near Loss	The turntable on the stretchwrapper at door 6 was lifted or knocked off of its base with a forklift.	The turntable on the stretchwrapper at door 6 in the warehouse was lifted or knocked off of its base by a forklift.	NL-Equipment/Property Damage - General Liability	
12829	Richmond, CA - Refinery	4/27/2011 8:56:00 AM	Closed	Loss	Flare activity while blowing down equipment to relief system	While removing (blowing down) hot condensate from the process side piping to E181 (C160 Debutanizer reboiler) to the blowdown header, it caused the propane already in the blowdown header (from the V-263A safety) to vaporize sending a sudden flow to the flare. Why did we have flare activity? There was a sudden flow of propane to the FCC flare from the FCC relief system. Why was there a sudden flow? The lower leg on E-181 reboiler needed to be blown down, there was hot condensate that needed to be removed. Why did blowing down the hot condensate to the blowdown system result in the sudden flow of propane to the flare? V-263A had a leaking PRD that was sending a constant flow of propane to the relief header. The relief system piping was all iced up from V-263A to the blowdown knock out drum. When the hot condensate came in contact with the propane, the propane vaporized and went out to the flare.	Environmental	(1) C-263A has a weeping safety that is sending a constant flow of propane to the relief system. Relief piping all the way to the relief knock out drum is iced up. When hot condensate was introduced to the blowdown header, the propane vaporized., (2) SOS: Training & Procedures--FCC Flare Event. Water/ Condensate and process hydrocarbons blown down to relief header.
12855	Richmond, CA - Refinery	4/27/2011 3:00:00 PM	Closed	Loss	Vacuum Truck Foamed Over	Draining abanded 7 Chg pipline to a bin (heavy type gas oil material), when material changed from heavy gas oil material to a light cutter type material shutdown draining line to the bin and changed the connection to the vacuum truck onsite to evacuate the line. When draining the 7 chg line to the vacuum truck it was filling to fast, so the block valve on the 7 chg was pinched down to slow the drop to the truck. The vacuum truck foamed over.	Environmental	(1) SOS: Training & Procedures: Vacuum Truck Foamed Over. Line (cutter) was aerated. Cutter was pinched back.Level in truck was rising fast. Too much flow. They were using a 4" hose. Not changed to smaller diameter hose when cutter (light material) broke through. Personnel working the job were not aware of foaming phenomenon (aeration of cutter). Pressure regulator was not used. Cutter was not listed on the MFG-3131 .
12857	Richmond, CA - Refinery	4/27/2011 3:20:00 PM	Closed	Loss	21 pump station, across from health quest	ee was receiving nine foot metal scaffold plank from his partner in crew, when the plank was positioned upright so that he could grab it there was some debris that came off plank and went into left eye. The debris might have been stuck in small channel on the bottom part of steel plank.	Injury/Illness	(1) Debris was not visible because it was hidden in bottom channel of steel plank. Steel plank was not inspected fully before handing and/or passing to partner.
12858	Richmond, CA - Refinery	4/21/2011 8:00:00 AM	Closed	Near Loss	GHT F-1660 Burner Cleaning Caused Brief Decrease in Heat Input	A burner cleaning activity at the GHT F-1660 furnace led to a brief decrease in heat input to the GHT SHU and HDS reactors. Higher than normal mercaptans were found in the GHT product stream. F-1660 runs with 3 burners in service out of 4, and burner cleaning coupled with plugging in another burner set limited the capacity of the F-1660 to provide enough heat to the reactor system.	NL-Quality - Product Quality (Int)	
						Green Card--Chevron Employee started to sit down in a 4-roller wheeled chair with a tilt back function and was violently lurched back in the chair almost		

12901	Richmond, CA - Refinery	4/21/2011 2:04:00 PM	Closed	Near Loss	Green Card--Chair nearly tips over	tipping over on his back. Some of the 4-roller wheeled chairs were taken out of service a few years ago for a different reason. The 5-roller wheeled chairs on hand have to my knowledge have not caused any problems. Be more diligent in screening out the chairs in question. Make knowledge of incident to other personnel.	NL-Injury/Illness - Contractor Injury	
12901	Richmond, CA - Refinery	4/21/2011 2:04:00 PM	Closed	Near Loss	Green Card--Chair nearly tips over	Green Card--Chevron Employee started to sit down in a 4-roller wheeled chair with a tilt back function and was violently lurched back in the chair almost tipping over on his back. Some of the 4-roller wheeled chairs were taken out of service a few years ago for a different reason. The 5-roller wheeled chairs on hand have to my knowledge have not caused any problems. Be more diligent in screening out the chairs in question. Make knowledge of incident to other personnel.	NL-Injury/Illness - Employee Injury	
12913	Richmond, CA - Refinery	4/2/2011 2:00:00 PM	Closed	Near Loss	Green card - Doing radiation work in back of tank 3126 company did not let us know what was going on	Green card - Doing radiation work in back of tank 3126 company did not let us know what was going on	NL-Injury/Illness - Employee Injury	
12913	Richmond, CA - Refinery	4/2/2011 2:00:00 PM	Closed	Near Loss	Green card - Doing radiation work in back of tank 3126 company did not let us know what was going on	Green card - Doing radiation work in back of tank 3126 company did not let us know what was going on	NL-Injury/Illness - Contractor Injury	
12914	Richmond, CA - Refinery	4/12/2011 2:00:00 PM	Closed	Near Loss	Green card - Higher than 4 feet up a ladder, no safety harness	Green card - Higher than 4 feet up a ladder, no safety harness	NL-Injury/Illness - Employee Injury	
12914	Richmond, CA - Refinery	4/12/2011 2:00:00 PM	Closed	Near Loss	Green card - Higher than 4 feet up a ladder, no safety harness	Green card - Higher than 4 feet up a ladder, no safety harness	NL-Injury/Illness - Contractor Injury	
12916	Richmond, CA - Refinery	4/20/2011 10:00:00 AM	Closed	Near Loss	Green card - use of incorrect tool to safely do job	Green card - during a flobin to cougar sack transfer (at ESA) I noticed the technicians were using the wrong tool for the job, a funnel that was not big enough which caused the catalyst dust to go everywhere.	NL-Injury/Illness - Employee Injury	
12916	Richmond, CA - Refinery	4/20/2011 10:00:00 AM	Closed	Near Loss	Green card - use of incorrect tool to safely do job	Green card - during a flobin to cougar sack transfer (at ESA) I noticed the technicians were using the wrong tool for the job, a funnel that was not big enough which caused the catalyst dust to go everywhere.	NL-Injury/Illness - Contractor Injury	
12917	Richmond, CA - Refinery	4/20/2011 10:00:00 AM	Closed	Near Loss	Green card - unsafe work practice	Green card - During a flobin to cougar sack transfer (at ESA) I noticed that the technician had tp get under the flobin to open the valve while it was raised in the air.	NL-Injury/Illness - Employee Injury	
12917	Richmond, CA - Refinery	4/20/2011 10:00:00 AM	Closed	Near Loss	Green card - unsafe work practice	Green card - During a flobin to cougar sack transfer (at ESA) I noticed that the technician had tp get under the flobin to open the valve while it was raised in the air.	NL-Injury/Illness - Contractor Injury	
12936	Richmond, CA - Refinery	4/28/2011 10:00:00 AM	Closed	Loss	Leak on the PUL filter Pot fore the sales loading racks	Blown gasket on the PUL filter pot near the Truck Loading Rack fince which leaked less than a half barrel to a contained basin.	Environmental	(1) line has no releif. when T-1635 the tank this line releaved to was taken out service, the system PRD's do not have a route to relieve for sun pressure. , (2) Not compliance on establish procedure
12974	Richmond, CA - Refinery	4/28/2011 10:15:00 PM	Closed	Loss	> 1 bbl spill (H-2O / HC) into pipe trench between T-3104 / T-3105	At approximately 2215Hours there was a spill in the pipe trench between T-3104 and T-3105 where the connection for the water dropped out by the 3 stage centrifuge jumps into the 8" Petrolite. At the time PSC was circulating cutter through T-3104 with the Robo jets in service. The 3 stage centrifuge was running and they were attempting to pump some water into the 8" Petrolite from the centrifuge skid via a Weldon pump set up. The PSC foreman said that he was seeing back pressure on the Weldon pump and could not get out. The Crude HO traced out the system to #8 PS and confirmed that everything was open and also started the clean water pump to verify open to the look box. PSC again tried using the Weldon pump to transfer H2O to the 8" Petrolite Line but continued to get back pressure. The spill occurred when the ca PSC employee disconnected the line at the tie-in point without first closing the gate valve.Once the line was disconnected, it sprayed out less than a barrel of H2O / HC into the trench.	Environmental	(1) Contractor failed to close block valve before disconnecting line. Why? Because contractor was not following procedures. Why? Because contractor was in a hurry
						Crew was working to get MP-713 hot and on stand-by. MP-713 was released from maint. after repairs were made on a cracked weld on the pump discharge spool APS root block. While working through the "P-713/A commission/start Pump" procedure (procedure TKN-NP-4512) HGO flow to FCC was lost. Following procedure area operator got to step 3.10 "Using hand jack slowly open, P-713/A suction block 2-3 turns." When the operator did this light seal flush from the pump got into the suction line and the on line pump lost suction and lost flow to FCC. The board operator notified the area operator of the loss of flow and area operator closed the suction block (Procedure step 3.11/ 1) and the on line pump regained suction and flow was reestablished to FCC. In the		(1) Suction valve of MP-713 was opened to far thus allowing

12987	Richmond, CA - Refinery	4/29/2011 1:00:00 AM	Closed	Near Loss	Loss of HGO flow to FCC	procedure it warns "Caution" of the potential of the on line pump losing suction and flow. It also gives steps to correct this. These steps and cautions where followed. The loss of flow to FCC caused a minor upset at the FCC unit. After flow was reestablished the FCC they worked to get the unit back stable.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	light seal flush stock to enter suction line and ultimately gassing up the on line pump., (2) Procedure is too vague needs to be more precise on how far to open suction valve when warming up pump.
13178	Richmond, CA - Refinery	5/2/2011 8:15:00 AM	Closed	Loss	4Rhen K-3550 shutdown and caused the furnaces to trip	Loss of 4Rhen K-3550 caused loss of hydrogen to North Yard (TKN feed cut, pulled MCO from TKC, cut H2 bleeds) and sent DHT product offtest, NHT feed cut.	NL-Quality - Product Quality (Int)	
13178	Richmond, CA - Refinery	5/2/2011 8:15:00 AM	Closed	Loss	4Rhen K-3550 shutdown and caused the furnaces to trip	Loss of 4Rhen K-3550 caused loss of hydrogen to North Yard (TKN feed cut, pulled MCO from TKC, cut H2 bleeds) and sent DHT product offtest, NHT feed cut.	Quality	
13180	Richmond, CA - Refinery	5/2/2011 12:00:00 AM	Closed	Near Loss	Concrete Dust blew in eye	Contractor concrete dust blow in his eye.	NL-Injury/Illness - Contractor Injury	
13245	Richmond, CA - Refinery	5/2/2011 6:17:00 AM	Closed	Loss	Gate 31	At the above time, date and location the Chemical Transfer vehicle (semi) stopped at Gate 31 to turn in their "pink card" (temporary entry permit) to the Officer at the Gate and depart the refinery. Immediately after the Officer took the "pink card" the driver drove his vehicle into the gate, breaking the gate arm off. The driver did not wait for the Officer to manually open the gate. Since the driver had just made a delivery to the refinery and was possibly not aware of the necessity to wait for the Officer to manually press the button to raise the gate for him to exit, he drove into the gate, breaking off the barrier arm. There was no damage to the Contractor vehicle and the gate was immediately repaired and put back into service.	Equipment/Property Damage	(1) Contractor vehicle proceeded attempt to exit refinery at Gate 31 before Security Officer could manually push button to lift gate. Gate had to be lifted manually because Driver was making a first time delivery and did not have a Smart Badge. Driver was required to return "pink Card" (Temporary Permit) to gate Officer and was not aware that he had to wait for gate to be raised manually. Also, probably did not see gate from his high position in the semi.
13247	Richmond, CA - Refinery	5/2/2011 8:00:00 AM	Closed	Near Loss	Green Card. Tripping hazard. Location: Between 4 Crude and DHT.	Green Card. While walking through the lot between 4 Crude and DHT, I noticed a lot of debris, pipe fittings, metal, garbage which could pose a tripping hazard or a driving hazard.	NL-Injury/Illness - Employee Injury	
13247	Richmond, CA - Refinery	5/2/2011 8:00:00 AM	Closed	Near Loss	Green Card. Tripping hazard. Location: Between 4 Crude and DHT.	Green Card. While walking through the lot between 4 Crude and DHT, I noticed a lot of debris, pipe fittings, metal, garbage which could pose a tripping hazard or a driving hazard.	NL-Injury/Illness - Contractor Injury	
13249	Richmond, CA - Refinery	5/3/2011 12:00:00 PM	Closed	Loss	Employee was leaning forward and right side of neck made contact with hot steam tracing which caused a minor burn..	Employee was assisting insulators wrap steam tracing on P-1601 in the RLOP unit. While working with insulators, employee made contact with a piece of hot 1/2 ss steam tracing. Contact caused a minor burn to right side of neck.	Injury/Illness	(1) Unaware of surrounding environment
13267	Richmond, CA - Refinery	5/3/2011 3:30:00 PM	Closed	Loss	A-Train tripped due to High Furnace box pressure.	On May 3rd in the morning adjustments were made to A train trying to maximize steam output. Then the decision was made to return back to normal. Around 3 hours later, things were back to normal and a move needed to be made on the Pc-318. The Operator in training on the work station saw that it was in "BCAS" (a cascade mode) and placed it back to manual and went to change the out put from 72% open to 73% open and entered 7.3 instead of 73. When PC-318 closed off to 7.3% the furnace got a high furnace box pressure alarm and then the furnace went to min fire (per procedure) and automatically opens the guillotine (draft fan by pass) . This caused the draft fan "K-305" to shut down on high amps. A breaker reset was done on K305, PC318 was opened to 75% in manual, closed the guillotine (draft fan by-pass) and restarted K305. At that time we were able to re-fire all burners on the furnace and start recovering from min. fire. We also tripped the FCC flare totalizer when A-Tain went to min fires due to over pressuroing of the Fuel Gas KO (V-314) for F-305,355 and F-340. Please see investigation root causes and journal notes.	Operational Process/Procedures	(1) The wrong output was entered by an "In Training " Operator. The Operator had been "Piggy Backing" on OWS-2 for just a short time, getting to learn in depth process control and learing about various key process variables. Learing how to take control of loops and make moves in responce to changes in the process as well as alarm responce moves. This being done under watch of a qualified control board Operator., (2) Totalizer trip on the FCC flare was caused by not having a contingency plan/procedure in place for running with the ByPass open on PC-314. Procedure should capture what to do if any of F-305,F-355 or F-340 FSCs trip.
13267	Richmond, CA - Refinery	5/3/2011 3:30:00 PM	Closed	Loss	A-Train tripped due to High Furnace box pressure.	On May 3rd in the morning adjustments were made to A train trying to maximize steam output. Then the decision was made to return back to normal. Around 3 hours later, things were back to normal and a move needed to be made on the Pc-318. The Operator in training on the work station saw that it was in "BCAS" (a cascade mode) and placed it back to manual and went to change the out put from 72% open to 73% open and entered 7.3 instead of 73. When PC-318 closed off to 7.3% the furnace got a high furnace box pressure alarm and then the furnace went to min fire (per procedure) and automatically opens the guillotine (draft fan by pass) . This caused the draft fan "K-305" to shut down on high amps. A breaker reset was done on K305, PC318 was opened to 75% in manual, closed the guillotine (draft fan by-pass) and restarted K305. At that time we were able to re-fire all burners on the furnace and start recovering from min. fire. We also tripped the FCC flare totalizer when A-Tain went to min fires due to over pressuroing of the Fuel Gas KO (V-314) for F-305,355 and F-340. Please see investigation root causes and journal notes.	Environmental	(1) The wrong output was entered by an "In Training " Operator. The Operator had been "Piggy Backing" on OWS-2 for just a short time, getting to learn in depth process control and learing about various key process variables. Learing how to take control of loops and make moves in responce to changes in the process as well as alarm responce moves. This being done under watch of a qualified control board Operator., (2) Totalizer trip on the FCC flare was caused by not having a contingency plan/procedure in place for running with the ByPass open on PC-314. Procedure should capture what to do if any of F-305,F-355 or F-340 FSCs trip.
	Richmond,	2/5/2011			Late S/U notification of RLOP LNC unit (fax transmission failed on Feb. 5, and was not discovered			(1) not checking fax completion document for successful

13276	CA - Refinery	12:00:00 AM	Closed	Loss	until Feb. 8) NOV was issued on 5-2-11	Late S/U notification of RLOP LNC unit (fax transmission failed on Feb. 5, and was not discovered until Feb. 8) NOV was issued on 5-2-11	Environmental	transmission of fax., (2) Not building lighting fires into 21-Day plan
13321	Richmond, CA - Refinery	5/4/2011 12:00:00 AM	Closed	Loss	Trailer towing tongue damage during unauthorized move	During an unauthorized move at an unknown time and circumstances by unkown personnel, a trailer belonging to ETC Houston and currently being stored at Richmond was damaged on the left support towing frame member. The frame member was severely bent and a hole was punched into it possibly due to jacknifing during the move. It should be noted that since the move was made at an unknown date/time, no definitive description of weather conditions, temperature, or time of day can be given; those shown are from the date of discovery.	Transportation	(1) Unauthorized move of trailer
13337	Richmond, CA - Refinery	4/29/2011 12:00:00 AM	Closed	Loss	Feed Rate Limits and CO Excursion	After starting up following FCC shutdown on 4/25 wanted to max rates at FCC. Regen temps however became so high that heat balance could not be controlled and sprays were turned on for too long, resulting in a CO exceedance and an environmental recordable event. Feed rates were reduced to regain control but temperatures still remained high and feed could not be increased. PED worked with ABU and Ops to understand what is different about current situation. CO exceedance was caused from misunderstanding of the amount of afterburn taking place in the regenerator and the amount of coke that was being made. Afterburn and coking increased because catalyst activity was very high after startup and high MCRT levels in the feed coupled to increase coking. MCRT has been increasing in feed over last six months due to higher MCRT coming from TKC and imports to FCC. MCRT wasn't higher than it had ever been before, but after startup a lot of fresh catalyst was added and increased the overall activity. Catalyst was lost during the unplanned shutdown and was not made up with Ecat while the plant was down and at low pressure to get the Ecat in. Five Why explanation can be found on the Journal tab. More detailed technical report can be found on share drive at: <\\RIC841NTSHARE1.RIC841.CHEVRONTEXACO.NET\SHAREVAIIPmo\FCC PMO\FCC General Efile Library\Incidents\2011 - May Heat Balance Limitations\FCC Limitation Report May 2011.docx>	Environmental	(1) CO exceedance caused by excessive afterburn that was not responding to normal operator actions. Operator did not know about high Cat activity., (2) Feed rate limited through combination of increased amount of fresh catalyst added after shutdown., (3) Feed rate limited through increased amounts of MCRT causing high levels of coke.
13337	Richmond, CA - Refinery	4/29/2011 12:00:00 AM	Closed	Loss	Feed Rate Limits and CO Excursion	After starting up following FCC shutdown on 4/25 wanted to max rates at FCC. Regen temps however became so high that heat balance could not be controlled and sprays were turned on for too long, resulting in a CO exceedance and an environmental recordable event. Feed rates were reduced to regain control but temperatures still remained high and feed could not be increased. PED worked with ABU and Ops to understand what is different about current situation. CO exceedance was caused from misunderstanding of the amount of afterburn taking place in the regenerator and the amount of coke that was being made. Afterburn and coking increased because catalyst activity was very high after startup and high MCRT levels in the feed coupled to increase coking. MCRT has been increasing in feed over last six months due to higher MCRT coming from TKC and imports to FCC. MCRT wasn't higher than it had ever been before, but after startup a lot of fresh catalyst was added and increased the overall activity. Catalyst was lost during the unplanned shutdown and was not made up with Ecat while the plant was down and at low pressure to get the Ecat in. Five Why explanation can be found on the Journal tab. More detailed technical report can be found on share drive at: <\\RIC841NTSHARE1.RIC841.CHEVRONTEXACO.NET\SHAREVAIIPmo\FCC PMO\FCC General Efile Library\Incidents\2011 - May Heat Balance Limitations\FCC Limitation Report May 2011.docx>	Operational Process/Procedures	(1) CO exceedance caused by excessive afterburn that was not responding to normal operator actions. Operator did not know about high Cat activity., (2) Feed rate limited through combination of increased amount of fresh catalyst added after shutdown., (3) Feed rate limited through increased amounts of MCRT causing high levels of coke.
13342	Richmond, CA - Refinery	5/3/2011 4:40:00 AM	Closed	Near Loss	Green Card - Lit cigarette butt found on floor of smoking post	Green Card - Passer by found a lit cigarette butt on the wooden floor of the smoking post at 218 Main Street.	NL-Fire/Explosion	
13344	Richmond, CA - Refinery	5/3/2011 4:40:00 PM	Closed	Near Loss	Green Card - Invalid Ignition Source Permit at Smoking Post	Green Card - The ignition source permit for the smoking post at 218 Main was out of date & no longer valid for the smoking post	NL-Business Process - Business Process	
13349	Richmond, CA - Refinery	5/3/2011 11:00:00 AM	Closed	Loss	K-1100B high vibration shutdown	K-1100B shut down on high vibration and wouldn't restart after pumping out liquid levels. Operator noticed K-1100B 1st stage distance piece was significantly damaged.	Equipment/Property Damage	(1) Demister pad allowing liquid to enter compressor.
13390	Richmond, CA - Refinery	5/4/2011 7:12:00 PM	Closed	Near Loss	Green Card - unconfirmed odor complaint	Green Card - An unconfirmed complaint was called in from a Ft. Richmond resident to the City of Richmond's 911 Dispatcher on Wednesday evening, 5/4/11.	NL-Environmental - Release	
13409	Richmond, CA - Refinery	5/2/2011 7:00:00 AM	Closed	Loss	EE Scrathed Head	EE was cleaning pot & pan rack and bumped her head on a plastic tub lid. Scrathed her forehead.	Injury/Illness	(1) Employee scratched head because she didn't see lid sticking out.
					Green Card - While looking to hook up air hose to yard air connection in plant, mechanic noticed the fittings on steam line and			

13424	Richmond, CA - Refinery	4/5/2011 8:30:00 AM	Closed	Near Loss	fire line. Mechanic almost mistook them as steam line for air line.	Green Card - While looking to hook up air hose to yard air connection in plant, mechanic noticed the fittings on steam line and fire line. Mechanic almost mistook them as steam line for air line.	NL-Lessons Learned	
13501	Richmond, CA - Refinery	5/6/2011 4:05:00 PM	Closed	Loss	Mechanic got a partical in his left eye.	Mechanic received particles in his left eye while using a hand grinder. Mechanic was wearing all his required safety equipment. After being check out by Chevron EMT'S mechanic was transported to the chevron clinic to make sure particles had been removed. After being check out by the chevron clinic it was clear that the mechanic still had particles in his left eye. The chevron clinic sent mechanic to an outside clinic to have remaining particles removed from his left eye. Mechanic will have a follow up appointment on 5/7/2011 and will return to work on Monday.	Injury/Illness	(1) EE used recommended PPE however during the task the grinding wheel was able to kick up metal particles under the face shield and safety glasses because it was spinning toward the user instead of away from the user.
13564	Richmond, CA - Refinery	4/25/2011 12:00:00 AM	Closed	Near Loss	OSI post scope freeze revealed remaining life issues requiring replacement during turnaround	OSI reported TML 10 on 0951-001-003 to have <1 year remaining life. Impact sent out a scope stakeholder letter to all inputters 1/27/2010. Input freeze was noted to be May 27, 2010. This work requires a turnaround to complete and will be going thru the extra work process.	NL-Business Process - Business Interruption	
13604	Richmond, CA - Refinery	5/9/2011 1:00:00 PM	Closed	Loss	EE felt discomfort in lower back and left leg. While welding in the overhead position, which requires holding his arms above his head for extended period of time.	While welding in the overhead position for extended period of time EE felt discomfort in lower back and leg.	NL-Injury/Illness - Employee Injury	(1) EE in stationary position numerous times for long periods of time the last several weeks while performing welding training.
13604	Richmond, CA - Refinery	5/9/2011 1:00:00 PM	Closed	Loss	EE felt discomfort in lower back and left leg. While welding in the overhead position, which requires holding his arms above his head for extended period of time.	While welding in the overhead position for extended period of time EE felt discomfort in lower back and leg.	Injury/Illness	(1) EE in stationary position numerous times for long periods of time the last several weeks while performing welding training.
13661	Richmond, CA - Refinery	5/10/2011 12:00:00 PM	Closed	Loss	Employee was working on a breaker and the arc shoe handle was extended. Employee turned to retrieve a tool and the handle struck him above the right eyebrow causing a small cut.	Employee was working in the CRC sub on the 12-340 breaker which is in a cramped work area. He had the arc shoe handle extended while working at ground level. Safety glasses were on when the employee turned to retrieve a tool, the handle struck him above the right eyebrow causing a small cut. The employee went to the clinic to have the injury seen by the medical staff. A bandage was applied and the employee returned to work.	Injury/Illness	(1) Employee lost his situational awareness while working on the breaker.
13664	Richmond, CA - Refinery	5/10/2011 8:00:00 AM	Closed	Near Loss	Green Card. Risk of bumping air valve handle inadvertently. Location: Alky V-1441	Green Card. Unlocking hand ball valve used in plant. Risk of bumping air valve handle inadvertantly shutting air off to valve. Location: Alky V-1441 Level Control 14LC737	NL-Lessons Learned	
13666	Richmond, CA - Refinery	5/10/2011 8:00:00 AM	Closed	Near Loss	Green Card. Traffic mirror at 8 Pump Station on Quarry Rd is missing. Location: Quarry Tank Field	Green Card. Spotting/traffic mirror at the corner of 8 Pump Station on Quarry Rd is missing. Vehicles traveling the road there are now blind to on-coming traffic. Location: Quarry Tank Field	NL-Lessons Learned	
13667	Richmond, CA - Refinery	5/10/2011 12:00:00 AM	Closed	Near Loss	Green Card. Pigeons are causing an inconvenience and health hazard. Location: Machine Shop	Green Card. The pigeons have started their roosting and nesting season causing an inconvenience and a health hazard. The pigeons affect areas by producing lots of bird droppings and sickness caused by the droppings. Location: Machine Shop	NL-Lessons Learned	(1) Broken windows in various areas of the shop., (2) Shop is not adequately closed up after the end of the shift which provides entry points for birds to enter the various areas., (3) Pigeons are searching and nesting in the shop.
13671	Richmond, CA - Refinery	5/10/2011 12:00:00 PM	Closed	Loss	Operator injured back removing sling from underneath cargo hose.	After disconnecting from the vessel the hose was placed on the ground via crane and sling. While trying to remove the sling from underneath the hose the operator felt pain in his lower back.	Injury/Illness	(1) Lifting heavy cargo hose. Operator says he used proper ergonomics back straight, lifting with his legs.
								(1) At times, all the fans are on, but quite often at least one or more fans are off. The INOx variable MB031 shows the number of fans on at any time. Recently when V-1100 temperature approached 150F, there were as few as 6 of 12 fans on. - Lack of understanding /sensitivity to affects of changing temp to liquid levels in the system, (2) At times, all the fans are on, but quite often at least one or more fans are off. The INOx variable MB031 shows the number of fans on at any time. Recently when V-1100 temperature approached 150F, there were as few as 6 of 12 fans on. - Only soft alarms are on the TI054 Temperature, (3) At times, all the fans are on, but quite often at least one or more fans are off. The INOx variable MB031 shows the number of fans on at any time. Recently when V-1100 temperature approached 150F, there were as few as 6 of 12 fans on. - There is nothing in the COD Table for temperatures on TI054, (4) P-1171 does not work

13684	Richmond, CA - Refinery	5/10/2011 1:30:00 PM	Closed	Near Loss	K-1100A shutdown on high liquid level	K-1100A shutdown on high liquid level on V-1170 on subsequent attempts to start up we had the compressor trip on high liquid level 1st stage suction bottle udder. Routine checks by IMI prior to the shutdown showed the compressor to be running well, IMI was on site during start up attempts and a knock due to liquid could be heard in the 2nd stage.	NL-Equipment/Property Damage - General Liability	due to cavitation when pumping light fluid - Designed for 15 gpm -- Higher level takes up valuable vapor space used to keep from entraining liquids in the gas to the compressor, (5) Demister pad on V-1170 not working well - Design not causing enough liquids to drop out high enough flow to drop liquids out in V-1170. Hole in plate was too large preventing increase in velocity, (6) Check valve downstream of the discharge stream to C-1190 leaking by allowing flow to go back into compressor. 1st and 2nd stage b/d lines tied to a common relief line, so when both machines are down, leaking main check valve to V-1190 caused suction pots to fill. - Did not anticipate that leaking past this check valve would cause liquid return to compressor when both machines were down, (7) K-1100A suction bottles have high level trip but K-1100B does not - Lack of understanding to need to have compressors available at all times - original design(in the past it may have been more important to have the compressors able to run vs. machine damage)
13806	Richmond, CA - Refinery	5/9/2011 12:00:00 AM	Closed	Near Loss	MABT MK-50 MOR Failure	On a routine round by operations it was noticed that the excitation controller was out of range. They informed the electrical group to get it reviewed. It was found that the MOR on MK-50 failed. The MOR is necessary for keeping our excition within the desired range (.95 lagging to .95 leading). this is done for 2 reasons, 1 is efficiency and the other is to keep the machine in sync with the grid. There have been other failures on the MOR and it's controller in teh last 6 months.	NL-Equipment/Property Damage - Equipment Damage	(1) Equipment failure
13627	Richmond, CA - Refinery	4/7/2011 7:00:00 AM	Closed	Near Loss	Green Card - repair of guard rail needed on bridge #125 on Channel @ Xylene	Green card - on the southwest side of the bridge there is part of the guard rail missing as well as the 6' x 8' timber at the base.	NL-Injury/Illness - Contractor Injury	
13627	Richmond, CA - Refinery	4/7/2011 7:00:00 AM	Closed	Near Loss	Green Card - repair of guard rail needed on bridge #125 on Channel @ Xylene	Green card - on the southwest side of the bridge there is part of the guard rail missing as well as the 6' x 8' timber at the base.	NL-Injury/Illness - Employee Injury	
13834	Richmond, CA - Refinery	5/5/2011 8:30:00 AM	Closed	Near Loss	Green Card. Motor for K-910 was racked out.	Green Card. Motor for K-910 was racked out but area operator was not aware it had been done earlier that morning. Written procedure for rack out on cubicle door was incomplete. Appears JJSV was not done because operator was not aware work was going on.	NL-Lessons Learned	(1) Motor testing was being performed on K-910 without LOTO per RI-9900, but was deemed insufficient from 2nd group of electricians arriving on site to LOTO same piece of equipment. Why - Scope change to ongoing work with 1st group of electricians, but they didn't modify LOTO. Why - 1st Group of electricians didn't think the change of work scope would require full LOTO.
13864	Richmond, CA - Refinery	5/4/2011 9:30:00 AM	Closed	Near Loss	New P1601 Feed Pumps put in service before all unsafe conditions were addressed	The rush to start the new P-1601 pumps before all safety concerns were met pose's an ongoing safety hazard to the operators operating the pumps. The design did not take in account the safety in design (SID) recommendations to protect operators from unsafe conditions. The pump discharge valve locations and handwheels are above max height for the torque required to open and close the valves. The feed filter switching valve is positioned in such a way that the operators must crouch down under piping and steam tracing and swing a long handle to switch the flow from one filter to the other. Operators LPSA, Refinery Tenets and Stop Work Authority went unheeded to prevent a delay in the startup of the pumps.	NL-Injury/Illness - Employee Injury	
13894	Richmond, CA - Refinery	5/12/2011 3:00:00 PM	Closed	Loss	Employee injury to his foot	An employee called me at ~12:45 pm to report that the heel on his foot had swollen up after shipboard fire training at Treasure Island. The training took place the day before the employee reported the incident. He stated that he thought the swelling may have been caused by his fire boots because it had happened before when using the same boots. I was with employee in training and he did not report it to me during or after the training.	Injury/Illness	(1) Employee was contacted and seen by our clinic. Employee condition not classified as an on the job injury but a medical condition. Employee is doing follow up at his own doctor., (2) Non occupational injury.
13908	Richmond, CA - Refinery	5/14/2011 2:21:00 PM	Closed	Loss	While testing routine alarm wrong test switch was engaged	In the process of routine testing F-730 &F-731 FSSD the control board operator inadvertently engaged furnace chopper valve on F-730 instead of F-731. F-730 chopper and placed furnace in min fire position. Loss of temperature cause high level in C-730 109% plus ..Jet product was routed off test.	Process Safety Management (PSM)	(1) Continuity broke once HO moved from observer to hands on. PCO was following process and ask HO to throw the switch.
13982	Richmond, CA - Refinery	5/10/2011 9:00:00 AM	Closed	Near Loss	Green Card. Steam leak in pipeway adjacent to pole 11010. Location: Channel St and Petrolite	Green Card. Steam leak in pipeway adjacent to pole 11010. Have questioned and notified Utility ops. regarding safety in proximity with no safety feedback.	NL-Lessons Learned	
					Green Card. Problem with	Green Card. The amount of pigeon droppings are incresing by the day. Droppings appear on work benches, walls, paperwork, machinery, personal tool boxes in the change room, and various areas of the shop floor. The droppings on the floor are walked on regularly throughout the day turning them into piles of fine dust. This focal dust becomes airborne and lingers in the air		

13983	Richmond, CA - Refinery	5/16/2011 8:00:00 AM	Closed	Near Loss	extensive amount of pigeon droppings. Location: Machine Shop	making it difficult for employees to avoid breathing it in. Inhalation of pigeon droppings can cause serious illness in human beings, and that is why this matter should be handled with some sense of urgency.	NL-Lessons Learned	
14047	Richmond, CA - Refinery	5/15/2011 8:00:00 AM	Closed	Near Loss	Green Card. Pigeon droppings all over the Machine Shop floors and equipment.	Green Card. There is pigeon droppings all over the Machine Shop floors and equipment A green card was put in before (#13983) and the supervisor's only corrective action was for everyone to wear dust masks which do not protect you from the fine particles of the pigeon droppings. A special respirator would need to be worn.	NL-Injury/Illness - Employee Injury	
14047	Richmond, CA - Refinery	5/15/2011 8:00:00 AM	Closed	Near Loss	Green Card. Pigeon droppings all over the Machine Shop floors and equipment.	Green Card. There is pigeon droppings all over the Machine Shop floors and equipment A green card was put in before (#13983) and the supervisor's only corrective action was for everyone to wear dust masks which do not protect you from the fine particles of the pigeon droppings. A special respirator would need to be worn.	NL-Injury/Illness - Contractor Injury	
14085	Richmond, CA - Refinery	5/12/2011 12:00:00 AM	Closed	Loss	Cogen HRSG Building Permit #10-04984 Non conformance	Rework to support non conformance on Capital Project	Business Process	(1) Did not understand all the Special Inspection requirements during construction, either the total # of SI or type (i.e., fit up & final vs. final only on structural welds) and no clear tracking method., (2) Decision was made to continue construction without meeting special inspection requirements (work it out later).
14085	Richmond, CA - Refinery	5/12/2011 12:00:00 AM	Closed	Loss	Cogen HRSG Building Permit #10-04984 Non conformance	Rework to support non conformance on Capital Project	Quality	(1) Did not understand all the Special Inspection requirements during construction, either the total # of SI or type (i.e., fit up & final vs. final only on structural welds) and no clear tracking method., (2) Decision was made to continue construction without meeting special inspection requirements (work it out later).
14155	Richmond, CA - Refinery	5/17/2011 10:00:00 AM	Closed	Loss	April List C Report reflected a net loss of 115 BBLS	During the Month of April RLP WHS adjusted out 115 BBLS .	Operational Process/Procedures	(1) Loss of BBLS in the month of April Why? 01 Adjusted BBLs out of Inventory Why? Book to physical inventory was off Why? Product wasnt Rebranded to Leaker mix Root cause : Operator chose not Rebrand product to Leaker mix
14171	Richmond, CA - Refinery	5/16/2011 9:00:00 AM	Closed	Loss	Customer complaint	Brown Evans Distributing was short product on the three seperate orders listed below in March . During this time RLP was recieving an abnormal amount of inbounds due to low inventory levels . RLP was unloading inbounds and trying to load trucks to meet customer demand . Product arriving on inbounds was for sameday shipping upon arrival. There were three different operators involved in loading the listed orders below . A..Order 217729: Per the below response, the plant's inventory is correct, but the marketer double checked, and the product was not delivered to their other location. Marketer is still asking for a credit to be issued. Description: The marketer ordered and was billed for 4 drums of Delo Grease 2 (235208980) but received zero drums. b. Order 213642: Probid submitted on 3/8/11 and is still open. Description: Marketer ordered and was billed for 8 pails of Meropa 220 (277211763). The marketer only received 6 pails of this product. Please issue a credit for 2 pails of Meropa 220. c.Order 182663: Sales decided to issue a sales policy adjustment credit to resolve this issue because the marketer did not receive the drums and expected a credit to be issued.	Business Process	(1) Customer short product why? load wasnt checked before loading why? operator didnt check load manifest why? Operator assumed all products were accounted for. Root cause : Operator choose not to follow General shipping process
14178	Richmond, CA - Refinery	5/12/2011 5:45:00 AM	Closed	Near Loss	Green Card. Traffic does not follow the posted speed limit. Location: Center St. by Bldg 216	Green Card. The traffic does not follow the posted speed limit. Location: Tech Center area on Center St by Bldg 216	NL-Transportation - Personal Use	
14178	Richmond, CA - Refinery	5/12/2011 5:45:00 AM	Closed	Near Loss	Green Card. Traffic does not follow the posted speed limit. Location: Center St. by Bldg 216	Green Card. The traffic does not follow the posted speed limit. Location: Tech Center area on Center St by Bldg 216	NL-Transportation - Contractor	
14178	Richmond, CA - Refinery	5/12/2011 5:45:00 AM	Closed	Near Loss	Green Card. Traffic does not follow the posted speed limit. Location: Center St. by Bldg 216	Green Card. The traffic does not follow the posted speed limit. Location: Tech Center area on Center St by Bldg 216	NL-Transportation - Company	
14184	Richmond, CA - Refinery	5/18/2011 11:00:00 AM	Closed	Near Loss	Green Card - Contractors working without proper safegaurds	Green Card - Two contractors working on the awning of the Main Gate guard shack were obstructing the road without proper warning signs, cones, barriers, or flag person. One contractor up on the step ladder that was in the roadway was exposed to a fall hazard if the ladder was bumped or clipped by passing vehicles.	NL-Injury/Illness - Contractor Injury	
14189	Richmond, CA - Refinery	5/18/2011 12:00:00 PM	Closed	Near Loss	EE felt dizzy and the EMT's were called to evaluate...EE seen at clinic and released.	CVX Employee felt dizzy and the EMT's were called to evaluate. The Employee was taken to the clinic for further evaluation and subsequntly released.	NL-Injury/Illness - Employee Injury	
						Near end of day shift at 15:00, Cygnus Voyager completed discharge of Arab Lt crude oil into T-3105. The Area Operator closed motor operated valve		

14236	Richmond, CA - Refinery	5/16/2011 3:30:00 PM	Closed	Near Loss	Unauthorized Cygnus Voyager discharge of crude oil to two tanks at same time instead of only one	(MOV) on fill line at T-3105 and re-opened it on same fill line at T-3100 to begin discharge of AXL crude oil to T-3100. Ship started this discharge at 15:15 to T-3100 and got to normal fill rate of 45,000 BPH. After night shift arrived and received the day crew turnover at 17:30, the new Board Operator noticed on computer that T-3105 had +1000 BPH flow into it when it should have been still. There was 2100 bbls of AXL crude that inadvertently went to T-3105 during the ship discharge to T-3100 until T-3105's tank block MOV was remotely closed by the night Board Operator. The real gauge on on T-3100 was broken and the outside gauger filed a Letter of Protest	NL-Quality - Product Mis-Delivery	(1) Motor valve did not close all the way during line switch to accommodate a ship discharge, (2) Day shift Board Operator got two separate audible alarms of unexpected movement on T-3105. He acknowledged the alarms, reviewed the tank status on computer thinking the alarm was false, but did not notify Area Operator.
14239	Richmond, CA - Refinery	5/16/2011 6:00:00 AM	Closed	Near Loss	Green Card Near miss at non-Chevron facility prompted question about chain valves.	Green Card. Near miss at other non-Chevron facility prompted question about chain valves. Thanks to whoever turned in this Green Card - it's a good question to raise (ABAE).	NL-Lessons Learned	
14270	Richmond, CA - Refinery	5/19/2011 12:55:00 PM	Closed	Loss	Employee hit elbow on car side mirror	While between two cars and turning, an employee's elbow came into forceful contact with the side mirror of an adjacent vehicle.	Injury/Illness	(1) The employee was in a hurry and didn't take the time to review their position relative to potential obstacles. Why were they in a hurry - they didn't see the vehicle where they expected it to be so they were searching for it & running late for their meeting. Why were they running late - because they had tried to complete one final task before leaving for their meeting.
14347	Richmond, CA - Refinery	5/19/2011 9:10:00 PM	Closed	Loss	PPS Security Officer struck gate pole on exit side of 31 gate parking lot, damaging passenger side mirror and scratching paint on contractor vehicle. No damage to CVX Property.	PPS Security Officer made contact with the gate pole on exit side of 31 gate parking lot, damaging passenger side mirror , scratching paint and slightly denting passenger door on contractor vehicle while driving out of the 31 gate parking lot. There were no injuries and no damage to CVX Property.	Transportation	(1) Driver was to close to the exit gate post . Did not appear to pull far enough away from the gate when he moved the vehicle, thus resulting in the vehicle mirror being broken and the passenger door being scratched and dented through slight contact with the gate post.
14347	Richmond, CA - Refinery	5/19/2011 9:10:00 PM	Closed	Loss	PPS Security Officer struck gate pole on exit side of 31 gate parking lot, damaging passenger side mirror and scratching paint on contractor vehicle. No damage to CVX Property.	PPS Security Officer made contact with the gate pole on exit side of 31 gate parking lot, damaging passenger side mirror , scratching paint and slightly denting passenger door on contractor vehicle while driving out of the 31 gate parking lot. There were no injuries and no damage to CVX Property.	NL-Transportation - Contractor	(1) Driver was to close to the exit gate post . Did not appear to pull far enough away from the gate when he moved the vehicle, thus resulting in the vehicle mirror being broken and the passenger door being scratched and dented through slight contact with the gate post.
14347	Richmond, CA - Refinery	5/19/2011 9:10:00 PM	Closed	Loss	PPS Security Officer struck gate pole on exit side of 31 gate parking lot, damaging passenger side mirror and scratching paint on contractor vehicle. No damage to CVX Property.	PPS Security Officer made contact with the gate pole on exit side of 31 gate parking lot, damaging passenger side mirror , scratching paint and slightly denting passenger door on contractor vehicle while driving out of the 31 gate parking lot. There were no injuries and no damage to CVX Property.	Equipment/Property Damage	(1) Driver was to close to the exit gate post . Did not appear to pull far enough away from the gate when he moved the vehicle, thus resulting in the vehicle mirror being broken and the passenger door being scratched and dented through slight contact with the gate post.
14445	Richmond, CA - Refinery	5/22/2011 10:00:00 AM	Closed	Near Loss	Oil spill in HNF Analyzer Shelter.	Lost seals for the motoring pump on the viscosity bath, causing about 10 gallons of oil to spill on the floor of the analyzer shelter.	NL-Environmental - Spill	(1) Pump seals failed because of lack of PM's
14460	Richmond, CA - Refinery	5/23/2011 1:00:00 PM	Closed	Near Loss	Additive injection S/D during cargo export delaying transfer	Additive injection system S/D due to incorrect LPO set up for control system. Export was started with the additive tank working in the lower 25% when the tank hit 15% the control system shutdown the additive pump. LPO was reset to 12% which had previously been determined to be the safe LPO and the cargo lift was re-started.	NL-Quality - Additive Injection (Int)	
14465	Richmond, CA - Refinery	5/23/2011 3:00:00 PM	Closed	Near Loss	A small amount of product leaked out of some pipe that had been transported from RDC to Reclamation.	After transporting various sections of pipe which was removed from RDC and taken to Reclamation a small amount of product leaked onto the ground where the pipe was sitting. The pipe had been cleaned, drained, sniffed for LEL's and tagged prior to transportation. Diapers were placed into the ends of the pipe as a precaution. When Plant Protection arrived at the scene, they sniffed the area and tested for benzene. Test results indicated approximately 0.6 PPM benzene from about 5' away from the leak. Later tests showed no potential for exposure at the source.	NL-Environmental - Spill	(1) SOS: Training & Procedures: Spill to soil from removed piping. Residual liquid in cut pipe. Prep. Work did not address low points in lines, animals, rain water, etc.
14519	Richmond, CA - Refinery	5/23/2011 1:30:00 PM	Closed	Near Loss	Green Card - Odor Issue	Green Card - During T-3104 turnaround activities, odors described as pungent were reported by CFD while passing through area. Area had a vac truck & centrifuge running while tank was opened for cleaning.	NL-Environmental - Release	
14526	Richmond, CA - Refinery	5/18/2011 8:00:00 AM	Closed	Near Loss	Green Card. Floor Monitor List needs to be updated. Location: Admin Bldg	Green Card Floor Monitor List needs to be updted in Admin Bldg.	NL-Lessons Learned	
14527	Richmond, CA - Refinery	5/18/2011 8:00:00 AM	Closed	Near Loss	Green Card. Put Green Card Station on First Floor of Admin Bldg.	Green Card Put Green Card Station on First Floor of Admin Bldg.	NL-Lessons Learned	
					A Quality Control Operator on A Crew was sent to the	A Quality Control Operator on A Crew was sent to the clinic after complaining of pain in shoulder. She was transferring milk crate baskets full of bottles of		

14552	Richmond, CA - Refinery	5/24/2011 10:00:00 AM	Closed	Near Loss	clinic after complaining of pain in shoulder while moving crate of samples.	sample material from inside the XRay Laboratory to the outside porch. She lifted the crate weighing 32 #'s, walked 10 feet with the crate, then lifted the crate to a shelf 3'8" from the floor.	NL-Injury/Illness - Employee Injury	(1) An effort to sustain clear walkways in the Lab Porch area led to QCD employees storing the crates on a ledge higher than waist level.
14628	Richmond, CA - Refinery	5/24/2011 1:00:00 PM	Closed	Loss	RTD driver did not secure inline pump on back of truck.	Driver did not secure P-2526A inline pump on truck prior to driving away from the Crane Bay which resulted in the pump falling over which damaged some tubing on the repaired / serviceable pump. The tubing was replaced, the pump retested and sent out same day.	Equipment/Property Damage	(1) Failure to properly secure load to truck
14639	Richmond, CA - Refinery	5/19/2011 6:30:00 AM	Closed	Near Loss	Wrong respirator cartridge was almost used for the hazard	A North Defender Cartridge No#75SCP100 was almost used when testing metal for mercury hazards. A North cartridge No#750052 is required for mercury.	NL-Lessons Learned	(1) EE did not full understand the hazard
14666	Richmond, CA - Refinery	5/25/2011 12:00:00 AM	Closed	Loss	QCD Refinery Services Truck backed into car	QCD Operator backed his truck into a parked car.	Equipment/Property Damage	(1) Person was trained and very experienced but needed additional training on dealing with vehicles in his blind spot., (2) Driver neglected to make sure area was clear before backing out of parking
14666	Richmond, CA - Refinery	5/25/2011 12:00:00 AM	Closed	Loss	QCD Refinery Services Truck backed into car	QCD Operator backed his truck into a parked car.	Transportation	(1) Person was trained and very experienced but needed additional training on dealing with vehicles in his blind spot., (2) Driver neglected to make sure area was clear before backing out of parking
14779	Richmond, CA - Refinery	5/26/2011 4:00:00 PM	Closed	Loss	Contractor worker feeling ill at T-3104 Tank Cleaning Job. Worker released back to work by clinic.	Worker feeling ill and reported to safety red hat that he had a rash. Worker released back to work by clinic.	Injury/Illness	(1) Liquid Alive not made to be atomized. A Naico replacement has been found., (2) possible that liquid alive may have caused the irritation, but not conclusive. An alternate chemical will be substituted for the mitigation of odors., (3) Liquid Alive not meant to be atomized
14986	Richmond, CA - Refinery	5/27/2011 10:00:00 AM	Closed	Near Loss	Improper use of and potential exposure to carbon bisulfide solvent.	FCC lab operators potentially exposed to carbon disulfide. On 5/27 a QCD engineer used their stop work authority to prevent the further use of a solvent, carbon disulfide, which is used to clean the lab gas chromtaograph. The chemical was improperly labeled, handled and stored. Additionally, the solvent was being used in equipment not designed for this particuair solvent. The MSDS classifies this product as a severe health and contact hazard and requires the use of specialized PPE when handled. The area operator was not aware of the these requirements and was not using the required PPE.	NL-Quality - Incorrect Product	(1) Previous QCD Chemist brought carbon disulfide into FCC lab without managing the change. There was no MOC or RI-313 instituted. If an MOC or RI-313 new chemical request had been instituted, the issue would have been detected and the problem averted., (2) Previous QCD Chemist brought carbon disulfide into FCC lab without managing the change. There was no MOC or RI-313 instituted. If an MOC or RI-313 new chemical request had been instituted, the issue would have been detected and the problem averted.
14898	Richmond, CA - Refinery	5/28/2011 7:00:00 PM	Closed	Near Loss	K-930 routed to both clean H2 and Rhenifer H2 causing comingling of dirty and clean Hydrogen.	At approximatly 19:00 on 5/28/11, South Isomex operators found K-930 1st and 2nd stage discharge were open to both the clean H2 routings and the dirty H2 routing. At the time, K-930 was the designated compressor to be pumping Rheniformer hydrogen. As a result, the Rheniformer H2 had been comingled with the Reformer H2.	NL-Quality - Product Contamination (Int)	(1) Why was K-930 discharge open to both clean and dirty routings? Operator opened clean side to help troubleshoot issues with discharge pressure and forgot to close. Why did the operator forget to close clean side routing vavle. Was working HO job and got distracted with other plant issues.
14900	Richmond, CA - Refinery	5/29/2011 5:50:00 PM	Closed	Near Loss	V-1900 gassed out causing the FCC flare totalizer to trip.	K-1910, the eductor for V-1900 in RLOP stayed open when the vessel was empty. LC-003 controls the eductor, and this indiction got stuck at 2%. This caused V-1900 to briefly gas out, sending process gas to FGR causing flow to the FCC flare.	NL-Environmental - Release	(1) Why did the FCC Flare Totalizer trip? Because FGR could not handle all the gas flow. Why was FGR not able to handle? V-1900 gassed out, sending process gas to FGR. Why did V-1900 gas out? LI-003 hung up at 2% when level went to 0%.
14942	Richmond, CA - Refinery	5/26/2011 10:00:00 PM	Closed	Loss	Operator reported soreness and swelling in their right wrist.	Operator heard and felt a "pop" in their right wrist while trying to break free a backwash valve on a Calgon GAC vessel. The operator claims to have experienced an iintial sharp pain that went away. The operator was able to continue working with continued slight discomfort but wiothout swelling or range-of-motion issues and thought it would "be forgotten about by morning". The operator did not report the injury to anyone and left at the conclusion of their shift. The injury was not disclosed until the start of the operator's next shift four days later.	Injury/Illness	(1) Human Factor
14951	Richmond, CA - Refinery	5/26/2011 11:00:00 AM	Closed	Loss	Lube oil piping replacement on K-1070 was almost replaced with galvanized pipe when it should be carbon steel.	K-1070 lube oil piping modifications were being executed to support the control panel cutover work. The piping contractor fabricated the galvanized piping per the DED EWO and was about to install it when the Chevron construction rep used pause work authority to raise a concern about galvanized piping being installed on a lube oil system. The correct piping is carbon steel. The loss is financial due to re-work; the piping contractor had to order new materials and additional man-hours were required to complete the job.	Business Process	(1) What: Engineer specified the incorrect pipe class, and supervisor review missed the mistake. Why: Engineer was unaware of the requirements specific to lube oil piping - is no galvanized pipe.
14958	Richmond, CA - Refinery	5/30/2011 3:05:00 AM	Closed	Loss	FCC opactiy violation.	FCC stack opacity occurred when K-13B, TR set B-8 tripped off line.	Environmental	(1) Control board failed
14975	Richmond, CA - Refinery	5/29/2011 6:00:00 PM	Closed	Near Loss	Flare Gas Recovery discharge line to 4H2S plugged.	Shortly after RLOP's V-1900 gassed out causing a flaring event, the pressures in Flare Gas Recovery went up. Originally it was thought the interstage fin fans, E-1051/E-1052, were plugging up, so operations started to water wash them. It was then discovered that 2nd stage discharge pressure had increased from 127 psig to 145 psig. Operations determined V-1052 overhead line to 4H2S was plugging up.	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) Why did the overhead line from V-1052 to 4H2S plug? PED believes it was ammonium bisulfide salt deposits formed from ammonia, H2S, and water that are present in recovered flare gas.
						CVX EE, driving the RTD forklift, was at the P&S Whse. to pick up an I&E JOBOX for delivery to the I&E Shop. When he positioned the forks under the JOBOX, they extended enough to partially enter a second pallet butted against		

15037	Richmond, CA - Refinery	5/31/2011 6:45:00 AM	Closed	Near Loss	Motor Dropped by RTD Forklift	the first pallet. The second pallet contained a 75 HP motor. When the forks were raised and the forklift was backing up, the motor was unintentionally moved. Because of the partial pallet engagement, when the motor reached the end of the platform, it flipped 180 degrees falling approximately 3'.	NL-Equipment/Property Damage - Equipment Damage	(1) Past practice to not have pallets back to back and did not get off forklift to check
15067	Richmond, CA - Refinery	5/31/2011 10:55:00 AM	Closed	Loss	Mechanic was moving pallet when a popping was felt in his lower back causing discomfort in his legs. Mechanic was taken to the clinic for evaluation	Mechanic was moving a pallet when he felt a pop in his lower back. At that time he felt discomfort in his legs. After a while the mechanic still felt a little discomfort in his legs and decided to go to the clinic to be checked out.	Injury/Illness	(1) possible muscle fatigue
15084	Richmond, CA - Refinery	5/29/2011 4:30:00 PM	Closed	Loss	Environmental On-Call lost pager in offsite park and it was not recovered.	Environmental On-Call pager was dropped accidently and lost at an offsite park.	Equipment/Property Damage	(1) Inadequate training and turnover procedure for Environmental On-Call personnel., (2) Lack of communication of expectations.
15085	Richmond, CA - Refinery	5/18/2011 12:00:00 AM	Closed	Near Loss	Trunking Repeater #2 weakening	Repeater control signalling weakened due to lots of interference and could have caused radios to not work. Systemed alarmed me before problems noticed.	NL-Business Process - Business Interruption	
15100	Richmond, CA - Refinery	5/18/2011 10:00:00 AM	Closed	Near Loss	material required was 347 SS and when PMI was done it was 321 SS. also material was stamped 321 SS	McJunkin delivered PO 10088732 3 line items that required PMI first 2 line item were PMI with out incident.Third line item (flange) shot 321 SS and we ordered 347 SS also certs were incorect (stamped 321 SS).	NL-Quality - Product Quality (Ext)	
15178	Richmond, CA - Refinery	6/1/2011 3:00:00 PM	Closed	Near Loss	Possible back injury	Operator felt back pop as they bent over.	NL-Injury/Illness - Employee Injury	
15223	Richmond, CA - Refinery	5/31/2011 12:00:00 AM	Closed	Near Loss	Keys left in fork lift while unattended	Incident Description: Operator was running the pail palletizer for 45 mins when he needed to use the rest room . He tried to get assistance from others in the work area however persons were busy and no immediate relief was available. At the first available opportunity the operator drove the forklift to the rest room. The Operator failed to remove the keys from the forklift prior to going to the restroom. During a walk through the forklift was found left unattended with the keys in the ignition.	NL-Business Process - Business Process	(1) Five Why's : Operator needed to use the rest room, he drove the forklift to the rest room and failed to remove the keys prior to using the rest room. Why ? Operator was focused on another task and did not take the time to remove the keys . Why ? Doing the job according to procedures or acceptable practices takes more time / effort to remove keys from fork lift Root cause : Personal Behavior
15252	Richmond, CA - Refinery	6/2/2011 8:00:00 AM	Closed	Near Loss	Green Card - Report of equipment being placed in service before MOC complete	Green Card - Equipment is being placed in service before an MOC (possibly a temporary MOC) has completed an HSE) and without a PSSR being completed.	NL-Business Process - Business Process	
15255	Richmond, CA - Refinery	6/1/2011 8:00:00 AM	Closed	Near Loss	Green Card - reports that MOC process is being short cut	Green Card - report that MOC process is being short cut and that construction is starting before an HSE is completed or all the other necessary approvals have been given	NL-Business Process - Business Process	
15302	Richmond, CA - Refinery	5/26/2011 12:00:00 AM	Closed	Near Loss	CME monthly report delay. Troubleshoot application error	The Richmond Refinery Environmental group's Computer Monitoring Emissions (CME) monthly report delivery to a regulatory agency was delayed by one day. Time and effort expanded by customer and IT support to troubleshoot the problem.	NL-Business Process - Business Interruption	(1) The error message was isolated but the root cause was not determined. The error was tracked down to a material code which had a few sub properties that were not defined.
15314	Richmond, CA - Refinery	4/20/2011 12:00:00 AM	Closed	Near Loss	Unit of Measure on 2 carton orders were entered manually incorrectly into SAP.	In March and April 2011,two new cartons were created in OCS but the pricing in the contract was not set up in SAP. Due to this, the plant purchaser had to manually create the Po's in SAP. Since pricing was not set up, it was advise to use a false amount of $500 with the understanding that this would need to be changed when pricing was confirmed by the supplier. While entering the PO in SAP, the purchaser accidentally entered the unit of measure as 1 per, instead of 1,000 per, which was not caught by the purchaser or the supplier. The PO was corrected before it was processed for payment, but not before it was seen by Finance as a potential 3 million dollar spend.	NL-Business Process - Business Process	(1) Why was the unit of measure in SAP incorrect? these were new cartons and the contract was not updated in SAP yet. Why? procurement was pending a response from vendor. Why? due to being a new item, so the purchaser had to enter the order manually in SAP, but did not review entry. Why? this is not an every day actions and it takes more time and effort.
15314	Richmond, CA - Refinery	4/20/2011 12:00:00 AM	Closed	Near Loss	Unit of Measure on 2 carton orders were entered manually incorrectly into SAP.	In March and April 2011,two new cartons were created in OCS but the pricing in the contract was not set up in SAP. Due to this, the plant purchaser had to manually create the Po's in SAP. Since pricing was not set up, it was advise to use a false amount of $500 with the understanding that this would need to be changed when pricing was confirmed by the supplier. While entering the PO in SAP, the purchaser accidentally entered the unit of measure as 1 per, instead of 1,000 per, which was not caught by the purchaser or the supplier. The PO was corrected before it was processed for payment, but not before it was seen by Finance as a potential 3 million dollar spend.	NL-Business Process - Financial Reporting Error	(1) Why was the unit of measure in SAP incorrect? these were new cartons and the contract was not updated in SAP yet. Why? procurement was pending a response from vendor. Why? due to being a new item, so the purchaser had to enter the order manually in SAP, but did not review entry. Why? this is not an every day actions and it takes more time and effort.
15321	Richmond, CA - Refinery	5/17/2011 12:00:00 AM	Closed	Near Loss	Refinery KPI's Energy Intensity Index and Utilization calculation tags '95REF-EII' and 'Utilization.vtag' have inaccurate results.	Reliable monitoring and reporting of the Refinery KPI's Energy Intensity Index and Utilization calculation tags '95REF-EII' and 'Utilization.vtag' were degraded because of erratic results. Since they are key process indicators (KPI) of refinery performance many VIP stakeholders were concerned.	NL-Business Process - Business Interruption	
	Richmond,	6/4/2011				During heavy rains, F-305 got 2 positive draft indications greater than +.4 inches for more than 20 seconds and caused the FSC Damper to trip. This	NL-Operational	(1) Investigation is incomplete and no root cause has been

15338	CA - Refinery	12:20:00 PM	Closed	Near Loss	F-305 Stack Damper Trip due to heavy rains	opened all 4 stack dampers to 100%. If the draft indications had gone higher than +.8, the furnace would have gone to Min Fire.	Process/Procedures - Safety Systems	identified. The ABU has decided to close the investigation and continue to track this issue via the OERI database
15369	Richmond, CA - Refinery	6/5/2011 10:10:00 PM	Closed	Near Loss	Lost Radio Communication	Radio Communication was lost	NL-Business Process - Business Interruption	
15447	Richmond, CA - Refinery	6/6/2011 4:30:00 PM	Closed	Loss	K-950/980 H2 booster compressor Shutdown on 1st stage knockout pot V-913 high level trip.	At 4.30 PM 6/6/2011 K-950 and K-980 tripped on 1st stage Knockout V-913 high level S/D. The outside operator first on the scene noticed the 2 independent level indicators reading 16.7% and 20 % respectively 63Lc913 and 63LI913A.The High Level S/D float chamber was drained and about a cup of water was observed. The High level shutdown was still active at this time when the operator began to unscrew the top of the float chamber alarm mechanism when the S/D alarm cleared. The compressors would not restart until the High level shutdown alarm was bypassed. There is a time limit on the S/D permissives that clears in 1 hour. The high level S/D bypass will stay in bypass until we get the permissives back. Operations in continuously monitoring the 2 independent level indicators until then.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) V-913 high level Trip S/D K-956/980, Due to Attraction Sleeve on Shutdown switch being stuck at the to of it's enclosing tube.
15486	Richmond, CA - Refinery	6/6/2011 11:30:00 AM	Closed	Near Loss	Inbound from SAS Houston to Richmond was over weight	Order #867988, an inbound from SAS Houston to RLP was entered 5/23/11, with seven different products on it, equalling 20 total pallets and weighing 43,252 lbs. This inbound is an intermodal shipment from SAS that was assigned to JB Hunt Transportation to pick up and deliver. JB Hunt picked this order up around 10am and headed to the scales to check the loads weight; it was found that this load was about 1,000 lbs overweight for California regulations, but not Texas. Due to this order being overweight, JB Hunt had to take the load back to SAS and re work it. It was the understanding of the purchaser that loads could be up to, but no more than 44,000 lbs, but this is not the case.	NL-Lessons Learned	(1) Why truck was over weight? Order was placed for too much weight: 43,000 lbs vs. the required maximum of 42.500 lbs. Why? Always placed order by the no. of pallets in the past. Why? Was not familiar with State weight regulations. Why? It is not specified in the work instructions.
15486	Richmond, CA - Refinery	6/6/2011 11:30:00 AM	Closed	Near Loss	Inbound from SAS Houston to Richmond was over weight	Order #867988, an inbound from SAS Houston to RLP was entered 5/23/11, with seven different products on it, equalling 20 total pallets and weighing 43,252 lbs. This inbound is an intermodal shipment from SAS that was assigned to JB Hunt Transportation to pick up and deliver. JB Hunt picked this order up around 10am and headed to the scales to check the loads weight; it was found that this load was about 1,000 lbs overweight for California regulations, but not Texas. Due to this order being overweight, JB Hunt had to take the load back to SAS and re work it. It was the understanding of the purchaser that loads could be up to, but no more than 44,000 lbs, but this is not the case.	NL-Business Process - Abnormal Freight	(1) Why truck was over weight? Order was placed for too much weight: 43,000 lbs vs. the required maximum of 42.500 lbs. Why? Always placed order by the no. of pallets in the past. Why? Was not familiar with State weight regulations. Why? It is not specified in the work instructions.
15486	Richmond, CA - Refinery	6/6/2011 11:30:00 AM	Closed	Near Loss	Inbound from SAS Houston to Richmond was over weight	Order #867988, an inbound from SAS Houston to RLP was entered 5/23/11, with seven different products on it, equalling 20 total pallets and weighing 43,252 lbs. This inbound is an intermodal shipment from SAS that was assigned to JB Hunt Transportation to pick up and deliver. JB Hunt picked this order up around 10am and headed to the scales to check the loads weight; it was found that this load was about 1,000 lbs overweight for California regulations, but not Texas. Due to this order being overweight, JB Hunt had to take the load back to SAS and re work it. It was the understanding of the purchaser that loads could be up to, but no more than 44,000 lbs, but this is not the case.	NL-Regulatory Compliance - Non Compliance - Weights & Measures	(1) Why truck was over weight? Order was placed for too much weight: 43,000 lbs vs. the required maximum of 42.500 lbs. Why? Always placed order by the no. of pallets in the past. Why? Was not familiar with State weight regulations. Why? It is not specified in the work instructions.
15490	Richmond, CA - Refinery	5/26/2011 8:55:00 AM	Closed	Near Loss	Green card - SUV ran stop sign in front of Tech Center	Green card - SUV leaving Tech Center parking lot rolled through stop sign and cut in front of me on way to main gate as I was turning left to enter lot.	NL-Injury/Illness - Contractor Injury	
15490	Richmond, CA - Refinery	5/26/2011 8:55:00 AM	Closed	Near Loss	Green card - SUV ran stop sign in front of Tech Center	Green card - SUV leaving Tech Center parking lot rolled through stop sign and cut in front of me on way to main gate as I was turning left to enter lot.	NL-Injury/Illness - Employee Injury	
15592	Richmond, CA - Refinery	6/7/2011 6:15:00 AM	Closed	Near Loss	Green Card. Contractor truck had low/flat tire. Location: 214 Main	Green Card. Driving behind a contractor's truck; contractor's truck had low/flat tire on rear left side. His rear window was fogged with morning dew; he could not see me directly. Location: 214 Main	NL-Lessons Learned	
15680	Richmond, CA - Refinery	5/9/2011 3:00:00 PM	Closed	Near Loss	Wireless gateway stopped communicating	Gateway stopped transferring data to the wireless system data coming into it was not available during this time.	NL-Business Process - Business Interruption	
15695	Richmond, CA - Refinery	6/9/2011 12:00:00 AM	Closed	Near Loss	MVC Mechanic backed company truck into parked company truck.	Mechanic leaving #3 District mainenance area backed into a truck parked at the IMI building.	NL-Equipment/Property Damage - General Liability	
15705	Richmond, CA - Refinery	6/8/2011 10:00:00 AM	Closed	Near Loss	Green Card - Gas testing for Vehicle Entry into Plants	Green Card - While conducting a LOTO audit, auditors also noticed a potential issue with vehicle entry into operating units. RI-341 (under non-open flame permits) says vehicles can enter & leave the plant work-site without drains within 50 feet being covered as long as they are escorted by an operator with a gas tester.	NL-Fire/Explosion	
						Green Card - While conducting a LOTO audit, auditors also noticed a potential		

15705	Richmond, CA - Refinery	6/8/2011 10:00:00 AM	Closed	Near Loss	Green Card - Gas testing for Vehicle Entry into Plants	issue with vehicle entry into operating units. RI-341 (under non-open flame permits) says vehicles can enter & leave the plant work-site without drains within 50 feet being covered as long as they are escorted by an operator with a gas tester.	NL-Business Process - Business Process	
15705	Richmond, CA - Refinery	6/8/2011 10:00:00 AM	Closed	Near Loss	Green Card - Gas testing for Vehicle Entry into Plants	Green Card - While conducting a LOTO audit, auditors also noticed a potential issue with vehicle entry into operating units. RI-341 (under non-open flame permits) says vehicles can enter & leave the plant work-site without drains within 50 feet being covered as long as they are escorted by an operator with a gas tester.	NL-Injury/Illness - Employee Injury	
15705	Richmond, CA - Refinery	6/8/2011 10:00:00 AM	Closed	Near Loss	Green Card - Gas testing for Vehicle Entry into Plants	Green Card - While conducting a LOTO audit, auditors also noticed a potential issue with vehicle entry into operating units. RI-341 (under non-open flame permits) says vehicles can enter & leave the plant work-site without drains within 50 feet being covered as long as they are escorted by an operator with a gas tester.	NL-Injury/Illness - Contractor Injury	
15739	Richmond, CA - Refinery	6/10/2011 5:30:00 AM	Closed	Near Loss	RLOP started up on 3186 getting a rate of 350 bph needed 450 to reach minnimum rate. Discovered AOV 108 not fully open	RLOP had to down grade production for an hour until the target rate could be achieved. Started RLOP UCBO feed at about 3am. Rate increased to 350bph. Recieved a call from RLOP at 4:30am saying they needed a higer feed rate Walked out line and found AOV 108 in the field , it looked not fully opened. Stroked air to valve until heard flow increase. Feed rate increased to 500bph to meet flow required.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Air Operated valve not fully opened
15769	Richmond, CA - Refinery	6/10/2011 11:00:00 AM	Closed	Loss	Employee was driving on Quarry Rd., hit a ballard while turning	Damage to left front panel of truck	Transportation	(1) lack of attention to work area
15769	Richmond, CA - Refinery	6/10/2011 11:00:00 AM	Closed	Loss	Employee was driving on Quarry Rd., hit a ballard while turning	Damage to left front panel of truck	Equipment/Property Damage	(1) lack of attention to work area
15804	Richmond, CA - Refinery	5/24/2011 11:50:00 AM	Closed	Loss	While loading drums on pallets doubled stacked , side wall of trailer was damaged	Contractor was loading John Deer load , While loading drums in trailer Operator punctured hole in side of trailer. Contractor inspected trailer before loading and saw no damaged . Loading requirement was a staggerd pattern with drums against wall going left to right through out trailer All drums were in good conditon with no leaks or damaged to product. The loss is that there was damage to side wall of trailer	Equipment/Property Damage	(1) Side wall of trailer was damaged Why? Contractor loading drums into trailer clipped the side wall support. Why? Came in at too sharp at an angle. Why? Used the wrong method for postioning pallet on floor of trailer as operator has done in the past Why? Didnt perform thorough enough LPSA .
15856	Richmond, CA - Refinery	6/8/2011 9:00:00 AM	Closed	Near Loss	Green card - encountered driving wrong way at Castro to Chevron Way	Green card - I was turning right from Castro to Chevron Way and ecountered a car on Chevron Way facing the wrong way (facing Castro). This is the second time I've this happen.	NL-Injury/Illness - Contractor Injury	
15856	Richmond, CA - Refinery	6/8/2011 9:00:00 AM	Closed	Near Loss	Green card - encountered driving wrong way at Castro to Chevron Way	Green card - I was turning right from Castro to Chevron Way and ecountered a car on Chevron Way facing the wrong way (facing Castro). This is the second time I've this happen.	NL-Injury/Illness - Employee Injury	
15893	Richmond, CA - Refinery	6/11/2011 12:00:00 AM	Closed	Near Loss	PED generated temporary operating instruction indicated the wrong date for a HNF feed switch	PED issued a temporary operating instruction stating the RLOP HNF would switch from a 220R to a 600R block on Saturday (6/11) nightshift in contradiction to the Lube Plan's schedule of Sunday nightshift (6/12). A possible result of a premature feed switch could have resulted in product inventor disruption. Near Loss: Interruption of HNF 220R Block, and inventory disruption. Why 1. Operation would have changed feeds 1 day premature. Why 2. Temporary Operating (TOI) Instruction indicated the wrong date. Why 3A. PED generated the TOI with the wrong date Why 3B. Operations signed-off on the TOI containing the wrong date. (Root cause: Lack or inadaquate procedures.) Why 4A: Process Engineer misread the Lube Plan and mistakenly entered the date on the TOI one day ahead of the plan (root cause: Lack or inadaquate procedures.)	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Operations signed-off on the temporary operating instructions containig the wrong date of the planned feed switch, (2) The process Engineer misread the Lube Plan and mistakenly entered the date on the TOI one day ahead of the plan.
15899	Richmond, CA - Refinery	6/13/2011 9:40:00 AM	Closed	Loss	Steam Hose failed while being used	Operator washing down equipment using water/ steam combination. Hose failed approximately 3" from nozzle while being used, making contact to Operators left arm and left leg.	Injury/Illness	(1) hose was stressed internally from used and not visiable from inspection
15962	Richmond, CA - Refinery	6/14/2011 3:00:00 PM	Closed	Near Loss	Forklift hydraulic hose leak	Hydraulic hose on gradall ruptured and sprayed hydraulic fluid on pavement and dirt near (T-1505).	NL-Environmental - Spill	
15962	Richmond, CA - Refinery	6/14/2011 3:00:00 PM	Closed	Near Loss	Forklift hydraulic hose leak	Hydraulic hose on gradall ruptured and sprayed hydraulic fluid on pavement and dirt near (T-1505).	NL-Regulatory Compliance - Non Compliance - Air	
15998	Richmond, CA - Refinery	6/13/2011 8:51:00 AM	Closed	Near Loss	Product physically loaded on bulk truck but processed complete in the sysem at zero.	Bulk truck order# 242392 for Ed Staub & Sons Petroleum was scheduled to load three products from RLP, 6/13/11 at 7am and it did 2,003 gals of the Chv Rando Hd Iso 46 was loaded, 3,497 gals of the Chv 1000 Thf was loaded and 1,453 gals of the Chv Supreme Mo 5w30 was loaded. But, when running the paper work(bill of lading and pacling slip) in OCS, the Chv Supreme Mo 5w30 (220013990) was completed at zero, which means the 1,453 gals loaded did not get deducted from inventory, the paper work reflected that the customer was going to receive zero and get billed for zero.	NL-Business Process - Business Process	(1) Paperwork was incorrect and was not verified by terminalling operator before it was issued to driver/customer. why? Operator or THO manually keyed differing amount from the actually transaction, he could have left OCS automatically enter number into invoice. Why? Operator did not review his paperwork before giving it to the driver, why? Operator was in too much of a rush to complete load and get the driver going so there would be no demurrage for the order, why? Operator chose production over accuracy

15996	Richmond, CA - Refinery	6/13/2011 8:51:00 AM	Closed	Near Loss	Product physically loaded on bulk truck but processed complete in the sysem at zero.	Bulk truck order# 242392 for Ed Staub & Sons Petroleum was scheduled to load three products from RLP, 6/13/11 at 7am and it did. 2,003 gals of the Chv Rando Hd Iso 46 was loaded, 3,497 gals of the Chv 1000 Thf was loaded and 1,453 gals of the Chv Supreme Mo 5w30 was loaded. But, when running the paper work(bill of lading and packing slip) in OCS, the Chv Supreme Mo 5w30 (220013990) was completed at zero, which means the 1,453 gals loaded did not get deducted from inventory, the paper work reflected that the customer was going to receive zero and get billed for zero.	NL-Quality - Paperwork Incorrect/Not Sent	(1) Paperwork was incorrect and was not verified by terminating operator before it was issued to driver/customer. why? Operator or THO manually keyed differing amount from the actually transaction, he could have left OCS automatically enter number into invoice. Why? Operator did not review his paperwork before giving it to the driver, why? Operator was in too much of a rush to complete load and get the driver going so there would be no demurrage for the order, why? Operator chose production over accuracy
16027	Richmond, CA - Refinery	6/14/2011 3:00:00 PM	Closed	Loss	exposure to fumes	2 Mistras Technicians were setting up rigging on the wind Girder of T-3197 were exposed to sulfer fumes which made them light headed	Injury/Illness	(1) SOS: Training & Procedures: Workers Exposed to Fumes. Workers were on top of T-3197. Workers were unaware of possible H2S (sulfur) gases venting out of the tank. No JJSV completed., (2) SOS: Training & Procedures: Workers Exposed to Fumes. Fumes (gases) vented out of vacuum breaker/ pressure relief (vents) on tank (roof). Hot ambient temperature from heat of the day contributed to emissions from tank vents.
16098	Richmond, CA - Refinery	6/16/2011 11:45:00 AM	Closed	Near Loss	Pail palletizer conduit struck by mobile equipment.	I was troubleshooting an equipment fault on the pail palletizer when I discovered that an electrical conduit bank on the side of the palletizer had been struck, probably by a forklift. The outside conduit is bent inward and no longer properly clamped and wil. have to be replaced.	NL-Equipment/Property Damage - General Liability	
16104	Richmond, CA - Refinery	6/16/2011 1:15:00 PM	Closed	Loss	Employee possibly strained his left knee and back	A crew of two employees were moving furniture and office materials from Central Maintenance to 214 Main St. While waiting for the other Co-worker to bring out some boxes that needed to go to 8 warehouse, the other worker lowered the lift gate of the truck to the ground. As the worker exited the building he called the other workers name causing him to turn around. As he turned, the employee felt a pain in his left knee and lower back. Because his foot was up against the lift gate, it restricted his range of motion possibly causing a strain.	Injury/Illness	(1) Employee made a normal turn to look backwards after another employee called his name.
16191	Richmond, CA - Refinery	6/18/2011 1:35:00 PM	Closed	Near Loss	Operator's H2S monitor alarmed	Operator's H2S monitor went off while he was opening the hatch on the recovered oil cell of #2 separator.	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) Operations is too close to the lids/openings when inspecting the liquid level in the separator. They must put themselves in the line of fire to open the lid.
16198	Richmond, CA - Refinery	6/18/2011 10:00:00 PM	Closed	Near Loss	K-930 Shutdown due to Lube oil leak	On 6/18 nightshift, operations noticed a leak on K-931 lube oil filter housing drain line for K-930 booster compressor. What started as a minor leak continued to get worse and became a steady stream. Ops attempted once to move the in drain line carefully, in a tightening movement and saw the leak get slightly worse. This filter housing is not isolatable from the lube oil system so a steadily worsening leak would eventually cause a compressor shutdown and possible damage to the machine. The decision was made to move as much load as possible to the available compressors and Shutdown K-930. The compressor is S/D and depressured at this time and the lube oil system is shutdown. TKN cut 2MBPD feed as a result of the loss of K-930	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
16199	Richmond, CA - Refinery	6/18/2011 10:00:00 PM	Closed	Loss	Burn top of hand with wash down hose	Operator during washing down his plant He had to walk through some staging and as he pulled the hose he pressed the trigger to wash down hose it went off and hit the top of his hand and it burned him	Injury/Illness	(1) Personal factors - doing the job according to acceptable practice takes more time / effort
16199	Richmond, CA - Refinery	6/18/2011 10:00:00 PM	Closed	Loss	Burn top of hand with wash down hose	Operator during washing down his plant He had to walk through some staging and as he pulled the hose he pressed the trigger to wash down hose it went off and hit the top of his hand and it burned him	NL-Injury/Illness - Employee Injury	(1) Personal factors - doing the job according to acceptable practice takes more time / effort
16238	Richmond, CA - Refinery	6/19/2011 9:30:00 AM	Closed	Near Loss	Green Card - Tech Center Stairwell Lights Not Working	Green Card - Tech Center Stairwell Lights Not Working Employee came in on a Sunday to do a few hours of work. They normally take the stairs. After walking up a flight, the door behind them closed and they realized that the motion detector lights had not come on. The employee held the hand-rail and slowly walked back down the stairs.	NL-Injury/Illness - Contractor Injury	
16238	Richmond, CA - Refinery	6/19/2011 9:30:00 AM	Closed	Near Loss	Green Card - Tech Center Stairwell Lights Not Working	Green Card - Tech Center Stairwell Lights Not Working Employee came in on a Sunday to do a few hours of work. They normally take the stairs. After walking up a flight, the door behind them closed and they realized that the motion detector lights had not come on. The employee held the hand-rail and slowly walked back down the stairs.	NL-Injury/Illness - Employee Injury	
16277	Richmond, CA - Refinery	6/17/2011 9:00:00 AM	Closed	Near Loss	MOV on valve damaged	Upon removing plastic from around a valve and MOV from Tank 3104 at the hydroblast pad, the load shifted causing the valve to fall, landing on the MOV, causing damage. Fortunately this assembly was designated for scrap.	NL-Equipment/Property Damage - Equipment Damage	
16284	Richmond, CA - Refinery	6/20/2011 9:00:00 AM	Closed	Loss	EE REMODLING HAZ WASTE EXTERIOR OFFICE ACCIDENTLY CUT COMMUNICATION LINE IN WALL	EE CUTTING BASE PLATE OF EXTERIOR WALL AT THE STUD NOTICED THE ELECTRICAL WIRE RUNNING PARELLEL TO STUD DID NOT KNOW WIRE RAN UNDER PLATE AND PLYWOOD. WIRE WAS CUT BY SAWSALL.	Equipment/Property Damage	(1) ee failed to use stop work or pause work to follow where the communication line could go. ee's felt they needed to get noisy part of the job done so they would not disturb workers inside of office.

15285	Richmond, CA - Refinery	6/20/2011 9:00:00 AM	Closed	Loss	Anna Victoria @ Berth 1 had a faulty O2 sensor that created a rich burn in the IGS boiler. After changing the sensor out, the IGS system was restarted, and the soot that was built up in the boiler was flushed out the overboard discharge. Cargo and IGS operations shut down immediately. There was no visible sheen associated with the soot. Notification went out from Wharf and Vessel (via O'Brian's).	Anna Victoria @ Berth 1 had a faulty O2 sensor that created a rich burn in the IGS boiler. After changing the sensor out, the IGS system was restarted, and the soot that was built up in the boiler was flushed out the overboard discharge. Cargo and IGS operations shut down immediately. There was no visible sheen associated with the soot. Notification went out from Wharf and Vessel (via O'Brian's).	Environmental	(1) A sensor failed creating a rich burn in the IGS boiler. After changing the sensor out, the IGS system was restarted, and the soot that was built up in the boiler was flushed out the overboard discharge.
15290	Richmond, CA - Refinery	6/20/2011 3:40:00 PM	Closed	Near Loss	68LC832 (C832) level indication topped out at 74%. The level carried over the top to V840 (K840 knockout). The high level alarm on V840 did not activate and the level continued to rise causing K840 to shutdown.	68LC832 (C832) level indication topped out at 74%. The level carried over the top to V840 (K840 knockout). The high level alarm on V840 did not activate and the level continued to rise causing K840 to shutdown. In an attempt to restart K-840, the level in V-840 was blown down to relief. This caused the FCC totalizer to trip.	NL-Operational Process/Procedures - Safety Systems	(1) Why did K840 trip? Liquid filled V840 and tripped high level shutdown. Why did liquid trip the shutdown? Liquid overfilled C832, upstream of V840 Why did C832 carry over liquid? It's level controller malfunctioned. The LC appeared to catch the level and hold at 74%, although actual level continued to rise over 100%. (2) Why did operator monitoring of C832 level not recognize potential bad reading from level controller? Operator believed moves made outside to open up on block valve downstream of suspect LV were adequate to catch the level. Operator thought LC showing level flattening out at 74% indicated level was under control.
15298	Richmond, CA - Refinery	6/18/2011 8:11:00 AM	Closed	Near Loss	The DWOP Compliance monitor and pH probe readouts were blank due to an apparent loss of power.	At approximately 9:45 am on Saturday, 6/18, while checking on electrical maintenance work taking place in the DWOP shack, operations became aware of the loss of readouts from both the DWOP compliance monitor and pH probes at the DWOP shack. After troubleshooting with the electricians on site, it was determined that the UPS system was recieving power from the local 120v supply, but for reasons unknown the power was not passing through the UPS to the compliance monitor and probes that were connected to it.	NL-Regulatory Compliance - Non Compliance	(1) Sidebar Issues: There is no alarm for loss of UPS common trouble communication to the 503 compliance equipment. , (2) Sidebar Issues: The UPS was never configured for time / date and alarm set points., (3) Sidebar Issues: There is no loss of communication alarm to the Honeywell system, (4) Sidebar Issues: The data collector was found to not be working. There are no operator time stamps in the collected data., (5) Sidebar Issues: Both operations and maintenance have not been trained on the UPS system., (6) Sidebar Issues: There was no written JJSV/JHA (Joint-Job Site Visit/ Job Hazard Analysis) done between operations and electricians for the job that day (as required per RI-9900: Release of Equipment). Electricians had started working on the shelter/beacon the day prior and had discussed the job scope with operations then. They had walked the job site as required. The next day, when the electricians came back to continue working on replacing the beacon, they again talked to operations and discussed the job for the day. The operator signed them in on the work order form but did not walk the site as there were no changes from the day prior and he'd been called to another job. Once the new beacon was in place, the operator was contacted via radio by the electricians and did arrive at the shelter to help test the new beacon., (7) Sidebar Issues: Safe work practices for isolation and release of equipment (LOTO: lock-out/tag-out procedures), were not followed, as required per Refinery Instruction RI-9900 Control of Hazardous Energy and RI-389 Electrical Safe Work Practices.
15319	Richmond, CA - Refinery	6/18/2011 12:00:00 AM	Closed	Near Loss	Lights in Warehouse 4 were on all weekend	Warehouse 4 lights were on all weekend, doors were all locked up didn't see an obvious on/off switch	NL-Business Process - Business Process	
15320	Richmond, CA - Refinery	6/16/2011 12:00:00 AM	Closed	Loss	Warehouse 4 door was hit by forklift & damaged	Warehouse 4 door was hit by forklift & damaged, making it difficult to open & close.	Equipment/Property Damage	(1) Whs entry door was damaged ? Why ? Operators in the past used forks to open door Why? Door was hard to open Why? Door Alignment was off Why? Door was hit on lower bottom causing alignment to be off. why? Operator didnt look back when backing up. (note) Door was damaged over 5 years ago.
15360	Richmond, CA - Refinery	6/13/2011 7:00:00 AM	Closed	Near Loss	Green Card. Blast resistant bldg propped open with broom and Acids and bases all mixed above/below the fume hoods. Location: Cracking/FCC/Alky Lab	Green Card. Blast resistant building found to have west door propped open with broom handle in hinge area; Acids/bases all mixed above and below the fume hoods. Location: Cracking/FCC/Alky Lab	NL-Lessons Learned	
								(1) The 10-inch elbow dead-leg was part of original plant

10363	Richmond, CA - Refinery	6/21/2011 4:15:00 PM	Closed	Loss	R-320 outlet spool leak	R-320 developed leak on startup gas return line.	Equipment/Property Damage	design and construction about 45 years ago. In 2010, the 4-inch elbow drain was reconfigured to a 2" drain made of 304ss, though it was ineffective in preventing carbonic acid corrosion at the 10" elbow., (2) The low-points of the original dead-leg design are prone to carbonic acid corrosion damage. Operating the original line configuration differently may eliminate the need for a piping redesign., (3) The Thickness Measurement Location (TML #24) on the failed elbow had been deactivated for several years. Past thickness monitoring could have found both the thin area prior to failure and/or characterized the corrosion rate as a short-term risk., (4) The business unit employed a minimum scope philosophy towards assessing the H2-A Train 1Q 2010 T/A work list. Least-cost bare-minimum repairs were favored over long-term solutions, and limited more effective solutions from being implemented during the Feb 2010 repairs and/or 1Q2010 H2-A Train T/A.
16432	Richmond, CA - Refinery	6/21/2011 4:39:00 PM	Closed	Near Loss	Hydrogen Leak at R320	TOP INVESTIGATION (see Investigation Journal or link on left for TOP description): Initial description: A high pressure hydrogen leak/release occured at R320. Operations and the Hydro STL were aware of this leak/release, but failed to immediately report this leak/release to Chevron Fire Department (CFD) for a minimum of 20 minutes after discovery of said leak/release, if not longer, in direct conflict with RI 481, Section 5. This led to a delay in emergency response. Had the leak/release gone to catastrophic, and with the close proximity of the A Train furnace, this could have been a fire response rather than a leak/release response. (What is the worst thing that can happen?) When CFD arrived on scene, operations personnel were inside the Hot Zone tape (which Operations put up) attempting to place steam lances on the leak. We (CFD) were then told not to use water because of concerns of "thermal shock" to the hot piping, and that it may cause the pipe to fail or the "hole" to get larger. This should not be a concern in an emergency response posture when attempting to disperse vapor from an uncontrolled realease of hydrogen. Furthermore, "thermal shock" has been refuted to be a primary concern due to the lack of evidence that it occurs by many design engineers in the past. Again, had there been a catastophic failure, there would have been no water stream in place to disperse the hydrogen in view of the close proximity to the A Train furnace. Lastly, once high flow water had been directed toward the leak/release (due to it becoming greater in noise and volume), two operators entered the Hot Zone and proceeded to climb R320 up to the first deck in an attempt to isolate a line. This was done without consent from the Incident Commander, and the two had to be quickly removed from the Hot Zone by emergency personnel. Operations personnel were upset that CFD would not let them isolate a valve within the Hot Zone, of which LEL readings were greater than 100%. Worst case scenario would have been a light-off of the hydrogen resulting in injuries and/or death.	NL-Business Process - Business Process	(1) Dayshift H.O. & STL Left The Incident Scene (shift/ turnover time), (2) Chevron Fire department (CFD/ PP) did not follow RI requirement, (3) Days HO was not notified of Incident Command by CFD or STL, (4) Sidebar Issue. Insulation on pipe came off during incident, (5) Sidebar Issue. Need to practice refinery-wide Incident Command Response hypothetical to ease use and familiarity with instruction
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16492	Richmond, CA - Refinery	8/22/2011 12:00:00 AM	Closed	Near Loss	Green Card - Water leak, minor staining of back stairwell	Green Card - Water leak produced minor staining of back stairwell wall below 2nd floor.	NL-Equipment/Property Damage - Equipment Damage	
16499	Richmond, CA - Refinery	6/21/2011 9:15:00 PM	Closed	Near Loss	Call Out Failure	Maintenance On Call was asked to locate mechanics to remove insualtion on R-320. Contract company was called and the numbers provided when called went to voicemail after no answer. There was no response from the contractor after appx. 2 hours of calling and voicemails being left. The Contract company recently changed service providers and the location of the managers home did not allow complete cellular service. As a result of the incident he manager added two contacts to their call out list and also included all home phone numbers (land lines) of thier call out responders to ensure contact.	NL-Lessons Learned	(1) Phone calls were not received due to new cellular service failure
16519	Richmond, CA - Refinery	6/6/2011 12:00:00 AM	Closed	Near Loss	Employee was not sent their written job offer in a timely manner	Employee was not sent his job offer in a timely manner. It took almost two weeks for the employee to receive his written job offer after his verbal offer had been extended. This is due to the delay of the Corporate Recruiting group as well as the specific Corporate Recruiter not reading the desk manual and understanding that the written offer would not automatically be sent by the recruiting system but that there was a work around and he would need to manually send the written offer.	NL-Business Process - Business Interruption	
16551	Richmond, CA - Refinery	6/22/2011 9:00:00 AM	Closed	Loss	Tank gauges lost during planed shutdown	Electrical group was doing a planed shutdown to service a switch gear on breaker at 17 pump station while JHT feed was being routed to T-1518 which was at low pump out. When the power was shut off, some of the tank gauging systems were lost	Business Process	(1) Communication during job preparation needs improvement
16553	Richmond, CA - Refinery	6/23/2011 12:30:00 PM	Closed	Near Loss	During a test to mary the 280 and 281 lines together the valve used to ty the line became stuck in the open position	During a test to mary the sour water lines 280 and 281 together to get ready for a upcoming shutdown, the valve used to between the line became stuck in the open position.	NL-Business Process - Business Process	(1) Valve forced open bender stem rendering it inoperable, (2) Excessive force was used when opening the valve., (3) Uneven surfaces and potholes around valve
16571	Richmond, CA - Refinery	6/23/2011 7:40 00 PM	Closed	Loss	P-733A seal leak caught fire and was quickly extinguished while Head Operator was verifying isolation of pump.	On 6/23/11 at 7:40 pm while the Head Operator was verifying isolation of the pump, P-733A seal leak caught fire and was quickly extinguished. On 6/21/11 night shift P-733A was put in service following H2 A-Train upset, for steam load shed. On 6/22/11 night shift at 7:45 pm Operations discovered that the outboard seal on P-733A had begun to leak. Due to the extent of the outboard seal leak, Operations made the decision to shutdown P-733A and start-up P-733. After the pump swap had taken place, the outboard seal leak on P-733A had stopped. P-733A was placed on APS (Automatic Pump Start) stand-by, WO was written, call was given to John Lizarraga has heads up for the next day to look at. On 6/23/11 Operations, Maintenance and IMI ran in P-733A and the seal leaked. Per IMI the pump needs an outboard seal job so Operations shutdown and isolated the pump for repairs. Per the day shift HO turnover "P-733A isolated", per the AO turnover "P-733A s/d and LOTO'ed". At 7:40 pm the on shift HO went out to look at P-733A and found the outboard seal leaking pretty good so he started double checking the isolation, he got a persuader and varified the discharge block valve was closed, he engaged the handjack on the suction valve to verify it was closed and started getting some lums closed on it and as he closed it off more the seal leak got worse and light off on him. He had a steam lence on the leaking seal and when it caught fire he increased the steam to it, he quickly checked the seal flush and it was closed, he then quickly checked the warm up line tying into the discharge of the pump coming from the discharge of the running pump and it was open. He blocked in the warm up line and the fire went out and the leak slowed to just a drip. He then went back and closed the suction valve all the way using the handjack. The fire burnt for less than 1 minute. After getting everything isolated and secure he called the STL and the STL phoned in the incident to Plant P	Fire/Explosion	(1) Valve left open during isolation of the pump
16581	Richmond, CA - Refinery	6/23/2011 4:00:00 PM	Closed	Near Loss	Green Card - Projector in TC-346 left on overnight	Green Card - Projector in TC-346 left on overnight. No room reservations shown for 6/23 - so not possible to identify responsible work group.	NL-Business Process - Business Process	
16612	Richmond, CA - Refinery	6/24/2011 0:00:00 AM	Closed	Near Loss	InadvertentShutdown of K-930	At 8 a.m. While doing routine temperature checks on K-930, the compressor shutdown without warning. Operations tried a restart on K-930 but it did not restart. K-940 was started and electricians were called in to troubleshoot. No cause for the shutdown has been found at this time. At 2PM operations attempted to restart K-930 and it started. Electricians looking at Shutdown timer .Troubleshooting continues.on timer and cause of shutdown.	NL-Lessons Learned	(1) Bad temperature indicator caused 2 out of 3 voating shutdown of compressor
16614	Richmond, CA - Refinery	6/24/2011 10:00:00 AM	Closed	Loss	C-1650 Level indication Casused HNFlo be routed off test	At Approx 9:00 am C-1650 Vacuum column in RLOP LNC began experiencing level indication issues. Operations worked to stabilize the level and troubleshoot the bad level indications. Operations was unsuccessful in troubleshooting the LI's and Maint. was called to investigate the issue.C-1650 bottoms (600R) was placed off test since Vis on finished tank was close and column temps were swinging due to level issues.. Maint. was able to repair one level indicator.(the Control Indicator) and the column was put back on auto control. Samples were pulled and 600R was routed back on test at 3:50 PM.	Operational Process/Procedures	(1) Failed LITorque tube access door opened up

16824	Richmond, CA - Refinery	6/24/2011 7:55:00 PM	Closed	Loss	GHT routed off test	GHT H/O noticed sulfur analyzer reading high to check if it went bad FCC was called to see if any plant moves were made they reported that they were experiencing high sulfur numbers also it was mentioned that TKC had started a Module on days FCC was making moves to help with High sulfur but at low feed it could only do so much	Business Process	(1) SOS: Training and Procedures; Communication GHT Gasoline reprocessed at a cost of <$5K. GHT Operations were not aware of change in FCCH feed condition. Were not alerted by the FCC that sulfur was higher than normal. , (2) SOS: Training and Procedures: Communication: GHT Gasoline reprocessed at a cost of <$5K. Off Spec Gasoline was produced at the GHT. Were not directly alerted by RSL via 7:15 conf call that feed condition could change., (3) SOS: Training and Procedures: Communication: GHT Gasoline reprocessed at a cost of <$5K. Off Spec Gasoline was produced at the GHT. GHT Operations were not aware of change in FCCH feed condition. Were not directly alerted of possible feed condition change via 21 day plan. , (4) Sidebar Issue: Training and Procedures (Communications): The guidance for GHT product routing for off test situations is unclear and needs review and modification to minimize impact on gasoline blending and/or reprocessing.
16704	Richmond, CA - Refinery	6/27/2011 7:15:00 AM	Closed	Near Loss	Discomfort in left forearm	EE reported discomfort in left forearm to Supervisor and said they were going to go to the Clinic. EE was advised to wait for the Supervisor. EE said that they felt that they were experiencing a non work related muscle strain of some sort. EE was then transported to the Clinic.	NL-Injury/Illness - Employee Injury	
16761	Richmond, CA - Refinery	6/27/2011 2:00:00 PM	Closed	Loss	Operator received burn to his neck and shoulder when hot condensate rained down on him while attempting to warming up TP-124 for hot alignment.	Operator received burn to his neck and shoulder when hot condensate rained down on him while attempting to warm up TP-124 for hot alignment.	Injury/Illness	(1) Why did operator get burned by condensate? • Because condensate came out of the turbine case vent and contacted operator Why did condensate come out of the vent and contact operator? • Condensate can end up exiting vents for a number of potential reasons (wet steam, inadequate trap system, inability to drain low points, condensing occurring in the vent stacks, etc.). Condensate contacted operator because the steam exhaust block valve that the operator was manipulating is directly under the vent. , (2) Since this root cause was identified in a previous incident, why is the exhaust valve "still" under the vent? • After 2009 B&S condensate burn incident, this system was identified as an at risk area that needed solutions put in place to mitigate burn risk. Mitigation was never put in place. , (3) Why was solution never put in place to mitigate exposure? • Solution was closed out in investigation database as complete before all components of solution were implemented. No subsequent system was put in place to ensure solutions were owned and being carried to completion.
16791	Richmond, CA - Refinery	6/27/2011 8:20:00 PM	Closed	Loss	Vacuum truck driver sprayed by recovered oil	Vacuum truck driver sprayed by recovered oil while attempting to hook up offload hose connection. An air switch located next to the camlock connection point on the truck was bumped open while in the process of hooking up the 4" pump off hose. Approx. less than 1 barrel of recovered oil spilled to grade which was contained with diapers. Plant protection was notified and evaluated drivers condition. Driver refused treatment from Chevron EMT's. Veolia supervisor was notified and arrived approx. 45 minutes later with safety person and indicated they would be sending driver to see their doctor.	Injury/Illness	(1) SOS: Design & Engineering: Handle too close to camlock fittings. , (2) SOS: Training & Procedures: Loss Vacuum Pressure. Vacuum Pump was not on. Thought there was enough vacuum left from the loading. Short Distance from Loading site to off-loading site. , (3) Sidebar Issues: Training & Procedures: 2" cam-lock cap was not removed under full vacuum first to ensure that the discharge line is empty., (4) Sidebar Issue: Training & Procedures : Driver was not wearing proper personal protective clothing for discharging the vacuum truck.
16791	Richmond, CA - Refinery	6/27/2011 8:20:00 PM	Closed	Loss	Vacuum truck driver sprayed by recovered oil	Vacuum truck driver sprayed by recovered oil while attempting to hook up offload hose connection. An air switch located next to the camlock connection point on the truck was bumped open while in the process of hooking up the 4" pump off hose. Approx. less than 1 barrel of recovered oil spilled to grade which was contained with diapers. Plant protection was notified and evaluated drivers condition. Driver refused treatment from Chevron EMT's. Veolia supervisor was notified and arrived approx. 45 minutes later with safety person and indicated they would be sending driver to see their doctor.	Environmental	(1) SOS: Design & Engineering: Handle too close to camlock fittings. , (2) SOS: Training & Procedures: Loss Vacuum Pressure. Vacuum Pump was not on. Thought there was enough vacuum left from the loading. Short Distance from Loading site to off-loading site. , (3) Sidebar Issues: Training & Procedures: 2" cam-lock cap was not removed under full vacuum first to ensure that the discharge line is empty., (4) Sidebar Issue: Training & Procedures : Driver was not wearing proper personal protective clothing for discharging the vacuum truck.
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						Green Card. I needed a drink of water and there was no cups available in the GMG offices. I was told that the cups are locked up and you have to ask for		

16856	Richmond, CA - Refinery	6/27/2011 1:00:00 PM	Closed	Near Loss	Green Card. No cups available for drinking water. Location: GMG	one, but there was no supervisor. OSHA law requires the employer to supply 1 quart of water per hour per employee, and cups. Are we going to have to carry our own cups around? Location: GMG	NL-Lessons Learned	
16914	Richmond, CA - Refinery	6/28/2011 9:00:00 PM	Closed	Near Loss	FCC Lost Control of C670 DTM Cikes B&S Line Wash Transfer to T-397 as Cause	Prior to transferring T-1899 to T-3196 Blending and Shipping Crude washed the 12 PY to T-397. This is a common transfer that happens almost daily. The line wash occurs on the 118Ln which shares a common fill header on T-307 with the 141 LN excess from FCC Alky. On this occasion due to unknown process conditions at FCC/ Alky C670 level began to rise uncontrollably.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Design & Engineering: Pump was unable to deliver enough pump discharge pressure, (2) Training & Procedures: No communication between B&S and Poly about running at higher rates at Poly Plant, (3) Design & Engineering: Poorly designed pump could not pump aged acid fast enough
16979	Richmond, CA - Refinery	6/28/2011 2:20:00 PM	Closed	Near Loss	Third Party Outside Hauler not correctly tied in with Safety Harness while operating Manlift	Third Party Outside Hauler not correctly tied in with Safety Harness while operating Manlift. Upon departure of RSC Manlift, Chevron E. stopped and explained to third party outside hauler that he needed to be tied into Manlift while operating.	NL-Injury/Illness - Contractor Injury	(1) Normal practice, user just neglected to tie off to unit. Was wearing the safety harness, was in a hurry to drop off his load.
16986	Richmond, CA - Refinery	6/6/2011 2:00:00 PM	Closed	Near Loss	Clienies were being diconnected from Usart during our normal working day	During our regular working day, some users were being diconnected from their "P" drives and if the client rebooted their PC, then the "O" drive would get disconnected also.	NL-Business Process - Abnormal Supply Occurrence	
17026	Richmond, CA - Refinery	6/6/2011 9:00:00 AM	Closed	Near Loss	Rebooted Server outside of Maint Window	Restarted Ric841ntpidmz outside of normal outage window. Installed new Legato client on Ric841ntpidmz Worked with PI analyst to schedule outage.	NL-Business Process - Business Interruption	
17149	Richmond, CA - Refinery	6/28/2011 6:30:00 AM	Closed	Near Loss	Green Card. Walkway behind Firehouse rotted. Location: New Firehouse	Green Card. Walkway's behind the new Firehouse is rotted.	NL-Injury/Illness - Employee Injury	
17152	Richmond, CA - Refinery	6/30/2011 10:30:00 AM	Closed	Near Loss	Backhoe working on an incline stalled out due to loss of fuel.	A backhoe was working on an incline with the bucket facing downwards. The engine stalled due to loss of fuel and could not move. There wasn't much fuel in the tank and the sharp dowwards angle caused the fuel pump to be starved.	NL-Business Process - Business Interruption	
17154	Richmond, CA - Refinery	6/27/2011 10:00:00 AM	Closed	Near Loss	Green Card. Replace fire monitor deck. Location: Behind separator on Main Street.	Green Card. Replace the fire monitor deck located behind separator on Main St. If there is a fire, cannot use the fire monitor. Location: EOD, behind separator on Main St.	NL-Lessons Learned	
17173	Richmond, CA - Refinery	6/30/2011 2:15:00 PM	Closed	Near Loss	P-152A cooling water pump suction piping leak.	While hot aligning P-152A cooling water pump the suction piping spool started leaking. The pump was out to service the coupling. The spool failed due to external corrosion.	NL-Equipment/Property Damage - Equipment Damage	
17176	Richmond, CA - Refinery	6/14/2011 2:00:00 PM	Closed	Near Loss	Backing Company vehicle out, did not see vehicle coming up behind van	Contractor was backing out of parking space as another vehicle was approaching. Contractor did not see the vehicle behind him and continued to back out of spot. Fortunately, approaching vehicle stopped early to avoid possible low speed collisioin.	NL-Transportation - Contractor	
17199	Richmond, CA - Refinery	6/29/2011 6:45:00 PM	Closed	Near Loss	Operator noticed small HC leak on channel/shell of E-3560B	During first rounds, unit operator noticed liquid/vapor spitting from the bottom of the channel/shell of E-3560B. He informed the Head operator, who in turn informed the STL. The steam ring was placed in surface to deter ignition. CFD was informed to assess fire fighting possabilities. Exchanger was monitored for the next several hours. CFD checked for LEL and BZ. None detected. At ~ 23:00 during a routine check of theexchanger it was noted that the leak had stopped. Maintenance and DED checked the exchanger on the following dayshift and steam was shut off to the steam ring	NL-Environmental - Operational Leak	(1) SOS: Maintenance & Inspections: E-3560B LEAK AT CHANNEL HEAD. Feed Temperature/pressure swings causes thermal cycling. Gasket Relaxation (Low gasket stress develops over time). Not enough tensioning/stress on bolt/flange.
17211	Richmond, CA - Refinery	6/29/2011 12:00:00 PM	Closed	Near Loss	Green Card--Hand Rail in need of repair	Green Card--I leaned on a hand rail and almost fell onto the pipe trenches because the 4 X 4 support was weak.	NL-Equipment/Property Damage - General Liability	
17236	Richmond, CA - Refinery	7/1/2011 10:00:00 AM	Closed	Near Loss	Opening waste oil storage drum in back of D & R lab, drum burped oil out which shot about 2 feet into the air	Went to dispose of sampled oils into waste oil drum at the back of the D & R lab. When I opened the valve to the drum to pour the oil into the drum, oil shot out of the drum up into the air approximately 2 feet.	NL-Injury/Illness - Contractor Injury	(1) The drum was under pressure; there was liquid in the funnel on top of the closed valve., (2) The liquid in the funnel should have been drained out.
17236	Richmond, CA - Refinery	7/1/2011 10:00:00 AM	Closed	Near Loss	Opening waste oil storage drum in back of D & R lab, drum burped oil out which shot about 2 feet into the air	Went to dispose of sampled oils into waste oil drum at the back of the D & R lab. When I opened the valve to the drum to pour the oil into the drum, oil shot out of the drum up into the air approximately 2 feet.	NL-Environmental - Spill	(1) The drum was under pressure; there was liquid in the funnel on top of the closed valve., (2) The liquid in the funnel should have been drained out.
								(1) 1) PCO grabbed wrong switch on panel. 2) PCO did not perform LPSA before task. PCO did not change light bulb out or recognize he was on the wrong chopper switch., (2) SOS: Design & Engineering: Switches are too close together, poorly labeled and lit, critical switches have no covers, etc. , (3) -Sidebar Issue. Design & Engineering : Evacuation alarm switches are not at a separate location from critical switches on alarm panels., (4) -Sidebar Issue. Training & Procedures :

17259	Richmond, CA - Refinery	7/1/2011 7:00:00 PM	Closed	Loss	4Rhen furnace emergency shutdown switch accidently switched	At 1900, on 7/1/2011, while testing the Penhex plant evacuation alarm per the Routine duties, the Honeywell FCO Accidently operated the 4 cat fuel gas shutdown switch and chopped the fires at 4Cat furnaces.	Equipment/Property Damage	•Operators who were out in the plant to help light the furnace had to go searching for torches: The 4 Cat torch did not work; a few other torches located in nearby plants did not work either, except for one (used for the relighting of the furnace). •Only one wrench for the deblinding of the burners was found. Although this did not severely impact the start up of the plant, it could have (normally several wrenches can be found near the furnaces but overtime these are removed and not returned).
17310	Richmond, CA - Refinery	7/3/2011 7:43:00 PM	Closed	Loss	P-4040/A tripped due to blown fuse on inner posing relay panel.	At 19:43 p-4040 tripped off line. Operations responded and were unable to re-start it. Operations then attempted to start P-4040A. Ops recognized that the lights on the suction EBV switch were out and the EBV was open but indication on the board was closed. The steam inlet has a reset latch with a button to push to engage it. The button would not set; ops manually held the latch open. The FC-41 chop to the Rxts and the min flow on P-4040's to protect the unit and feed pump. The pump restarted with no issues. After troubleshooting there was no power to the panel, and remote shutdown 40ZC41 lights were out. Maintenance was called out and after extensive trouble shooting diagnosed FU7 fuse blown on the inner posing relay panel had blown. Maintenance replaced it, power to the panel was restored. The EBV on the Honeywell showed open, the latch was then holding normally without assistance. Ops then switched pumps to the P-4040 electric pump.	Equipment/Property Damage	(1) Fuse blown , (2) SOS: Maintenance & Inspections: Stop signal from Mullilin tripped P-4040. Blown fuse (FU-7) triggered (sent) stop signal to Mullilin. Blown fuse found in circuitry (instrument/junction) box. Fuse blew (unable to determine cause) , (3) •SOS: Sidebar Issue.Design & Engineering (Design of Equipment): • Attempts to restart P-4040A, the back-up pump, failed. • Lights on the EBV switch were out • EBV was open in the field, yet indication in control room board showed it to be closed. • P-4040A driver steam inlet latch would not work, reset latch button would not energize. • Water/ moisture build up was found in one of the instrument junction boxes inspected during troubleshooting of pump shut down.
17325	Richmond, CA - Refinery	7/4/2011 4:00:00 AM	Closed	Near Loss	SDA feed cut	At approximately 4 am this morning Nightshift crew began to cut feed in the SDA plant due to an unexplained decrease in DAO yield. Further investigation Dayshift found significant amounts of water in the Solvent accumulators V-143/144 (approx. 300BBLS).Operations continued to drain water from the accumulators throughout the day and are slowly raising feed as the plant stabilizes.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Why was there water in the V-143-144's. There was water in the high pressure accumulators due to water carry-over from V-141. Why was there water carry-over from V-141. There was water carry-over from V-141 due to bad level indications on the 67LC1411, water interface. Why was there a bad indication on 67LC1411. There was a bad level indication on 67LC141 due to the steam tracing on the bridle was cold and bottom leg on level displacer was slanted uphill. Why was the steam tracing cold. Steam Tracking was cold due to steam traps not working. Why was the level transmitters bottom leg leaning uphill. Was leaning uphill due to constructed that way.
17366	Richmond, CA - Refinery	7/5/2011 6:17:00 AM	Closed	Near Loss	Trip and fall	While exiting the trailer at 242 Center St. EE tripped on the all weather mat and fell. Asked the EE if they were ok, they said yes and elected to go back to work.	NL-Injury/Illness - Employee Injury	
17381	Richmond, CA - Refinery	6/22/2011 1:30:00 PM	Closed	Near Loss	Green card - spotted an employee with a green slicker on his hard hat walking through the 4 crude unit by himself.	Green card - spotted an employee with a green sticker on his hard hat walking through the 4 crude unit by himself and he should have been accompanied by someone else.	NL-Injury/Illness - Contractor Injury	
17381	Richmond, CA - Refinery	6/22/2011 1:30:00 PM	Closed	Near Loss	Green card - spotted an employee with a green slicker on his hard hat walking through the 4 crude unit by himself.	Green card - spotted an employee with a green sticker on his hard hat walking through the 4 crude unit by himself and he should have been accompanied by someone else.	NL-Injury/Illness - Employee Injury	
17382	Richmond, CA - Refinery	6/20/2011 12:00:00 AM	Closed	Near Loss	Green card - light fell from catwalk	Green card - a light fell from the catwalk at the 1400 deck (SW) at RLOP 14 Plant onto the ground. The handrail was lightly bumped approximately 3' from the light pole.	NL-Injury/Illness - Employee Injury	
17382	Richmond, CA - Refinery	6/20/2011 12:00:00 AM	Closed	Near Loss	Green card - light fell from catwalk	Green card - a light fell from the catwalk at the 1400 deck (SW) at RLOP 14 Plant onto the ground. The handrail was lightly bumped approximately 3' from the light pole.	NL-Injury/Illness - Contractor Injury	
17397	Richmond, CA - Refinery	7/5/2011 2:30:00 PM	Closed	Loss	Roof Drain Failure on T-3196	While doing roof inspections Shutdown Safety Operator noticed what appeared to be oil on the Roof of T-3196.	Equipment/Property Damage	(1) The root cause will be identified after the tank is shutdown and inspected. It is suspected that either the actual location of the roof legs or the type of hose may not be suitable for the service.
17508	Richmond, CA - Refinery	7/6/2011 12:00:00 AM	Closed	Near Loss	V-1100 Fitness For Service Evaluation	Automated UT inspection in March of 2011 identified laminations and planer defects in the boot of V-1100 which triggered a Fitness For Service Evaluation.	NL-Business Process - Business Interruption	(1) Funding to perform AUT inspection was not available and justification for funding was not strong enough to obtain funding or for entering the vessel at all.
17532	Richmond, CA - Refinery	7/7/2011 11:00:00 AM	Closed	Loss	Sanitary Sewer Line leak off Megawatt Ave. Between Cogen & RO plant	Sanitary sewer line leak off Megawatt Ave. Located between Cogen & RP plant. Leak is near the line support hanger in the overhead pipeway.	Equipment/Property Damage	(1) Fiberglass line failed due to old age. It is at least 30 years old - probably closer to 50.
17584	Richmond, CA - Refinery	7/5/2011 4:28:00 PM	Closed	Near Loss	Green Card - Van Stopped in Middle of Street	Green Card - Work van stopped in the middle of street., all workers jumped out almost get hit by my Chevron truck. Dangerous action on the part of the driver to stop and let people out without getting off the street.	NL-Transportation - Contractor	
	Richmond,	7/8/2011						

17621	CA - Refinery	11:40:00 AM	Closed	Near Loss	Increase in HN3 % cause C-820 to become unstable.	Elevated NH3 % in feed cause column C-820 pressure to bounce (High D/P and followed by sudden pressure drop), possible cause off test product.	NL-Quality - Product Quality (Int)	
17630	Richmond, CA - Refinery	7/9/2011 1:23:00 PM	Closed	Near Loss	F-510 shut down during FSSD Quick Test	2 operators were performing a FSSD Quick Test at F510. One began closing valve on fuel gas line downstream of FSC in preparation to open the bypass. When pressure started to drop he notified the other who then began to open bypass. After a few seconds continued to open bypass and suddenly got flow, line pressure pegged 60 psi gauge and bypass was quickly closed. It was too late as the fuel gas chopped. Operators then isolated all fuel gas valves and followed restart process to re-lite F510. The operators had the FSSD Quick Test checklist in hand and were using it.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) F-510 S/D during FSSD Quick Test Why –High Pressure in fuel gas header Why-Operators were closing the block valve to the PC and opening the bypass valve to perform the Quick Test. Bypass valve was opened to rapidly / not balanced with closing the PC block valve. (the bypass valve takes very little input for substancial change) Why – Operators did not recognize how "touchy" the valve adjustment was. Why – Not familiar with task, F-510 bypass valve takes very little input once off the seat to make a substancial change in flow/pressure. Why – This task only rotates around to different crews periodically.
17651	Richmond, CA - Refinery	6/29/2011 12:41:00 PM	Closed	Loss	TP-310 A-Train HPBFW pump tripped off line	TP-310A was in service; pumping 2905 GPM of HPBFW (high pressure boiler feed water) and without warning shutdown. MP-310 immediately started via APS (automatic pump starting) which minimized HPBFW circulation interruption.	Equipment/Property Damage	(1) Weep holes not drilled in Trico oilers, causing overfill of bearing housing, causing oil rings to quit spinning, causing loss of lubrication. - No guideline on modifying Trico oilers to add weep hole to prevent overfilling (machinists have been trained, though)
17669	Richmond, CA - Refinery	7/11/2011 2:00:00 AM	Closed	Near Loss	Increase in SISO Relief HDR to FGR	OWS2 received an alarm when the suction pressure increased at FGR compressor K-1070. V-135 overhead pressure control system had malfunction and allowed make-up Nat Gas to flow straight through into the relief system. Once OWS1 placed the overhead pressure controller PV134B to relief on manual with set point at 0% (the valve leaks by) and Make-up controller PV134A in auto with set point at 15 PSIG the uncontrolled flow to relief was resolved. WR 337006	NL-Operational Process/Procedures - Safety Systems	(1) PT134B (V-135 overhead PT to relief) failed, causing PC134B to go wide open to relief.
17697	Richmond, CA - Refinery	7/10/2011 3:30:00 AM	Closed	Near Loss	Green Card. Tanks do not have good grounding locations. Location: B&S	Green Card. While gauging multiple tanks, observed that most or all tanks do not have good grounding locations. Paint and dirty/rusty hinges or bolts commonly block the electrical path in the best grounding locations available on most tanks. Location: B&S	NL-Lessons Learned	
17699	Richmond CA - Refinery	7/10/2011 12:01:00 AM	Closed	Loss	Non-compliance with vapor abatement carbon canister changeout	The inspection of carbon vapor abatement on frac. tank related to R-1410 in the Alky plant failed to get the proper changing of the carbon canister, based on information the technician recorded. Permit condition reads as follows: Must remove Carbon #1 if reading a point. B (between 1st and 2nd drum) is >10% of point A (inlet reading) OR >1000 ppm and move carbon #2 into position #1. A fresh carbon is then placed into position #2. If reading is at point C is >100 ppm then both carbon #1 and #2 need to be replaced. The breakthrough was greater than 1000 ppm after the 1st carbon canister and should have been taken out of service and replaced with 2nd canister. This happened on both days during the weekend!	Regulatory Compliance	(1) 5 Why: 1. Why did ACIG/HazWaste miss carbon change-out? Because ACIG technician told the liquid specialist the readings were fine. 2. Why did the ACIG technician tell the liquid specialist that the VOC reading where good? Because the weekend technician was told during a turnover that the 10% of inlet reading was all that was required and did not read the paragraph on data sheet stating the 1000 ppm breakthrough would need a change-out of carbon.
17710	Richmond, CA - Refinery	7/11/2011 12:00:00 AM	Closed	Loss	Theft of welding cable	LSM contractors discovered there welding leads that are used for the rock field had been stolen. There was between 1800 and 1900 feet of welding cables chained locked up, in the weld bay.	Security	(1) theft unknown
17730	Richmond, CA - Refinery	7/11/2011 10:20:00 AM	Closed	Loss	Contract employee hit gaurd rail with rental truck	Contract employee was traveling north on Petrolite St. and made a right turn across narrow bridge into D&R control room parking lot. In the process of turning, the right rear wheel well caught the gaurdrail resulting in damage to right rear panel and rear bumper of rental truck.	Transportation	(1) EE turned too sharp and contacted the guard rail
17773	Richmond, CA - Refinery	7/12/2011 12:00:00 AM	Closed	Near Loss	Contractor Observed Driving Forklift in the Tank Field	Contractor was observed using a forklift up next to 679 TK on Petrolite hill. Company employee informed the contractor that this was not allowed and he was asked to leave the area. After discussion with contractor it was discovered that he was not aware that this area was considered part of the "tank field" and off limits plus their was no sign present.	NL-Equipment/Property Damage - General Liability	(1) Failure to follow existing Chevron Forklift Policy.
17773	Richmond, CA - Refinery	7/12/2011 12:00:00 AM	Closed	Near Loss	Contractor Observed Driving Forklift in the Tank Field	Contractor was observed using a forklift up next to 679 TK on Petrolite hill. Company employee informed the contractor that this was not allowed and he was asked to leave the area. After discussion with contractor it was discovered that he was not aware that this area was considered part of the "tank field" and off limits plus their was no sign present.	NL-Injury/Illness - Contractor Injury	(1) Failure to follow existing Chevron Forklift Policy.
						TOP INVESTIGATION; FINAL DESCRIPTION IS IN LINK TO THE LEFT. Initial description: While inspecting the open end of R-1410K after equipment was chemical cleaned and neutralized without breaking the plane of the equipment EE and others noticed a not normal smell which resulted a headache and throat irritation. Alky F settler & K contactor had been chemically neutralized in preparation for project work inside V-1410F. Entry blinds had been installed and manways opened to establish equipment ventilation on Monday 7/11. Upon initial inspection of equipment on Tuesday 7/12, Maintenance detected an unusual & strong odor coming from the opened equipment. Maintenance requested Ops Mgmt and Safety dept. rep to assess the condition of the equipment for cleanliness. A decision was quickly made to close the equipment and initiate an additional Delta Tech chemical circulation procedure to eliminate the residual chemical which was generating the odors. The associated losses to this incident are: Chemical used by Delta Tech was a		(1) SOS: Design & Engineering: Exposed to Abnormal Smell. Rodine31A Used for Cleaning of V-1410. Listed as one of the chemicals to be used for clean-up of vessel in the contractors' contract / procedure. Approved for Use in the Past. Contractor's contract lists Rodine31A (approved by

17804	Richmond, CA - Refinery	7/12/2011 1:00:00 PM	Closed	Loss	Exposure to fumes that irritated EE throat and gave headache	different acid inhibitor that was substituted for what is typically used, the chemical used was not clearly outlined in the procedure, the cost for maintenance reworkdelays associated with the second chem clean circulation to address the odors was not planned or budgeted and personnel exposure resulted in acute illness to one individual who was later cleared to return to work.	Injury/Illness	procurement)., (2) SOS: Training & Procedures: Substitute chemical Rodine31A was not discussed during HSE. Not well communicated., (3) Sidebar: Design & Engineering (Chemical Selection and Substitution): • Armohib was unavailable and there's no back up chemical (acid inhibitor) in its place that is approved by the refinery currently
17807	Richmond, CA - Refinery	7/11/2011 8:20:00 AM	Closed	Near Loss	Centre Com Radio Dispatch in Firehouse intermittent outage	The Dispatcher console was blanking out momentarily	NL-Operational Process/Procedures - Safety Systems	
17892	Richmond, CA - Refinery	7/12/2011 3:40:00 PM	Closed	Loss	Officer tripped over a trench plate and water hose causing body injury.	Officer tripped over a trench plate and water hose which caused bodily injury (scraped knees, shin, elbow bump on head). Officer was authorized to return to duty by Doctor at refinery clinic. However, Officer was replaced at post and allowed to go home and recuperate. Doctor wants to see him when he returns at regularly scheduled time Thursday (7/14) before he goes to his post.	Injury/Illness	(1) Plate 1. Why did the Officer trip over the trench plate? a. The edge of the plate was higher than grade. 2. Why was the plate higher than grade and not reported? a. The plate was warped or the mating surface was uneven. b. In the past did not follow procedure or acceptable practices and no incident occurred. , (2) The Officer tripped and fell stepped on wet garden hose, slipped and tripped on the uneven trench plate. Hose 1. Why did the Officer walk on the hose? a. The Officer walked on the hose because it wasn't properly stored. 2. Why wasn't the hose properly stored? a. In the past did not follow procedure or acceptable practices and no incident occurred.
17971	Richmond, CA - Refinery	7/14/2011 10:30:00 AM	Closed	Loss	CW lines to C1190 sample draw knocked / damaged during staging	During staging for upcoming S/D near C1180 the lines of CW to the C1190 sample draw were knocked and subsiquently damaged. This caused a leak in the suppy line and the return line was also damaged. The CW was blocked in and the lines were drained. However, operations is now unable to draw the C1190 sample as the cooler is needed for sample draw. The product is approx. 170 degrees Farenheit.	NL-Equipment/Property Damage - Equipment Damage	(1) stagers bumped water line
17971	Richmond, CA - Refinery	7/14/2011 10:30:00 AM	Closed	Loss	CW lines to C1190 sample draw knocked / damaged during staging	During staging for upcoming S/D near C1180 the lines of CW to the C1190 sample draw were knocked and subsiquently damaged. This caused a leak in the suppy line and the return line was also damaged. The CW was blocked in and the lines were drained. However, operations is now unable to draw the C1190 sample as the cooler is needed for sample draw. The product is approx. 170 degrees Farenheit.	Equipment/Property Damage	(1) stagers bumped water line
17975	Richmond, CA - Refinery	7/12/2011 3:00:00 PM	Closed	Loss	Foul overwhelming odor in Alky plant (F settler & K contactor) following chemical cleaning	TOP INVESTIGATION IN LI 17804> Alky F settler & K contactor had been chemically neutralized in preparation for project work inside V-1410F. Entry blinds had been installed and manways opened to establish equipment ventilation on Monday 7/11. Upon initial inspection of equipment on Tuesday 7/12, Maintenance detected an unusual & strong odor coming from the opened equipment Maintenance requested Ops Mgmt and Safety dept. rep to assess the condition of the equipment for cleanliness. A decision was quickly made to close the equipment and initiate an additional Delta Tech chemical circulation procedure to eliminate the residual chemical which was generating the odors. The associated losses to this incident are: Chemical used by Delta Tech was a different acid inhibitor that was substituted for what is typically used, the chemical used was not clearly outlined in the procedure, the cost for maintenance reworkdelays associated with the second chem clean circulation to address the odors was not planned or budgeted and personnel exposure resulted in acute illness to one individual who was later cleared to return to work.	Business Process	
17975	Richmond, CA - Refinery	7/12/2011 3:00:00 PM	Closed	Loss	Foul overwhelming odor in Alky plant (F settler & K contactor) following chemical cleaning	TOP INVESTIGATION IN LI 17804> Alky F settler & K contactor had been chemically neutralized in preparation for project work inside V-1410F. Entry blinds had been installed and manways opened to establish equipment ventilation on Monday 7/11. Upon initial inspection of equipment on Tuesday 7/12, Maintenance detected an unusual & strong odor coming from the opened equipment Maintenance requested Ops Mgmt and Safety dept. rep to assess the condition of the equipment for cleanliness. A decision was quickly made to close the equipment and initiate an additional Delta Tech chemical circulation procedure to eliminate the residual chemical which was generating the odors. The associated losses to this incident are: Chemical used by Delta Tech was a different acid inhibitor that was substituted for what is typically used, the chemical used was not clearly outlined in the procedure, the cost for maintenance reworkdelays associated with the second chem clean circulation to address the odors was not planned or budgeted and personnel exposure resulted in acute illness to one individual who was later cleared to return to work.	Quality	
						TOP INVESTIGATION IN LI 17804> Alky F settler & K contactor had been chemically neutralized in preparation for project work inside V-1410F. Entry blinds had been installed and manways opened to establish equipment ventilation on Monday 7/11. Upon initial inspection of equipment on Tuesday 7/12, Maintenance detected an unusual & strong odor coming from the opened equipment Maintenance requested Ops Mgmt and Safety dept. rep to assess the condition of the equipment for cleanliness. A decision was quickly made to		

17975	Richmond, CA - Refinery	7/12/2011 3:00:00 PM	Closed	Loss	Foul overwhelming odor in Alky plant (F settler & K contactor) following chemical cleaning	close the equipment and initiate an additional Delta Tech chemical circulation procedure to eliminate the residual chemical which was generating the odors. The associated losses to this incident are: Chemical used by Delta Tech was a different acid inhibitor that was substituted for what is typically used, the chemical used was not clearly outlined in the procedure, the cost for maintenance rework/delays associated with the second chem clean circulation to address the odors was not planned or budgeted and personnel exposure resulted in acute illness to one individual who was later cleared to return to work.	Operational Process/Procedures	
18165	Richmond, CA - Refinery	7/17/2011 3:58:00 AM	Closed	Near Loss	Almost exceeded V-475 H2S 24 Hr Avg	Following an upset condition of the #3 H2S plant starting on 7/16 at 02:30am, V-475 Fuel Gas K/O drum saw levels of H2S as high as 126.1 ppms. The H2S 24 hour average has a maximum value of 60 ppms and the highest that was detected was 49.3 at 03:58 am on 7/17.	NL-Regulatory Compliance - Permit Exceedance	(1) PED and Nalco had not established proper operating guidelines or maximum for anti-foam injection, (2) PED/Operations were unaware of the potential for flooding/foaming caused by too much return flow to C-220
18215	Richmond, CA - Refinery	7/18/2011 12:00:00 AM	Closed	Near Loss	Unable to install TP-310A due to lack of material	Unable to install TP-310A as scheduled due to lack of required material, IE: complete coupling assembly.	NL-Lessons Learned	(1) Inadequate communication between head mechanic and planner. , (2) Need management to review position vacancies to determine if adequate personnel levels are maintained to ensure successful planning, scheduling and execution.
18233	Richmond, CA - Refinery	3/31/2011 11:59:00 PM	Closed	Loss	Regulatory required test of FCC V-65 O2 analyzer was not completed for 1st 1Q2011	A regulatory required Relative Accuracy Test Audit (RATA) for the FCC V-65 oxygen analyzer was not completed during the 1st quarter of 2011, resulting in a Title V deviation. The originally scheduled test was delayed twice due to operational issues, and due to a communications breakdown with the test contractor, a third test was never scheduled.	Regulatory Compliance	(1) No system or procedure to assure test had been completed.
18235	Richmond, CA - Refinery	12/31/2010 11:59:00 PM	Closed	Loss	VOC inspections were not conducted on new flow meter components on the Wharf Vapor Recovery line at the ERD.	Regulatory required VOC inspections were not conducted on new flow meter components on the Wharf Vapor Recovery line at the ERD. The components were placed in service on December 28, 2010 but the Air Compliance Inspection Group (ACIG) was never notified through the MOC process to add these to their VOC inspection database and as a result required quarterly VOC inspections were not conducted for the 4Q2010, 1Q2011, and 2Q2011.	Regulatory Compliance	(1) Human error
18242	Richmond, CA - Refinery	7/19/2011 1:00:00 PM	Closed	Near Loss	Two Abandoned lines dripped less than a gallon of hyrocarbon during a hot day	Two abandoned lines dripped less than a gallon of hydrocarbon during the heat of the day	NL-Equipment/Property Damage - Equipment Damage	
18271	Richmond, CA - Refinery	7/20/2011 12:00:00 AM	Closed	Near Loss	Company car found with trunk open	Company car found with trunk open - when arriving at work. Car was located in parking lot on B&S side of cafeteria. Car was white Chevy - 4ACH152. Not known if anything was removed from trunk.	NL-Security - Property Loss or Theft - Physical Property	
18271	Richmond, CA - Refinery	7/20/2011 12:00:00 AM	Closed	Near Loss	Company car found with trunk open	Company car found with trunk open - when arriving at work. Car was located in parking lot on B&S side of cafeteria. Car was white Chevy - 4ACH152. Not known if anything was removed from trunk.	NL-Transportation - Company	
18308	Richmond, CA - Refinery	7/20/2011 12:00:00 AM	Closed	Near Loss	Lost LOTO key	Opened LOTO box to remove lock and the key was not inside.	NL-Operational Process/Procedures - Safety Systems	
18314	Richmond, CA - Refinery	7/18/2011 12:00:00 AM	Closed	Near Loss	Large amount of oil impacting 13 separator and the bio inlet.	A large amount of oil passed through 13 separator and entered the bioreactor inlet on the weekend of July 15. Oil was visibly described as waxy. After the first 4 days, the oil changed in appearance/color. At this time, EOD visually identified the 60" line from Hydro as the contributing source to the oil. Coincidentally, EOD operations made significant changes to 13 separator (reducing its separation capacity in preparation for planned maintenance) on the Monday after the oil began showing up. The oil continued to overwhelm 13 separator for about a week and a half before subsiding to normal oil levels that 13 separator could handle.	NL-Environmental - Operational Leak	(1) The initial surge of oil that made it past 13 separator into the bioreactor on the weekend of 7/15/11 was found to be a finished base oil, either 100R or 110RLV. LNF was on a 110RLV run at the time but no single point source of release to the sewer could be identified. Subsequent oil that continued to show up in 13 separator and bioreactor was found to be 220R. Team found that 220R was coming from a lube oil source and not an RLOP production source. 220R oil in 13 separator subsided significantly to normal levels after oil from RLOP cooling tower was vacuumed out. Oil stopped showing up in RLOP cooling tower after leaking tube oil cooler E1104A was isolated on both the oil side and cooling water side. Unable to positively identify a single source of oil that would have singularly contributed to overwhelming 13 separator.
18371	Richmond, CA - Refinery	7/21/2011 10:00:00 AM	Closed	Near Loss	Contractor Employee struck on upper bridge of nose	While contract employee was blocking and raising pipe hydric jack kicked out causing the jack to come in contact with workers nose	NL-Injury/Illness - Contractor Injury	(1) SOS:Maintenance & Inspection: Jack Used Was Too Small for the Job. Bigger Size Jack Was Unavailable. Order Hadn't Come In. , (2) SOS: Mitigation Devises: Jack Became Unstable. No Sleeve For The Pipe. , (3) SOS: Personal Protective Factors: Jack Used Was Too Small for the Job. Thought It Would Be Safe to Use until bigger jack arrived.
18378	Richmond, CA - Refinery	7/21/2011 10:00:00 AM	Closed	Near Loss	Green Card. Hand rail broke after contract painter leaned on it. Location: Long Wharf	Green Card. Hand rail gave way after contractor painter leaned against hand rail and almost fell in the water. Location: Long Wharf Bent 104	NL-Injury/Illness - Contractor Injury	
	Richmond,	7/22/2011				Plant Op noticed lube oil flow from P1601 gearbox showed no flow when he		

18448	CA - Refinery	1:00:00 PM	Closed	Near Loss	stalled lube oil flow from gear box P1601A	looked in bulls eye. This had also occured in all of P1601's bulls eyes on initial startup.	NL-Lessons Learned	(1) Breather Cap on oil reservoir and does not allow pressure to vent causing low oil flow into reservoir readily
18463	Richmond, CA - Refinery	7/24/2011 10:00:00 AM	Closed	Loss	Cogen T-2000 train trip	Loss of Cogen 2000 train due to temperature probe issues	Business Process	(1) While disabling 1 of 2 TIs CGT Tripped. "B" TI was erratic, Ops disabled "A" TI first and the second TI went erratic and initiated 2 of 2 trip logic.
18515	Richmond, CA - Refinery	7/19/2011 6:00:00 AM	Closed	Near Loss	Green Card. Low visibility crossing Channel St. Location: Channel St. at Toulene St.	Green Card. Hard to see for workers walking from Gate 91 around CRTC drum storage facility crossing Channel St. Waiting on traffice to stop so they could cross Channel St. Location: Channel St. at Toulene St.	NL-Injury/Illness - Contractor Injury	
18523	Richmond, CA - Refinery	7/25/2011 12:00:00 AM	Closed	Near Loss	Leak from unknown source	A strong gasoline oder lead to the discovery of Gasoline under 992 manifold header system on SP Hill. Due to debris under the manifold system we have been unable to locate the source. Leak was located as coming from the 10 wharf on T-992 Header and plans for the repair are underway	NL-Environmental - Operational Leak	
18613	Richmond, CA - Refinery	7/26/2011 11:00:00 AM	Closed	Loss	Contractor tripped over hose and hurt his ankle.	Contractor tripped over a 4" petroleum hose at the 1A separator offloading area. He fell to the ground and hurt his ankle. Contrator immediately called his supervisor and informed him of the incident. Chevron fire was called out to examine the contractor. Contractor was taken to his companies medical clinic offsite.	Injury/Illness	(1) Why did the Veolia vacuum truck driver injure his ankle? He fell with his foot caught between a 4" hose and a permanent concrete block structure. Why did he have his foot caught between the hose and the concrete structure? He was not paying close enough attention to his surroundings. Why was he not paying close attention to his surroundings? He was helping out a fellow driver, and got distracted. Why did he get distracted? It was a very busy period causing him to lose focus of his surroundings.
18632	Richmond, CA - Refinery	7/19/2011 6:00:00 AM	Closed	Near Loss	Green Card. Multiple large potholes. Location: GMG staging lot	Green Card. Multiple large potholes, causing forklift to become unstable while moving and lifting. Location: GMG staging lot	NL-Injury/Illness - Contractor Injury	
18634	Richmond, CA - Refinery	7/19/2011 7:00:00 AM	Closed	Near Loss	Green Card. Tripped on an air hose. Location: B&S #7 Pump Station	Green Card. Tripped on an air hose that lies across raised pathway into 7 Station near T-1506. Did not fall but it could have resulted in a serious fall down in the station or into the T-1506 lower area. Location: B&S #7 Pump Station	NL-Injury/Illness - Employee Injury	
18642	Richmond, CA - Refinery	7/25/2011 1:30:00 PM	Closed	Near Loss	K-900A to K-900 switch	While switching from K-900A to K-900 for K-900A maintenance Hydrocom pump shut down unexpectedly causing K-900A to load to fail safe 100%. This swung Rhen export H2 to North Yard. K-900A shutdown on a CIU error control output out of range.	NL-Business Process - Business Interruption	
18653	Richmond, CA - Refinery	7/21/2011 10:30:00 AM	Closed	Near Loss	Green Card - Large cover to breaker panel in PC #6 LP 2A in RLOP 18 Plant war removed, leaving bare wires exposed.	Green Card - Large cover to breaker panel in PC #6 LP 2A in RLOP 18 Plant war removed, leaving bare wires exposed. Cover was laying on the ground next to it.	NL-Lessons Learned	
18689	Richmond, CA - Refinery	7/27/2011 3:30:00 AM	Closed	Loss	Employee complaint of back pain due to an injury sustained at home while performing yard work.	Employee complained of back pain due to an injury sustained at home while performing yard work. The pain, present at start of shift, progressively worsened throughout the night to the point where he requested Plant Protection respond and provide transport to a hospital.	Injury/Illness	(1) Off the Job Injury
18689	Richmond, CA - Refinery	7/27/2011 3:30:00 AM	Closed	Loss	Employee complaint of back pain due to an injury sustained at home while performing yard work.	Employee complained of back pain due to an injury sustained at home while performing yard work. The pain, present at start of shift, progressively worsened throughout the night to the point where he requested Plant Protection respond and provide transport to a hospital.	NL-Injury/Illness - Employee Injury	(1) Off the Job Injury
18724	Richmond, CA - Refinery	7/26/2011 11:15:00 AM	Closed	Near Loss	Green Card. Tripped over the concrete parking barrier. Location: Cracking Admin Bldg	Green Card. Leaving the building, I was concentrating on locating my vehicle so my eyes weren't on the path and I tripped over the concrete parking barrier. Location: Cracking Admin Bldg	NL-Lessons Learned	
18755	Richmond, CA - Refinery	7/27/2011 9:00:00 AM	Closed	Near Loss	Green Card - Truck cut corner very tight at Mill / Channel & almost hit HealthQuest vehicle at Stop sign on Mill Street	Green Card - Truck cut corner very tight at Mill / Channel & almost hit HealthQuest vehicle waiting to make a turn on to Channel Street.	NL-Transportation - Contractor	
18755	Richmond, CA - Refinery	7/27/2011 9:00:00 AM	Closed	Near Loss	Green Card - Truck cut corner very tight at Mill / Channel & almost hit HealthQuest vehicle at Stop sign on Mill Street	Green Card - Truck cut corner very tight at Mill / Channel & almost hit HealthQuest vehicle waiting to make a turn on to Channel Street.	NL-Injury/Illness - Contractor Injury	
18755	Richmond, CA - Refinery	7/27/2011 9:00:00 AM	Closed	Near Loss	Green Card - Truck cut corner very tight at Mill / Channel & almost hit HealthQuest vehicle at Stop sign on Mill Street	Green Card - Truck cut corner very tight at Mill / Channel & almost hit HealthQuest vehicle waiting to make a turn on to Channel Street.	NL-Transportation - Company	
								(1) ANS injection rate into T-3107 set too high 5-Why document location: https://collab001-

18958	Richmond, CA - Refinery	7/29/2011 11:00:00 AM	Closed	Near Loss	solids in 2 Sep,	Solids found at 2 Sep, Bio inlet - possible cause; comingle tank-ANS injection set too high 65 MBPD	NL-Quality - Incorrect Volume	hou.sp.chevron.net/sites/dsgmfgoe/LPSOut/RIDocLib/2011-07-29%205-Why%20Solids%20in%20no.%202%20Separator%20R1.docx
18899	Richmond, CA - Refinery	7/30/2011 12:00:00 AM	Closed	Near Loss	DHT feed pump lost suction due to 3 S/C stripper level control.	Crude unit had recently taken a crude feed switch. Operators were regulating the atmospheric side cuts to accomodate the new feed qualities. Ops were adjusting the 3 S/C stripper level control and inadvertantly starved the suction of the DHT feed pump, causing the pump to trip. Ops instantly recognized the error, re-established feed to DHT and recovered from incident	NL-Operational Process/Procedures - Safety Systems	
19013	Richmond, CA - Refinery	7/31/2011 5:30:00 AM	Closed	Near Loss	Operator eye was swollen and extruding fluid. It was thought to be ZMX contamination. It was a personal medical condition.	Operator had a eye swelling and extruding fluid. The operator thought they had gotten ZMX in thier eye. Plant protection was called and rinsed the eye and sent the operator to the Martinez clinic. The clinic further tested and irragated the eye. The clinic medically discovered that the issue was not ZMX contamination but it was personal medical condition. The operator returned to work after treatment of the eye.	NL-Injury/Illness - Employee Injury	
19091	Richmond, CA - Refinery	8/1/2011 1:11:00 AM	Closed	Near Loss	Green Card. Mushrooms growing on outside of building. Location: 230B Main	Green Card. Mushrooms growing on outside of building on back of building. Location: 230B Main	NL-Equipment/Property Damage - Equipment Damage	
19100	Richmond, CA - Refinery	8/1/2011 10:40:00 AM	Closed	Near Loss	A pickup truck backed up off the roadway near 93 Tank Pad	After loading rebar cages into his pickup truck, the employee attempted to perform a 3 point turnaround in the roadway near 93 Tank Pad. In the process he misjudged the distance to the edge of the road causing him to roll down the short embankment. There was no property damage or injury caused by the incident.	NL-Transportation - Contractor	(1) While the employee was making a 3 pt turnaround he misjudged the distance to the edge of the roadway. , (2) There was no delineators or markings to identify the edge of the road. No guard rail or curb existed.
19111	Richmond, CA - Refinery	8/1/2011 3:15:00 PM	Closed	Loss	Employee pulled off road to answer cell. Car drifted into guard rail.	Car Door dented while employee pulled off road to answer cell.	Equipment/Property Damage	(1) Car was not place in park prior to use of cell phone.
19164	Richmond, CA - Refinery	8/2/2011 9:30:00 AM	Closed	Loss	Particle in the eye	Employee got his ball cap, which is stored on a hook in his work area and started placing it on his head when he felt something enter his eye. Employee was wearing his safety glasses at the time.	Injury/Illness	(1) Dust particles that came to rest in employees cap which is hanging on a hook in his work area., (2) Dust particles came to rest in employees cap which is stored on a hook in his work area.
19202	Richmond CA - Refinery	8/2/2011 3:30:00 PM	Closed	Near Loss	Contractor reported back discomfort sent to Chevron clinic for pre caution	Contractor reported back discomfort to lower back	NL-Injury/Illness - Contractor Injury	
19219	Richmond CA - Refinery	8/3/2011 1:00:00 AM	Closed	Near Loss	Feed pump shut down for unknown reason	P4040 Feed pump shut down for unknown reason. Would not reset.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
19241	Richmond CA - Refinery	8/3/2011 6:00:00 AM	Closed	Near Loss	Green Card. During heavy construction at South Yard, traffic was limited. Location: GMG facility	During heavy construction at South Yard substation, traffic was limited and GMG yard adapted its traffic throughput to compliment Petrolite St. Heavy construction is done.	NL-Lessons Learned	
19242	Richmond CA - Refinery	8/3/2011 8:30:00 AM	Closed	Near Loss	Green Card. Several processes have been changed for the P&MM group without any documentation. Location: P&MM	Several processes have been changed for the P&MM group without any documentation. No MOOC, no new procedures, no RI changes. i.e., Nalco, hoses, Point of Use safety equipment, sewer balloons.	NL-Lessons Learned	
19252	Richmond, CA - Refinery	8/3/2011 7:49:00 AM	Closed	Loss	EE FELT POP IN LOWER RIGHT SIDE OF BACK	EE WAS REMOVING BOXED MATERIAL RECEIVED FROM THE STOREHOUSE FROM A STOREHOUSE BASKET WHEN HE FELT A POP IN THE LOWER RIGHT SIDE OF HIS BACK. THE EE HAD BRACED HIS RIGHT KNEE AGAINST THE BASKET WHILE LEANING HIS UPPER TORSO TO THE RIGHT AND OVER THE EDGE OF THE BASKET WHEN HE FELT THE POP	Injury/Illness	(1) No warm up prior to task of lifting boxes, (2) No warm up prior to task of lifting boxes, (3) Incorrect Body Positioning for reaching for boxes, (4) Latching mechanism on delivery basket needs redesign, (5) Incorrect Body Positioning for reaching for boxes, (6) Work group was not aware of swing door on basket, (7) Employee was not aware of swing door on basket
19252	Richmond, CA - Refinery	8/3/2011 7:49:00 AM	Closed	Loss	EE FELT POP IN LOWER RIGHT SIDE OF BACK	EE WAS REMOVING BOXED MATERIAL RECEIVED FROM THE STOREHOUSE FROM A STOREHOUSE BASKET WHEN HE FELT A POP IN THE LOWER RIGHT SIDE OF HIS BACK. THE EE HAD BRACED HIS RIGHT KNEE AGAINST THE BASKET WHILE LEANING HIS UPPER TORSO TO THE RIGHT AND OVER THE EDGE OF THE BASKET WHEN HE FELT THE POP	NL-Injury/Illness - Employee Injury	(1) No warm up prior to task of lifting boxes, (2) No warm up prior to task of lifting boxes, (3) Incorrect Body Positioning for reaching for boxes, (4) Latching mechanism on delivery basket needs redesign, (5) Incorrect Body Positioning for reaching for boxes, (6) Work group was not aware of swing door on basket, (7) Employee was not aware of swing door on basket
19336	Richmond, CA - Refinery	11/15/2010 12:00:00 AM	Closed	Loss	Turnaround extension of schedule and overrun of budget	4Q11 DHT Cat Change TA went over schedule by 5.5 days and over budget by ~$500M	Business Process	(1) PED - unanticipated coking of catalyst caused longer than scheduled dump, (2) INSPECTION - lack of history of Belzona in this vessel made it impossible to predict its condition. We now have the data for future maint windows, (3) OPERATIONS - ops had concerns with pipe class on temp pipe and its proper railing., (4) OPERATIONS - Reactor cleanup took longer than anticipated using current procedure

19345	Richmond, CA - Refinery	7/24/2011 4:00:00 PM	Closed	Near Loss	T-3101 had stratification after the discharge of the Vasconal on 7/23.	The Astro pheonix discharged 199 MB of Vasconia into T-3101. At this time, T-3101 had about 230 MB total in it. After mixing, settling, and sampling the tank, we had stratification in it which prevented a tank switch and held the ship up.	NL-Business Process - Business Interruption	(1) Scheduler did not allow enough mixing time for the two crudes
19346	Richmond, CA - Refinery	8/4/2011 1:05:00 PM	Closed	Loss	particle in left eye	Employee was exiting the restroomwhen a gust of wind blew a particle into his left eye. Employee stated that he was wearing his safety glasses at the time of the incident.	NL-Injury/Illness - Contractor Injury	(1) Not wearing sealed eyewear
19346	Richmond, CA - Refinery	8/4/2011 1:05:00 PM	Closed	Loss	particle in left eye	Employee was exiting the restroomwhen a gust of wind blew a particle into his left eye. Employee stated that he was wearing his safety glasses at the time of the incident.	Injury/Illness	(1) Not wearing sealed eyewear
19352	Richmond, CA - Refinery	8/4/2011 4:40:00 PM	Closed	Near Loss	Loss of K-242/K-252 due to high liquid level in KO pot.	IMI had Ops switch from K-242 to K-252 to gather data. At end of shift IMI had Ops switch back to K-242. During this operation, the KO pot level went high. and shut down compressor. Ops continued to blow down KO pot less agressively and re-established compressor flow. There was NO VISABLE FLAME.	NL-Operational Process/Procedures - Safety Systems	
19414	Richmond, CA - Refinery	2/18/2011 12:00:00 AM	Closed	Loss	The lab control charts for finished base oil at the RLOP lab have not been consistently filled out since February 2011.	The lab control charts for finished base oil at the RLOP lab have not been consistently filled out since February 2011. These standards ensure on-spec base oil is being produced at RLOP. This is critical to maintaining RLOP's ISO-9001 certification. The control chart process involves running standards on the flash machine, two pour point machines (one for LNF, one for HNF), and the HNF 600R cloud point machine each night (4 standards total/night). The data for LNF and HNF pour as well as HNF cloud was found in a separate notebook in table format. (This data should be charted in the central ISO-9001 control chart book.) The data for flash is either missing or never taken (except for the few samples in the central ISO-9001 control chart book).	Quality	(1) New Pour Point Analyzer Casual Factor #1: Procedure not available The operating procedure for the pour analyzer is not current and is for another (obsolete) analyzer. In the RLOP EOM site, only the obsolete analyzer's procedures are found. The new procedure is available, but is only accessible from QCD's ISO 9001 SOP and not linked to RLOP's. Prior to the lab move operators were routinely running and charting results indicating they were familiar with operating procedures on the TRI analyzer. MOC was completed for new analyzer but links not completed. Root Cause: Importance of ISO 9001-2008 has been loss. Causal Factor #1: Oversight- Infrequent Audits & Evaluations There is no accountability for not running and charting standards. Results and charts were not reviewed over quite some time, yet no one is held accountable. The ISO Quality Manual (Sec. 8) clearly states that statistical techniques are used to monitor our processes and that calibration of the base oil lab equipment is checked by running known standards and charted on SPC control charts to insure they are accurate and reliable. They are defined as part of the operator's routine duty. Failure to comply can lead to a major non conformance and ISO certification can be pulled until conformance is met and verified. Being ISO certified is also part of our contractual agreement with our customers. , (2) Root Cause: Lab Move Casual Factor #1: Standards, Policies or Administrative Controls Not Used- Accountability Needs Improvement The RLOP field lab has been relocated temporarily to North Isomax's Hydro Lab while blast upgrades are being made to the existing RLOP lab. All of the analyzer equipment was moved to this location. Prior to the move, records indicated standards were routinely run and charted, but after the move, results and control charting were sporadic depending on month and test. While IntegraTrac indicated all tests were signed off as completed, operators chose not to follow proced
19443	Richmond, CA - Refinery	8/7/2011 4:53:00 AM	Closed	Loss	Contaminated stream of NH3 supply to the Cogen Units	The Cogen Units received a contaminated stream of NH3 from the normal 2" supply line from the yard. This caused the Cogen units to exceed their normal allowable Stack Nox emmissions for a number of hours. During this time the Cogen Operators are experiencing erratic operating conditions of the Nh3 system until the contaminated product is flushed through the system and the concentrated Nh3 quality is restored.	Environmental	(1) Single globe block valve at 8 Plant boundary does not provide tight shutoff to prevent water contamination of NH3 header during 8 Plant cleanups, (2) Procedural changes have been discussed to warn of and potentially segregate wet ammonia during planned plant cleanups, but no investigation solutions were documented to ensure and verify changes were made
19446	Richmond, CA - Refinery	8/6/2011 6:00:00 PM	Closed	Near Loss	Propane water % above limit - freeze test > 180 sec	AO-3 operator reports V-1942 was placed in service on day shift after regenerating for 48 hrs. and propane does not pass the freeze test. V-1941 is currently regenerating. Operator rechecked propane @2:00 AM and it still does not pass the freeze test.	NL-Quality - Product Quality (Int)	(1) Board operator exited dryer regeneration early without checking V-1940 udder level., (2) Procedure incorrectly states to open isolation valve at the top of the dryer when putting it into standby mode., (3) Normal practice is to only notify LPG Racks when unable to swap dryers following a wet freeze test result.
19504	Richmond, CA - Refinery	8/7/2011 8:30:00 PM	Closed	Near Loss	DCMA #3 stopped working upon attempt to raise the arm onto the Sunset Bay barge that was here to load HSFO.	RLW / Berth 3: DCMA #3 became non operational during pre-flight testing prior to loading HSFO on the Sunset Bay. The DCMA relaxed and came to rest on protective rail of barge without any damage to DCMA or the barge.	NL-Business Process - Demurrage	(1) Operator did not follow procedures for draining DCMA prior to disconnecting from vessels.WHF9882J Clearing DCMA's.
19504	Richmond, CA - Refinery	8/7/2011 8:30:00 PM	Closed	Near Loss	DCMA #3 stopped working upon attempt to raise the arm onto the Sunset Bay barge that was here to load HSFO.	RLW / Berth 3: DCMA #3 became non operational during pre-flight testing prior to loading HSFO on the Sunset Bay. The DCMA relaxed and came to rest on protective rail of barge without any damage to DCMA or the barge.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Operator did not follow procedures for draining DCMA prior to disconnecting from vessels.WHF9882J Clearing DCMA's.

19565	Richmond, CA - Refinery	8/8/2011 4:00:00 PM	Closed	Near Loss	Water was fed to 4 Crude during feed switch from T-3101 to T-3100	On 8/8/11 at 15:00 a feed switch was made from T-3101 to T-3100. The AGAR water probe on the 21 Charge Line spiked for 2 minutes alerting 4 Crude. At 16:00 they received water for a period of about 15 minutes.	NL-Quality - Product Contamination (Int)	(1) Line not flushed after recovered oil job completed
19587	Richmond, CA - Refinery	8/9/2011 10:40:00 AM	Closed	Loss	#1 Power Plant Boiler Feed Water Burn	EE was putting the boiler feed water header I/S. The bleeder vent had a hose attached and positioned to a drain at grade. Bleeder valve was cracked open to remove air. When H2o was introduced at 1200 lbs., it caused the end of the hose to move in the upward direction splashing the EE just above the boot line. EE called their H.O. who in turn called the STL. Plant Protection was notified and responded.	Injury/Illness	(1) Lack skill or knowledge. Unecessary to displace air when placing BFW line in service. High point vents are preffered when venting air not lowpoint bleeders., (2) In the recent past a steam hose was used and no incident occured
19597	Richmond, CA - Refinery	6/27/2011 5:15:00 PM	Closed	Near Loss	Active Directory Server not responding	RSL could not get into XHQ. XHQ Admin asked firehouse to check, also could not access. XHQ Admin checked server room, logs did not indicate any problems. Authentication service was not running. Some issue with IIS, updated Tom Cat to Tom Cat 6 where there were too many groups. Rebooted server for Indx 2. Indx 1 was running slow, service account not found, could not find XHQ Admin's CAI either. Manually set logon server to RIC100. Sent text message to XHQ Secondary support person, called and talked to XHQ Secondary support person. Talked to Infrastructure Primary support person, then called .Infrastructure Secondary Support person, said to press reset button on the Active Directory server. ITC needs to check the event log to see what happened, why it did not fall back to the other local servers. Server labels were not correct, need better instructions. Server takes 30-45minutes before databases are ready.	NL-Lessons Learned	(1) 5. doing the job according to acceptable practices takes more time
19604	Richmond, CA - Refinery	8/9/2011 12:00:00 AM	Closed	Near Loss	Smoking post behind Cafeteria found to be missing a Hot Work permit	An employee inspected the Smoking Post behind the Cafeteria and found that it did not have a valid Hot Work permit. The employee inspection was triggered by a team discussion of RI-341 associated with the 3rd Quarter Proactive event.	NL-Business Process - Business Process	
19699	Richmond, CA - Refinery	8/10/2011 5:30:00 PM	Closed	Loss	First aid Operator cut finger on broken glass.	Operator had pulled a DEA sample using a 4 oz sample bottle. In the process of running that sample the sample bottle fell over and broke. Half of the bottle was on the counter and the other half was on the floor to the left of the operators left foot. The operator picked up the pieces of glass and disposed of them. The operator began sopping up the spilled DEA with a wypall towell. A small piece of glass was still on the ground and when the operator wiped the towel across the floor the glass produced a small cut to the palm side of his middle finger. The operator was wearing chemical gloves. The operator removed the chemical glove and rinsed the injured finger under running water. The operator applyed direct pressure and proceeded into the control house to inform his head operator. The head operator informed the STL. The STL informed the RSL and the Battalion Chief. The STL drove the operator to the clinic where the staff were able to stop the bleeding, clean the small cut and apply a dressing. Employee was released back to work with no restrictions.	Injury/Illness	(1) Broken bottle not cleaned up properly
19699	Richmond, CA - Refinery	8/10/2011 5:30:00 PM	Closed	Loss	First aid Operator cut finger on broken glass.	Operator had pulled a DEA sample using a 4 oz sample bottle. In the process of running that sample the sample bottle fell over and broke. Half of the bottle was on the counter and the other half was on the floor to the left of the operators left foot. The operator picked up the pieces of glass and disposed of them. The operator began sopping up the spilled DEA with a wypall towell. A small piece of glass was still on the ground and when the operator wiped the towel across the floor the glass produced a small cut to the palm side of his middle finger. The operator was wearing chemical gloves. The operator removed the chemical glove and rinsed the injured finger under running water. The operator applyed direct pressure and proceeded into the control house to inform his head operator. The head operator informed the STL. The STL informed the RSL and the Battalion Chief. The STL drove the operator to the clinic where the staff were able to stop the bleeding, clean the small cut and apply a dressing. Employee was released back to work with no restrictions.	NL-Injury/Illness - Employee Injury	(1) Broken bottle not cleaned up properly
19701	Richmond, CA - Refinery	8/10/2011 10:52:00 AM	Closed	Loss	Supersack of C831 packing/rust & scale started smoldering	Plant operator noticed a super sack of packing rings, rust and scale that had been removed from C831 was smoking. Plant protection was called immediately, the contents of the super sack were water soaked. All material was then shoveled into sealed drums to prevent it from self heating again.	Fire/Explosion	(1) Use of improper container
19712	Richmond, CA - Refinery	8/8/2011 12:00:00 AM	Closed	Near Loss	MorganChase reported suspicious activity on an employee's procard. Appears that a 3rd party had obtained access to card information.	MorganChase reported suspicious activity on an employee's procard. Appears that a 3rd party had obtained access to card information.	NL-Security - Misconduct by Employee or Third-Party - Criminal Activity	
19732	Richmond, CA - Refinery	8/8/2011 9:00:00 AM	Closed	Near Loss	P-35 Motor Failure	Reported Ground fault at 17 PS.	NL-Equipment/Property Damage - General Liability	(1) Procedure or acceptable practice exists and is technically right. However it needs to be improved to improve clarity, (2) Procedure or acceptable practice exists and is technically right. However it needs to be improved to improve clarity, (3) Procedure or acceptable practice exists and is technically right. However it needs to be improved to improve clarity

19734	Richmond, CA - Refinery	6/9/2011 12:00:00 AM	Closed	Near Loss	FT-220 Flow meter failure	The flow meter for #2 separator (FI-220) failed. Although this is not a parametric meter, over the years it has been used for compliance reporting for separator flow. #2 separator has Title V daily flow limits. In addition, this flow is used to calculate annual through put limits. This meter has been problematic but was not considered a high priority as there are other indicators to verify flow limits were not exceeded. A work request was submitted several months ago to repair the meter but somehow the work order was closed & the meter wasn't repaired. When the meter failed, it indicated a false high reading for the FI tag which is used to calculate annual throughput. At this time, an NOV has not been issued.	NL-Regulatory Compliance - Non Compliance - Air	(1) The flow meter was not viewed as necessary to verify we stayed in compliance so it wasn't treated the same as a parametric meter when it failed. It was believed we could prove compliance without this meter , (2) The Title V CEV page does not include separator flow meters as a means to monitor flow. The page needs to be reviewed and updated., (3) ABU Operations was not aware this meter is used for compliance reporting.
19753	Richmond, CA - Refinery	8/10/2011 6:00:00 PM	Closed	Near Loss	Commmunication breakdown	Did not get timly update on torch oil job status form plant, I failed to follow up, before maintenance left for the day. This left the RSL out of the loop as to plant status. didn't validate contingency plan with on comming crew.	NL-Lessons Learned	
19826	Richmond, CA - Refinery	8/13/2011 2:00:00 PM	Closed	Near Loss	T-3072 secondary high level alarm cable detached during testing	During monthly testing of the T-3072 (HREF) secondary high level alarm, the cable attached to the counterweight detached from the test arm and fell onto the tank roof.	NL-Operational Process/Procedures - Safety Systems	(1) Unknown root cause. This is an un-common failure however, the system is designed as a fail-safe and will activate an alarm when the contact touches the tank roof even if the tank is not at a high level
19837	Richmond, CA - Refinery	8/13/2011 8:28:00 AM	Closed	Near Loss	Honeywell App Node failure resulted in loss of DMC controllers and GDOT optimizer, degraded system performance	At 8:28 A.M., App Node 30 in D&R West failed, losing communication with the DMC server. After the 10-minute time-out period, all of the D&R West DMC's shutdown. Operations also experienced long graphic loading times for graphics that contained DMC tags, due to the loss of App Node 30.	NL-Business Process - Business Process	(1) System error ($$WS_Master) indicates App Node received a duplicate network message causing the node to stop functioning properly. The reason for the duplicate message is not known.
19849	Richmond, CA - Refinery	8/12/2011 12:00:00 PM	Closed	Near Loss	Hydrocarbon at 2A Separator from DEBRU outlet	TOP INVESTIGATION - For complete report, see attached link. INITIAL REPORT- 2 hours after crude tank switch to T-3106 V-1102 desalter water to DEBRU visual inspection indicated high hydrocarbon content. V-3212 DEBRU oil skim drum developed high level and had difficulty getting out to to 4CU feed (normally routed to lower pressure T-3126 or T-3128 but both are out for maintenance). This led to hydrocarbon carryover to filters, plugging of downstream carbon filters and hydrocarbon breakthrough to 2A separator and bio reactor. Bio reactor dissolved oxygen levels dropped and K-10 was turned on to increase oxygen levels. Low oxygen levels lead to killing bioreactor bugs that remove toxic compounds before discharging to bay. Discharging toxic compounds to bay lead to enviromental degradation and possible fines.	NL-Quality - Product Quality (int)	(1) SOS: Maintenance & Inspections: Back up tanks to T-3126 were not readily available. T-3128 on recirculation and heating *T-3127 blocked in for a separate project * T-3144 decommisioned 7 years ago. , (2) SOS: Maintenance & Inspections: Undercarry of oil into water effluent from desalter. Desalter did not completely separate water from oil. Demulsifier injection could not keep up with unexpected sludge volume. , (3) SOS: Design & Engineering: Extra sediment RO had been routed to crude feed tank T-3106. It is not abnormal to route to tankage. Only place it can currently be routed to.
19849	Richmond, CA - Refinery	8/12/2011 12:00:00 PM	Closed	Near Loss	Hydrocarbon at 2A Separator from DEBRU outlet	TOP INVESTIGATION - For complete report, see attached link. INITIAL REPORT- 2 hours after crude tank switch to T-3106 V-1102 desalter water to DEBRU visual inspection indicated high hydrocarbon content. V-3212 DEBRU oil skim drum developed high level and had difficulty getting out to to 4CU feed (normally routed to lower pressure T-3126 or T-3128 but both are out for maintenance). This led to hydrocarbon carryover to filters, plugging of downstream carbon filters and hydrocarbon breakthrough to 2A separator and bio reactor. Bio reactor dissolved oxygen levels dropped and K-10 was turned on to increase oxygen levels. Low oxygen levels lead to killing bioreactor bugs that remove toxic compounds before discharging to bay. Discharging toxic compounds to bay lead to enviromental degradation and possible fines.	NL-Environmental - Release	(1) SOS: Maintenance & Inspections: Back up tanks to T-3126 were not readily available. T-3128 on recirculation and heating *T-3127 blocked in for a separate project * T-3144 decommisioned 7 years ago. , (2) SOS: Maintenance & Inspections: Undercarry of oil into water effluent from desalter. Desalter did not completely separate water from oil. Demulsifier injection could not keep up with unexpected sludge volume. , (3) SOS: Design & Engineering: Extra sediment RO had been routed to crude feed tank T-3106. It is not abnormal to route to tankage. Only place it can currently be routed to.
19909	Richmond, CA - Refinery	8/15/2011 11:50:00 AM	Closed	Near Loss	unintentional loss of steam due to PRD commissioning	The CGT-600 PSV lifted on the 500# steam exhaust header.	NL-Lessons Learned	
19964	Richmond, CA - Refinery	8/16/2011 2:30:00 PM	Closed	Loss	Particle in the Eye	JVI, While working inside of #4 Boiler firebox grinding, EE felt something make contact with his eye. EE was wearing half face respirator, safety glasses and a face shield. Particle in eye? Extremely Dusty in the box. W. wearing glasses instead of goggles W. wears prescription glasses.	Injury/Illness	(1) Improper PPE, Not wearing a full face respirator or goggles
20117	Richmond, CA - Refinery	8/15/2011 9:00:00 AM	Closed	Near Loss	S&S Provided 4 Defective Respiratory Training Masks	A respiratory training class for 2 CVX new hires was given on 8/15/11. Both were being trained on the use of the Scott AV 300 and North 7600 series full face respirators. During the hands on practice with the North 7600, both EE's removed their masks from their bags. From one bag, a plastic piece belonging to the mask fell out. The other mask had both inhalation valves stuck to their seats not allowing the EE to inhale. A second North 7600 mask was issued for use and while performing a user's inspection, it was noticed gaskets were missing and the exhalation valve was cocked and not seated properly. A positive pressure test would and could have been performed for a face seal and it would have sealed not detecting that the valve was cocked allowing the user to potentially be exposed. During the hands on practice with the Scott AV3000, the EE noticed that the nose piece was rebuilt at an angle and he couldn't place his face in the mask. Four of six respirator training masks removed from their bags were found to be defective.	NL-Operational Process/Procedures - Safety Systems	(1) INADEQUATE OVERSIGHT OF QUALITY CONTROL FOR THE MAINTENANCE OF RESPIRATORY MASKS
						A respiratory training class for 2 CVX new hires was given on 8/15/11. Both were being trained on the use of the Scott AV 300 and North 7600 series full face respirators. During the hands on practice with the North 7600, both EE's removed their masks from their bags. From one bag, a plastic piece belonging to the mask fell out. The other mask had both inhalation valves stuck to their		

20117	Richmond, CA - Refinery	8/15/2011 9:00:00 AM	Closed	Near Loss	S&S Provided 4 Defective Respiratory Training Masks	seats not allowing the EE to inhale. A second North 7600 mask was issued for use and while performing a user's inspection, it was noticed gaskets were missing and the exhalation valve was cocked and not seated properly. A positive pressure test would and could have been performed for a face seal and it would have sealed not detecting that the valve was cocked allowing the user to potentially be exposed. During the hands on practice with the Scott AV3000, the EE noticed that the nose piece was rebuilt at an angle and he couldn't place his face in the mask. Four of six respiralor training masks removed from their bags were found to be defective.	NL-Quality - Product Quality (Ext)	(1) INADEQUATE OVERSIGHT OF QUALITY CONTROL FOR THE MAINTENANCE OF RESPIRATORY MASKS
20132	Richmond, CA - Refinery	8/11/2011 12:00:00 AM	Closed	Near Loss	Possible trip/fall hazard Cnt Mnt RM 137	Due to shut down activity, a large number of office supplies were purchased and temporarily stored in the admin office, CNT MNT RM 137. A contract employee worked around the issue by stepping over and around boxes and at one point her foot struck the corner of one of the large boxes. That is when the contract employee noted the unsafe conditions.	NL-Injury/Illness - Contractor Injury	
20144	Richmond, CA - Refinery	8/8/2011 3:00:00 AM	Closed	Near Loss	High water and chlorides in T-1899 post Energy Century discharge	Ship samples from the Energy Century sent from Panama did not indicate high chlorides or water. The ship arrived on late on 8/7 (Sunday) with 380 MB of LSWR. She began discharging the first 110 MB into T-1899 at about 03:00 hrs on 8/8 (Monday) and finished at 18:00 hrs on 8/8. She then began to discharge the remaining 270 MB into T-3103 at 19:00 hrs on 8/8. Per Star Lims, first tank samples on T-1899 were pulled at 18:40 hrs on 8/8. Results from this test were 47 PPM chlorides and the high water (results attached). This tank was left to settle, and then re-sampled on 8/9 at 19:30 hrs (about 24 hrs later). This sample showed chlorides dropped considerably (22.5, 21.8, and 18.5), as well did the water. We also pulled T-3103 samples as soon as the ship finished discharging, 20:00 hrs on 8/9. These results came back acceptable. On Thursday night, after we received the first T-1899 sample results, we made the decision to cut FCC feed to allow us additional contingency days for FCC feed inventory in case T-3103 was bad as well. We were able to start raising FCC feed back up this morning to make up for any product loss we encountered last night	NL-Quality - Product Quality (Ext)	(1) Scheduler relied solely on composite Panama samples.
20195	Richmond, CA - Refinery	8/19/2011 8:00:00 AM	Closed	Near Loss	"Polymer like" material found in the washdown station.	While sticky polymer material was discovered all over the left side of the washdown area. The source is currently unknown:. Investigation to follow.	NL-Lessons Learned	(1) for documentation purposes
20201	Richmond, CA - Refinery	8/18/2011 8:00:00 AM	Closed	Near Loss	While dragging rescue manikin the strap broke causing EE to stumble	While dragging rescue manikin the strap broke causing EE to stumble feeling a slight pull in his Right calf	NL-Injury/Illness - Employee Injury	
20206	Richmond CA - Refinery	7/26/2011 10:00:00 AM	Closed	Near Loss	Railcar offload adjustment was entered incorrectly and 8 days later after our monthly stock count.	A railcar offload adjustment (05) was entered incorrectly and after the monthly stock count. The actual amount 346 ga was captured in the July 01 adj. gain and the incorrect qty. of 2,554 ga was entered after the count resulting in the books saying we had more qty. available than we truly had. This could have caused a blending problem since the system said we had more than we had. Also an ordering problem. If not caught, this would have also resulted in a book to physical adj. (01) of 2,607 ga gain instead of the correct qty. of 53 gallon gain.	NL-Regulatory Compliance - Non Compliance - Company Policy	(1) What: Book Inventory Loss or Gain Why? Calculations using strapping charts that are unreliable. Why? The process followed led inventory out of balance. Why? There are too many variables with current process. Solution: Rewrite work instructions to reflect receiving additive based off of tank rise.
20216	Richmond CA - Refinery	8/19/2011 3:00:00 PM	Closed	Loss	K-242 tripped out and K-252 would not start	K-242 was on line and tripped due to power factor. K-252 would not start. Totalizer tripped, but visable flame NOT observed.	NL-Environmental - Release	
20216	Richmond, CA - Refinery	8/19/2011 3:00:00 PM	Closed	Loss	K-242 tripped out and K-252 would not start	K-242 was on line and tripped due to power factor. K-252 would not start. Totalizer tripped, but visable flame NOT observed.	Equipment/Property Damage	
20226	Richmond, CA - Refinery	8/20/2011 1:00:00 AM	Closed	Loss	Particle in the Eye	WWW; EE was welding inside of the weld bay at the time of the incident. Particle in the eye due to high wind. W. No sealed eye wear. W. Didn't feel it was needed working in an enclosed area. W. Didn't think the wind would be an issue inside the enclosure.	Injury/Illness	(1) Changing Condition, High Winds
20234	Richmond, CA - Refinery	8/19/2011 9:00:00 PM	Closed	Near Loss	73pc710 output low alarm in place	Received output low alarm on ows4 for 73pc710. Area and Head operator went to verify transmitter with local PI. Local pressure gauge indicated higher pressure than transmitter. Output alarm in place was an excellent tool to help recognize potential safeties on V712 to lift causing an environmental event.	NL-Operational Process/Procedures - Safety Systems	(1) Low output alarm on 73PC710 Why –leads were plugged (area operator and HO field verified with local PI) Why- steam tracing was blocked in. (probably not returned to service after maint.) Why – task overlooked After maint the steam tracing to 73PC710 was not put back in service causing the leads to plug during cold weather. The low output alarm activated identifying the issue, so the system worked.
20244	Richmond, CA - Refinery	8/20/2011 2:30:00 AM	Closed	Loss	Timec, pinched finger	Timec EE was using a torque wrench on a manway to C-831. While pushing (turning) the wrench to tighten a stud, his pinky finger on his left hand was caught between the hand rail and the torque wrench. EE pinched his finger between handrail and wrench. W. hand wasn't in it's proper position for the task. W. Not paying attention. W Complacency.	Injury/Illness	(1) Body Position, Pinch Points
						Flow meter was erroneously reading high flow rates during a minor flaring		(1) SOS: TRAINING & PROCEDURES: GUIDELINE WAS NOT USED DURING INSTALLATION. EXPERIENCED MECHANICS FELT COMFORTABLE DOING THE TASK .

20348	Richmond, CA - Refinery	8/8/2011 9:00:00 AM	Closed	Loss	Inoperative Monitor was not reported within required time.	activity. In order to correct issue, vendor was contacted and advice was given to involve Maintenance in disabling Channel 1 of the two channels for the meter. The DCS was never programmed to receive redundant information on Molecular Weight (as well as Pressure and Temperature) and disabling Channel 1 caused a lack of continuous data. Vendor advised HES personnel that data would be logged, but not continuous data. HES Compliance personnel did not report inoperative monitor within the time required.	Environmental	HAD DONE SAME TASK IN THE PAST. INNEXPERIENCED MECHANIC WAS UNAWARE OF GUIDELINE . ALTHOUGH A GUIDELINE IS NOT REQUIRED, IT IS EXPECTED, (2) SOS: MAINTENANCE & INSPECTIONS: PROBE WAS MISALIGNED. PROBE ALIGNMENT MARKS ARE NOT EASILY RECOGNIZED. GROOVES ARE PAINTED OVER. ADDITIONAL MATCH MARKS ADDED OVER TIME.
20348	Richmond, CA - Refinery	8/8/2011 9:00:00 AM	Closed	Loss	Inoperative Monitor was not reported within required time.	Flow meter was erroneously reading high flow rates during a minor flaring activity. In order to correct issue, vendor was contacted and advice was given to involve Maintenance in disabling Channel 1 of the two channels for the meter. The DCS was never programmed to receive redundant information on Molecular Weight (as well as Pressure and Temperature) and disabling Channel 1 caused a lack of continuous data. Vendor advised HES personnel that data would be logged, but not continuous data. HES Compliance personnel did not report inoperative monitor within the time required.	Regulatory Compliance	(1) SOS: TRAINING & PROCEDURES: GUIDELINE WAS NOT USED DURING INSTALLATION. EXPERIENCED MECHANICS FELT COMFORTABLE DOING THE TASK . HAD DONE SAME TASK IN THE PAST. INNEXPERIENCED MECHANIC WAS UNAWARE OF GUIDELINE . ALTHOUGH A GUIDELINE IS NOT REQUIRED, IT IS EXPECTED, (2) SOS: MAINTENANCE & INSPECTIONS: PROBE WAS MISALIGNED. PROBE ALIGNMENT MARKS ARE NOT EASILY RECOGNIZED. GROOVES ARE PAINTED OVER. ADDITIONAL MATCH MARKS ADDED OVER TIME.
20435	Richmond, CA - Refinery	7/26/2011 12:00:00 AM	Closed	Loss	Inspection hatches at #13 separator failed a BAAQMD VOC inspection	A BAAQMD VOC inspection of all three API separators revealed two hatch/inspection covers at #13 separator outfall sump to not be vapor tight. They showed VOC leaks in excess of the 500 ppm limit.	Environmental	(1) Design of hatch not meant to be vapor tight, (2) Currently there isn't a Routine Duty to document daily Operations Inspections of the hatches, (3) ABU was not aware a leak would result in an immediate NOV instead of the normal time allotment given to repair
20437	Richmond, CA - Refinery	8/23/2011 3:30:00 PM	Closed	Near Loss	F-731 trip to min fire while commissioning P-737A	While putting P-737A on stand by after returning from maineneance, the pump starting. After shutting down the pump and adjustments made to the APS setting, an attempt was made to place P-737A on APS again, but the other pump shut down. F-731 went to minimum fire as a result.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Field communication was not clear and led to both pumps being shutdown. Hand signals were used to direct area Operator to shutdown the stand-by pump, the area Operator thought these hand signals were for him to shutdown the primary pump.
20494	Richmond, CA - Refinery	8/22/2011 12:00:00 AM	Closed	Near Loss	Channel 4 of Trunking Station in failure Mode and locked out.	Channel 4 had transmitter breakdown due to faulty amplifiers and age.	NL-Operational Process/Procedures - Safety Systems	
20495	Richmond, CA - Refinery	8/16/2011 12:00:00 AM	Closed	Near Loss	Point to Point new system Not connecting to Trunking system properly	new Point to Point system lossing connections with the Older trunked system.	NL-Operational Process/Procedures - Safety Systems	
20511	Richmond, CA - Refinery	8/24/2011 11:58:00 AM	Closed	Loss	Disabled Aerial Work Platform rolled off side of semi tractor trailer	Two contracted employees, while loading a disabled aerial work platform onto the back of the delivery trailer, had rolled the equipment off the trailer side onto the ground. The disabled work platform was being winched onto the trailer. The hydraulic brake system was disabled , In order to winch aerial work platform onto the trailer. Once the Aerial Work platform was on the back of the trailer, contractors used local rocks as chocks to hold the wheels. When attempting to lift the loading ramp,In order slow the dove tail, the angle of the tail caused the aerial work platform to move forward, until it rolled off the trailer completely.	Equipment/Property Damage	(1) Why did the manlift flip onto the ground? It rolled off the trailer. Why did it roll off the trailer? Rolled forward over insufficient wheel chalks. Why did it roll over the wheel chalks? Wheel chalks were insufficient for the task at hand. Why did we use insufficient chalks? Insufficient chalks were closer at hand. *Could have still shifted with sufficient chalks. **Trailer could not have been wide enough to take load. ***Potential, In the future, whith wheel s cocked to the right+ Deny load, and take alternate means of pickup.
20512	Richmond, CA - Refinery	4/3/2011 10:20:00 AM	Closed	Near Loss	Green Card. E-340 Oil leak	Green Card. Oil leak from top of E-340 to gound level big spill on ground Location: Top of E-340.	NL-Environmental - Spill	
20513	Richmond, CA - Refinery	8/24/2011 7:45:00 AM	Closed	Near Loss	While getting ready for the work day, the employee noticed his right hand was very sensative and upon rolling up his sleeve found a red spot on his right wrist with a red streak running up his arm to his elbow. The employee assumed he had been bitten by a spider. Plant Protection was contacted immediately.	Prior to the work activities taking place, employee claimed he was apparently bitten by an insect or had some kind of a reaction or infection. We cannot confirm yet whether or not it is an infection or insect bite at this time.	NL-Injury/Illness - Contractor Injury	(1) Employee was bitten by some insect outside of the refinery. This is non-occupational, (2) Employee was bitten by an insect off site. This is non-occupational
						At approximately 7:40PM the OWS-1 received the Hi delta pressure alarm Between 4-H2S and Flare gas recovery (66PD1053) and called the Area operator to Set up to condensate wash the FGR discharge Fin fan E-1051.The Safety Using the job aid FGR5N01J.doc the outside area operator lined up Condensate to the discharge of K-1060 and began water washing at 8:00PM.Water level began to raise quickly at 8:05PM and the High level alarm in V-1053 sounded. At this time the operator Blocked in the wash water and opened the temp bypass to V-1890 to help break level in V-1051.P-1051's were not keeping up with the level increase at this time, Operations began to troubleshoot the reason level was not getting out when at 8:11 PM the Flare gas compressor K-1060 S/D on High High level in V-1051,At about 8:25PM the bypass line to V-1890 began to get warm throughout and level quickly began to		

20536	Richmond, CA - Refinery	8/24/2011 8:11:00 PM	Closed	Loss	K-1060 Trip caused FCC flare totalizer trip	break and alarms cleared The Compressor was restarted and Flare gas header pressure quickly returned to normal. During this event the FCC FLOW TOTALIZER TRIPPED AND AN INTERMITTANT VISIBLE FLAME WAS OBSERVED BUT NO AUTOSAMPLE OCCURRED.	Operational Process/Procedures	(1) Procedure not adequate.Not very detailed with no precautions , (2) P-1051 lost suction
20601	Richmond, CA - Refinery	8/25/2011 11:30:00 AM	Closed	Loss	Irritation to the eye	Contractor employee complaining of minor irritation and discomfort in the right eye from an unknown source.	Injury/Illness	(1) Not Job Related: Irritation to the eye was a pre-existing condition that the worker mentioned to EMT's in the area. Worker was checked as a precaution.
20601	Richmond, CA - Refinery	8/25/2011 11:30:00 AM	Closed	Loss	Irritation to the eye	Contractor employee complaining of minor irritation and discomfort in the right eye from an unknown source.	NL-Injury/Illness - Contractor Injury	(1) Not Job Related: Irritation to the eye was a pre-existing condition that the worker mentioned to EMT's in the area. Worker was checked as a precaution.
20604	Richmond, CA - Refinery	8/25/2011 11:00:00 AM	Closed	Loss	particle in eye	Mechanical pipe fitter received dirt particles in his right eye	Injury/Illness	(1) Person removed their spoggles and when they removed them a particle drifted into their eye, (2) Person removed their spoggles and upon removal a particle drifted into their eye., (3) Worker removed spoggles and a particle drifted into his eye.
20604	Richmond, CA - Refinery	8/25/2011 11:00:00 AM	Closed	Loss	particle in eye	Mechanical pipe fitter received dirt particles in his right eye	NL-Injury/Illness - Contractor Injury	(1) Person removed their spoggles and when they removed them a particle drifted into their eye, (2) Person removed their spoggles and upon removal a particle drifted into their eye., (3) Worker removed spoggles and a particle drifted into his eye.
20664	Richmond, CA - Refinery	8/23/2011 2:00:00 PM	Closed	Loss	JP 8 delivery on Oregon Voyager was offlest for freeze at destination	125 MB FOB destination JP8 cargo loaded on the Oregon Voyager at Richmond 8/19 to 8/21 and received at San Pedro 8/23 was tested out of spec for freeze point and rejected by the customer.	Quality	(1) No results for Freeze on 5 P/S first ins prior to resuming load., (2) QCD receives 3 P/S and 4 P/S first ins. 1 compartment off test for freeze @ -46C. QCD does not notify B&S STL of off test compartment., (3) Richmond using ASTM D5972 and Destination customer using ASTM D2386. D5972 has repeatability of +/- 0.8C and D2386 and repeatability of +/- 2.5C.. (4) No results for Freeze on 5 P/S first ins prior to resuming loading.
20666	Richmond, CA - Refinery	8/26/2011 9:50:00 AM	Closed	Near Loss	One half barrel of cutter spilled into Asphalted ground at Cutter Rack, Main Street near #1 Power Station	Around 09:50 am at Cutter Rack near #1 Power Plant at Main Street, 1/2 barrel of cutter spilled from a Veolia vacuum truck. Veolia Vacuum trucks have been loading cutter at this rack on a routine basis in support of T-3076 sludge removal activity since June, 2011. The truck driver reported checking the float activated level indicator on the side of the truck several times during the loading. At the point where the truck's level indicator was just below 3/4 full, when he poked the gauge with the broom, it shot to full. The driver immediately turned off the truck's vacuum and closed the source valve. It was than that the driver noticed that the cutter was overflowing from Pressure Relief Valve located on top of the vacuum truck. Later in the day, after the truck was emptied and opened, it was discovered that the float's arm was sticky when rotating it.	NL-Environmental - Spill	(1) Half a barrel of diesel spilled to the asphalt. Why? The vacuum truck was over filled. Why? The gauge was sticking and required the driver to stroke the gauge. Why? The driver didn't stop when he noticed the gauge was not functioning properly. Why? Because the driver had done it in the past and there was no negative consequences.
20722	Richmond, CA - Refinery	8/28/2011 7:00:00 PM	Closed	Near Loss	FF hit head on earphone holder clip in rear cab of E-60	While doing weekly inspection on E-60 FF opened and entered rear driverside door to complete air pack inspection and cleaning. While cleaning FF hit headphones and knocked them off of the clip. When FF finished cleaning he backed away and stuck his head on the empty headphone clip on the roof of the compartment causing a laceration to the top of his head. Bandaid was applied to the laceration by another FF.	NL-Injury/Illness - Employee Injury	
20773	Richmond, CA - Refinery	8/25/2011 10:00:00 AM	Closed	Near Loss	Green Card. Fire water valve near T-1669 is unsafe. Location: Pole Yard Tanks	Green Card. Fire water valve located near T-1669 is unsafe to access due to the steep hillside leading up to valve. During rainy season, hillside is especially slippery. Fire H2O valve #194A. Location: Pole Yard Tanks	NL-Injury/Illness - Employee Injury	
20782	Richmond, CA - Refinery	4/20/2011 8:00:00 AM	Closed	Near Loss	Green Card. Low visibility of storage area. Location: Haz Waste Collection Area	There is a couple of steps at the little retaining wall that you have to go up by the Seatainder trailer in which fluorescent bulbs and computer equipment are stored. They are visible only from bottom of steps and not at the top.	NL-Lessons Learned	
20786	Richmond, CA - Refinery	4/21/2011 1:00:00 AM	Closed	Near Loss	Green Card. Contractor failed to signal while driving forklift. Location: RLOP/Recovery Rd.	Contractor driving a forklift making a left turn off Channel St into RLOP unit without making any signal by hand or light.	NL-Lessons Learned	
20787	Richmond, CA - Refinery	4/25/2011 7:00:00 AM	Closed	Near Loss	Green Card. Truck driver driving with headlights off. Location: D&R Control Room/Petrolite St.	Truck driving with headlights off. It was raining and he was traveling 22 mph. It was clearly visible on radar screen.	NL-Injury/Illness - Contractor Injury	
20789	Richmond, CA - Refinery	4/25/2011 12:30:00 PM	Closed	Near Loss	Green Card. Employees not wearing a bike helmet. Location: D&R/Petrolite	I noticed employees riding their bikes on the road. If one person were to fall off, their hard hat would not protect their head because there is no strap.	NL-Injury/Illness - Employee Injury	
					Pipe spool extending off side of goose-neck trailer	P2S employee bumped a wooden sign at the Fire Drill Grounds while transporting a large pipe spool on P2S' goose-neck trailer. The spool extended approximately 2 foot outside the boundary of the trailer allowing it to strike the sign as the trailer moved past. A spotter was present, but on the other side of		

20831	Richmond, CA - Refinery	6/29/2011 5:10:00 PM	Closed	Loss	bumped sign at Fire Grounds causing minor damage to the sign.	the trailer, and the driver misjudged the clearance between the trailer and the sign. The sign will need to be re-bolted to its posis, but is otherwise undamaged.	Transportation	(1) Blind spot
20846	Richmond, CA - Refinery	4/25/2011 12:15:00 PM	Closed	Near Loss	Green Card. Operating a manlift without safety harness. Location: D&R	Chevron operating a manlift without a safety harness.	NL-Injury/Illness - Employee Injury	
20847	Richmond, CA - Refinery	4/25/2011 7:15:00 AM	Closed	Near Loss	Green Card. Found out one of the ladders was loose. Location: S. Isomax E-338 & E-339	When me and my co-worker was doing a JHA walk inspecting the scaffold, we found out one of the ladders was loose.	NL-Injury/Illness - Contractor Injury	
20851	Richmond, CA - Refinery	8/23/2011 8:00:00 AM	Closed	Near Loss	Green Card. Pallets are a tripping hazard. Location: Cracking Annex	At the south entrance to the Cracking Annex building, pallets of office supplies are being placed. This is creating a tripping hazard for anyone exiting the building. Additionally, a garbage can and bike racks are on the other side of entrance making it a crowded area	NL-Injury/Illness - Employee Injury	
20853	Richmond, CA - Refinery	8/30/2011 11:00:00 AM	Closed	Near Loss	P-1601 tripped causing momentary disruption of feed to DHT	DHT was running steady-state at 21.5M feed rate. At ~ 11:00 P-1601 (feed pump) tripped out, resulting in the furnace reducing to min fires. Ops restarted P-1601, and normal feed rate was restored to DHT. product was NOT routed off test due to the short duration of the outage, and no material was released to the flare.	NL-Equipment/Property Damage - Equipment Damage	(1) No causes determined, electrical checks on motor determined no problems, instrumentation signal from field to house are adequate. Pump has ran on spare pump program with no issues.
20856	Richmond, CA - Refinery	4/26/2011 11:00:00 AM	Closed	Near Loss	Green Card. Driving flatbed truck with bottle caps off. Location: B&S B3 Weld Bay	Green Card - Chevron vehicle driving flatbed truck with bottle caps off. Bottles should have caps on when not in use.	NL-Lessons Learned	
20858	Richmond, CA - Refinery	4/27/2011 8:30:00 AM	Closed	Near Loss	Green Card. Tank 3106 needs new wind sock. Location: B&S Tank Field	Green Card - Tank 3106 needs a new wind sock.	NL-Lessons Learned	
20860	Richmond, CA - Refinery	5/28/2011 8:30:00 AM	Closed	Near Loss	Green Card. Walkway damaged. Location: B&S, #7 Pump Station	Green Card. #7 Pump Station walkway damaged floor. Exposing hazards. Barricaded area. Needs repair asap. Location: B&S, #7 Pump Station	NL-Injury/Illness - Employee Injury	
20921	Richmond, CA - Refinery	8/31/2011 10:00:00 AM	Closed	Near Loss	Temporary loss for feed to DHT while attempting to put P-1149 on line.	Operators were attempting to place P-1149 on line after maintenance activity. Flow to the DHT feed pump was temporarily interupted causing the furnace to go to min fires.	NL-Operational Process/Procedures - Safety Systems	
20932	Richmond, CA - Refinery	4/28/2011 8:00:00 AM	Closed	Near Loss	Green Card. No stop sign posted. Location: One-way street off Channel St. across from scales at 31Gate	Green Card. At the one-way street of Channel across from the scales at 31Gate and the street joined by the water treatment plant, there is no stop sign at the intersection going either way. Many times I have driven this path and people are crossing the intersection with their vehicle without looking or yielding.	NL-Injury/Illness - Employee Injury	
20936	Richmond, CA - Refinery	4/27/2011 7:15:00 AM	Closed	Near Loss	Green Card. Truck parked on an uneven/steep grade. Location: D&R by Cooling Tower	Green Card. A truck was parked on an uneven/steep grade with no room to load the truck so I asked them to move truck.	NL-Lessons Learned	
20937	Richmond, CA - Refinery	4/25/2011 8:00:00 AM	Closed	Near Loss	Green Card. Removing extension cord incorrectly. Location: #8 Plant	Green Card. Observed a fellow worker pulling an extension cord out of the wall by the cord.	NL-Lessons Learned	
20938	Richmond, CA - Refinery	4/27/2011 6:30:00 AM	Closed	Near Loss	Green Card. Dip in asphalt by railroad tracks. Location: Pond area/Castro site	Green Card. Dip in asphalt by railroad tracks has gotten bigger by the front gate. It should be marked for both driving and walking. Location: Pond area/Castro site	NL-Injury/Illness - Employee Injury	
20939	Richmond, CA - Refinery	4/27/2011 10:00:00 AM	Closed	Near Loss	Green Card. Vehicle driving with with no caution tape. Location: Channel St.	Green Card. Vehicle driving down Channel St. with pipe extending over the rack had no caution tape attached to it.	NL-Lessons Learned	
20940	Richmond, CA - Refinery	4/26/2011 4:30:00 PM	Closed	Near Loss	Green Card. Trash in walkway. Location: Near 91Gate	Green Card. When going out of walkway by 91Gate, there was trash in walkway making a tripping and slipping hazard.	NL-Lessons Learned	
20941	Richmond, CA - Refinery	4/26/2011 10:00:00 AM	Closed	Near Loss	Green Card. No traffic control in area. Location: No. 8 Warehouse	Green Card. Warehouse workers were off-loading a truck of pipe, but there was moving traffic. Location: No. 8 Warehouse	NL-Lessons Learned	
20943	Richmond, CA - Refinery	4/25/2011 1:00:00 PM	Closed	Near Loss	Green Card. Contractor loading pipe improperly. Location: Lay Down Yard	Green Card. A contractor was loading pipe onto trailer with forks other than using mast and slings.	NL-Injury/Illness - Contractor Injury	
20945	Richmond, CA - Refinery	4/28/2011 2:45:00 PM	Closed	Near Loss	Green Card. Stop sign down. Location: Zerolene and Mill St.	Green Card. Stop sign down at Zerolene and Mill Street.	NL-Lessons Learned	
	Richmond,	4/28/2011			Green Card. Traffic not stopping at posted stop			

20953	CA - Refinery	5:30:00 AM	Closed	Near Loss	signs. Location: 91Gate Contractor Parking Lot	Green Card. I observed traffic not stopping at stop signs posted in parking lot.	NL-Lessons Learned	
20955	Richmond, CA - Refinery	5/26/2011 5:45:00 AM	Closed	Near Loss	Green Card. Smoking in portable outhouse. Location: Contractor Laydown Area/Xylene Street	Green Card. Somebody was smoking in the portable outhouse.	NL-Lessons Learned	
20958	Richmond, CA - Refinery	5/25/2011 6:35:00 AM	Closed	Near Loss	Green Card. Truck driving with no headlights. Location: Channel and Zylene St.	Green Card. Truck driving with no headlights. Location: Channel and Zylene Street	NL-Lessons Learned	
20963	Richmond, CA - Refinery	4/20/2011 11:30:00 AM	Closed	Near Loss	Green Card. Contractor left truck running. Location: North Yard	Green Card. Contractor left truck running while he looked for a valve.	NL-Lessons Learned	
20965	Richmond, CA - Refinery	4/28/2011 2:00:00 PM	Closed	Near Loss	Green Card. Bottles with no caps. Location: B&S/93 Tank Pad	Green Card. The oxygen & excetelyne rack has bottles in the empty rack with no caps on them. Even though they are in the empty rack, they still need to have caps on them.	NL-Lessons Learned	
20966	Richmond, CA - Refinery	4/28/2011 9:30:00 AM	Closed	Near Loss	Green Card. Contractor without a spotter. Location: Maintenance Berth RLW	Green Card. Contractor was attempting to back a full size van out of a tight area without a spotter.	NL-Injury/Illness - Contractor Injury	
21023	Richmond, CA - Refinery	8/4/2011 8:00:00 AM	Closed	Near Loss	PI data interruption while upgrading firewall operating system	The PCN firewall was scheduled for an operating system upgrade on 8/4/2011 at 8am. This firewall has a redundant spare to prevent outages and business disruptions. When the firewall failover was activated and the operating system was upgraded a couple of PI collector systems located on the PCN lost communication with the main PI server that is located on the DMZ network. The loss of communication disrupted the transfer of plant process information between the PI collector on the PCN and the main PI server located on the DMZ.	NL-Business Process - Business Interruption	
21050	Richmond, CA - Refinery	9/1/2011 10:30:00 AM	Closed	Near Loss	scaffold material came in contact with off switch and shut off pump.	PUMP WAS SHUT OFF BECAUSE EMPLOYEE BUMPED THE ON OFF SWITCH. REPORTED TO OPERATIONS IMMEDIATELY. THE AUTOMATIC SYSTEM TOOK CARE OF ITSELF. IN THIS SITUATION THE SYSTEM IS SET UP FOR THE ADJACENT PUMP TO START AND KICK IN BY ITSELF. THE PUMP DID JUST THAT IT STARTED UP WHEN THE OTHER PUMP WAS SHUT OFF.	NL-Equipment/Property Damage - General Liability	(1) Did not follow Chevron Policy regarding JJSV. They assumed nothing bad would happen. communication of on/off button not addressed.
21068	Richmond, CA - Refinery	9/1/2011 7:15:00 PM	Closed	Loss	MVA: B&S / Wharf pickup truck sustained slight damage to driver's side mirror	Operator couldn't get his TWIC badge (and vehicle puck) to register on the badge reader at the TWIC gate (by Machine Shop/CTR) while driving to the QCD compound. Some TWIC badge readers will fail to register, which requires the driver to back up and drive forward several times in order to get the gate to open. In doing so, the driver got too close and the mirror rubbed against the reader and sustained slight damage to its plastic body around the mirror. A dime size piece chipped away from the outer edge of the mirror body.	Equipment/Property Damage	(1) Driver got too close to the TWIC badge reader post and did not maintained safe distance with the TWIC reader post.
21080	Richmond, CA - Refinery	8/29/2011 1:00:00 AM	Closed	Loss	Underloaded CBFS by 14MB	P-1 went down on low suction pressure so CPS operator restarted pump but had to run at half the rate. 20 minutes later the pump loss suction again and could not get enough suction to run it.	Business Process	(1) Tank design or the rundown system is not designed to handle the catalyst in the HCO rundown from FCC, (2) Rundown system is not designed to handle catalyst in the rundown system to prevent build-up in T3216, (3) The tank is not designed to handle the catalyst in the HCO rundown from FCC.
21145	Richmond, CA - Refinery	9/4/2011 8:30:00 PM	Closed	Near Loss	#1 Cross lay charged upon connection to hydrant	#1 crosslay charged upon connection to hydrant due to valve on engine being left open causing hose to to expand forcing the hose cover open on top of Foam 60	NL-Equipment/Property Damage - General Liability	
21193	Richmond, CA - Refinery	9/4/2011 1:20:00 PM	Closed	Near Loss	T-3220 SAAB gauge jumped 4 ft in error	The level on T-3220 dropped 13,000 bbls for no apparent reason. Tanks was slowly emptying (~200 bph) before and after the sudden gauge change. No other tank level changed to account for the discrepancy.	NL-Operational Process/Procedures - Safety Systems	(1) The impact on the reliability of the SAAB reading was not known if the sponge oil was less than 3 ft. Existing procedure is technically right, however, it needs to improve the clarity to cover additional scenario.
21204	Richmond, CA - Refinery	9/1/2011 8:00:00 AM	Closed	Near Loss	Green Card. Too much oil in the bearing boxes of our equipment. Location: Hydro Maint	Green Card. Since the move to 220 neutral lube oil, our oil mist generators seem to be adding way too much oil into the bearing boxes of our equipment. High lube oil levels can be just as bad as no lube oil at all; I fear that if something is not done to correct this issue, soon we may start seeing many bearing failures.	NL-Lessons Learned	(1) No high level drain on the Trico oiler- likely oversight when Trico installed. , (2) SOS: Training & Procedures: High Oil Level in Bearing Housing. No overflow hole in TRICO oiler cup. Cup comes in without overflow hole from manufacturer. Not drilled on cup. Missed by maintenance when new oiler/cup installed. , (3) SOS:Maintenance & Inspections: Sidebar Issue: 220 Neutral Oil (interim oil) in mist oil could be contributing to higher oiler level. SOS:Training & Procedures : Sidebar Issue: Operations did not identify missing oil overflow hole in TRICO oiler cup during routine plant/ equipment checks.
	Richmond,	9/6/2011				Moves being made at Cogen to remove a 150# steam line from service. During this process, condensate was picked up and water hammered the line to #1		(1) Steam traps are left cold if not discovered by operators The lists of cold traps are not resolved unless by work orders.

21253	CA - Refinery	2:30:00 PM	Closed	Loss	U&E / 150# steam water hammer stantion failer.	Power Plant. The force from the water hammer shifted the line approx. 3' off it's shoe's. Multiple stantion's sustained damage.	Equipment/Property Damage	In most cases we only resolve the top 20% of those that are bad order.
21316	Richmond, CA - Refinery	7/26/2011 12:00:00 AM	Closed	Near Loss	Loss of TKC redundant Honeywell HPM power supplies	At approximately 3pm on July 26th a Control Systems Analyst and a Maintenance Technician found both primary and secondary Honeywell HPM 24V rear power supplies down in Cabinet 9 located in Hydro RIE5. Two individual fuses from 2 separate USPs were blown resulting in the loss of AC power to both power supplies. The down power supplies supply 24V power to digital field devices.	NL-Business Process - Business Interruption	(1) AC power was lost to (2) redundant Honeywell power supplying power to 24V field outputs. 2 fuses were found blown. , (2) The current equipment configuratin does provide clear indication that both power supplies are down.
21331	Richmond, CA - Refinery	9/6/2011 8:22:00 AM	Closed	Near Loss	Permit to Operate Check for BAAQMD was not cut in timely manner due to conflicting information for DOPA	Prepared GO-1627 for permit to operate check for BAAQMD to arrive 9/6/11. The new HES Manager's DOA has not yet transferred over so Air Team Lead suggested another Level 1 employee sign off on GO-1627. GO-1627 was prepared, approved and submitted to A/P Rush Desk on Friday, 9/2/11 for delivery on 9/6/11 (due to district on 9/11/11 but wanted to have the check early enough to prepare accompanying letter and send out prior to 9/11/11). Tuesday, 9/6/11 the check approver received an email from the A/P Rush Desk stating that they did not have the appropriate level of approval for the check. The approver forwarded the email to me and I contacted the person at the A/P Rush Desk who sent it because according to our internal DOA database, the approver of the check had a $5MM DOPA. According to the A/P Rush Desk our approver only had $1MM DOPA. The Rush Desk provided a link to the DOA database they use which is different than ours and when I tried to pull up our approver's name I got no returns.	NL-Business Process - Business Process	(1) RI-803 database had not been updated for certain personnel moves.
21332	Richmond, CA - Refinery	9/7/2011 8:00:00 AM	Closed	Near Loss	Green Card. Water cooler has been broken. Location: Hydro Maint	Green Card. For approx. two weeks during August and now into September, the Hydro Maint. building water cooler has been broken and water has been unavailable to maintenance personnel. We are asked to work in some pretty extreme conditions (high heat).	NL-Lessons Learned	
21347	Richmond, CA - Refinery	8/26/2011 2:00:00 PM	Closed	Near Loss	entry into a confined space	In the process of cleaning T-3076 for its 20 year inspection, a contactor entered the tank (confined space and fresh air) not knowing that the air supply to his regulator was not on. He proceeded into the tank with the air from the supply line only. Once he was 20 feet inside the tank he noticed that something was not right with his air. He turned around and started walking toward the entry manway. He failed to turn on his egress pack. As he exited the tank he lost air and pulled his mask off.	NL-Lessons Learned	(1) Employee did not follow egress procedure, (2) Bottle watch did not verify that all supply valves were open before allowing the worker to enter the tank.
21348	Richmond, CA - Refinery	9/7/2011 1:00:00 PM	Closed	Near Loss	7 Boiler S/D - 9/7/11	7 Boiler tripped off-line due to a faulty Woodward Governor. Started back up and will remain I/S until 3 Boiler is up and running. 7 boiler will then be taken O/S for Governor repairs.	NL-Equipment/Property Damage - Equipment Damage	
21363	Richmond, CA - Refinery	9/7/2011 12:00:00 AM	Closed	Loss	Employee got particle in the eye while conducting vessel closure.	Employee was performing a vessel closure at a Contactor in the Alky Plant. Walked to north end of equipment to verify drawing information. Gust of wind picked up dust and blew it into work area. Employee felt discomfort in right eye. Employee was wearing proper PPE (Spoggles) at the time of the incident.	Injury/Illness	(1) Employee got particle in eye and had to receive first aid. Why? Gust of wind blew particle in eye despite wearing proper PPE. Why? Natural phenomenon – dust/gust of wind
21373	Richmond, CA - Refinery	9/7/2011 3:55:00 PM	Closed	Loss	Rockfill area near 7 pump station	While cutting pipe with a diamond blade saw contract employee accumulated dust on his face and in his hair. While removing his PPE employee felt an irritation to one of his eyes.	NL-Injury/Illness - Contractor Injury	(1) Lack of training on removal of PPE
21373	Richmond, CA - Refinery	9/7/2011 3:55:00 PM	Closed	Loss	Rockfill area near 7 pump station	While cutting pipe with a diamond blade saw contract employee accumulated dust on his face and in his hair. While removing his PPE employee felt an irritation to one of his eyes.	Injury/Illness	(1) Lack of training on removal of PPE
21416	Richmond, CA - Refinery	9/8/2011 10:00:00 AM	Closed	Loss	CVX EE had security gate arm come down on vehicle while leaving refinery.	CVX EE was exiting the 31 gate security point with CVX vehicle. EE swiped badge, and started to pull through/under guard crossing arm. Vehicle was approx. 1/2 through when arm started to come down. Arm struck the top of vehicle, breaking the arm off. No damage was sustained to the vehicle. No injuries were reported.	Equipment/Property Damage	(1) SOS:Maintenance & Inspection: BROKEN GATE ARM. Gate arm came in contact with passing vehicle. Gate arm does not recognize passing vehicle. Does not reset timer to allow vehicle to pass under arm. Malfunctioning system/equipment configuration., (2) Sidebar Issues -Although the malfunctioning equipment caused the arm gate to close striking the passing vehicle, the employee is required to submit to intrusive testing as the incident is considered a motor vehicle incident. -There are costs related to lost time waiting for personnel response to incident site (one hour) and the costs of performing tests and sending out to test at outside lab.
21423	Richmond, CA - Refinery	8/1/2011 12:30:00 PM	Closed	Near Loss	Green Card. Steam Leak. Location: FCC North of P-105-B	Green Card. Steam leak North of P-105-B is causing slippery surface on ground.	NL-Injury/Illness - Employee Injury	
21425	Richmond, CA - Refinery	8/1/2011 2:45:00 PM	Closed	Near Loss	Green Card. Odor of oil burning on P-105B. Location: FCC	Green Card. Working on E-1020, down wind we can smell the oil burn on P-105B.	NL-Lessons Learned	
21427	Richmond, CA - Refinery	8/1/2011 1:00:00 PM	Closed	Near Loss	Green Card. Overhead steam leak. Location: FCC - 30' North of P-105B	Green Card. Overhead steam leak needs to be repaired. It makes a very loud noise and dangerous for workers.	NL-Lessons Learned	

21428	Richmond, CA - Refinery	8/1/2011 12:30:00 PM	Closed	Near Loss	Green Card. Wooden ladder in the unit. Location: FCC - V-220	Green Card After lunch I started to walk to my job again and do my LPSA and saw a wooden ladder in the unit.	NL-Lessons Learned	
21429	Richmond, CA - Refinery	8/1/2011 4:10:00 PM	Closed	Near Loss	Green Card. Contractor using cell phone. Location: Main Tank Field Road	Green Card Contractor using cell phone on Main Tank Field Road.	NL-Lessons Learned	
21432	Richmond, CA - Refinery	9/8/2011 12:00:00 AM	Closed	Near Loss	Nausea, Vomiting	Matrix: EE suffering from nausea and vomiting, transported to outside hospital for further evaluation and treatment.	NL-Injury/Illness - Contractor Injury	
21433	Richmond, CA - Refinery	8/1/2011 12:00:00 PM	Closed	Near Loss	Green Card. Excessive wood planks. Location: Alky - V-1410F	Green Card Excessive wood planks left inside vessel making a tripping hazard.	NL-Injury/Illness - Employee Injury	
21434	Richmond, CA - Refinery	8/1/2011 2:30:00 PM	Closed	Near Loss	Green Card. P-105B is leaking oil. Location: FCC	Green Card P-105B is leaking oil.	NL-Lessons Learned	
21437	Richmond, CA - Refinery	8/1/2011 6:45:00 AM	Closed	Near Loss	Green Card. Man talking on his cell phone. Location: Channel St	Green Card. Seen a man talking on his cell phone while driving this morning.	NL-Lessons Learned	
21438	Richmond, CA - Refinery	8/1/2011 12:10:00 PM	Closed	Near Loss	Green Card. Steam leak. Location: FCC - North side of E-102D	Green Card. Steam leak at North side of E-102D	NL-Lessons Learned	
21441	Richmond, CA - Refinery	8/1/2011 12:00:00 PM	Closed	Near Loss	Green Card. Oil in walkway. Location: FCC - 20' North of P-105B	Green Card. Me and my partner were walking out of hot area of E-1020, taking a short break and walk in cool area when we found oil on the walkway.	NL-Lessons Learned	
21442	Richmond, CA - Refinery	8/2/2011 11:20:00 PM	Closed	Near Loss	Green Card. Street sign fell on the ground. Location: Ammonia Street	Green Card. The sign, Ammonia and Toulene Street, fell on the ground and it needs to be put back up.	NL-Lessons Learned	
21443	Richmond, CA - Refinery	8/2/2011 8:30:00 AM	Closed	Near Loss	Green Card. Pen hole leak on oxygen hose. Location: Boiler Shop	Green Card. When using a torch, noticed a large bulge on oxygen hose. It had a pen hole leak.	NL-Lessons Learned	
21445	Richmond, CA - Refinery	8/2/2011 6:30:00 AM	Closed	Near Loss	Green Card. Acetylene gauge low pressure above 15PSI. Location: Boiler Shop	Green Card. While hooking up acetylene gauge, I noticed the low pressure side was creeping above 15PSI. Location: Boiler Shop	NL-Lessons Learned	
21446	Richmond, CA - Refinery	8/2/2011 9:30:00 AM	Closed	Near Loss	Green Card. Steam leak. Location: S. Isomax	Green Card. During a job walk I saw a big steam leak come out from 3/4" steam line next to V-500. Location: S. Isomax	NL-Lessons Learned	
21451	Richmond, CA - Refinery	9/8/2011 1:19:00 PM	Closed	Loss	Operator experienced sharp pain to lower abdominal quadrant while attempting to don on SCBA	On September 8th, 2011 at approximately 13:20 hrs West Side Operator experienced sharp pain to lower abdominal quadrant while attempting to don on SCBA. SCBA was needed for fresh air job taking place on P-3569.	Injury/Illness	(1) Sharp pain while donning on SCBA
21492	Richmond, CA - Refinery	8/2/2011 2:45:00 PM	Closed	Near Loss	Green Card. EE's did not have their hard hat on. Location: D&R North of Control Room	Green Card. When I drove by the D&R area, I saw two employees working around the carry deck without their hard hats on.	NL-Injury/Illness - Employee Injury	
21494	Richmond, CA - Refinery	8/2/2011 10:30:00 AM	Closed	Near Loss	Green Card. Not wearing hard hat or safety glasses. Location: 0 Warehouse	Green Card. Not wearing hard hat or safety glasses while driving forklift.	NL-Injury/Illness - Employee Injury	
21497	Richmond, CA - Refinery	8/2/2011 8:00:00 AM	Closed	Near Loss	Green Card. Company cars are so dirty. Location: Refinery	Green Card. Company cars are so dirty I could barely see out the window to drive.	NL-Lessons Learned	
21498	Richmond, CA - Refinery	8/2/2011 8:30:00 AM	Closed	Near Loss	Green Card. Respirator not properly stored. Location: AV Gas/Rack	Green Card. Found 1/2 face respirator not properly stored.	NL-Lessons Learned	
21500	Richmond, CA - Refinery	8/2/2011 1:30:00 PM	Closed	Near Loss	Green Card. Overgrown vegetation growth. Location: Channel Street	Green Card. Vegetation growth around digital speed indicator making it difficult to see the digital readout.	NL-Lessons Learned	
21502	Richmond, CA - Refinery	8/3/2011 9:30:00 AM	Closed	Near Loss	Green Card. Employee not wearing safety glasses. Location: South Isomax	Green Card. An employee walking in control room signing in and when he walked out of the control room and started walking in the unit, I noticed he wasn't wearing safety glasses.	NL-Lessons Learned	
21503	Richmond, CA - Refinery	8/3/2011 4:30:00 PM	Closed	Near Loss	Green Card. EE left his truck running with door open. Location: 91 Gate	Green Card. An employee stopped his truck and went out to talk to another in front of him. When he walked out he left his truck running and the door open. They tried to pass by and almost hit the door.	NL-Injury/Illness - Employee Injury	

21505	Richmond, CA - Refinery	8/3/2011 7:00:00 AM	Closed	Near Loss	Green Card. Vehicle passing too close. Location: Timco Field Office	Green Card. 2 vehicles parked close to Sealand trailer. Another vehicle going too fast while passing between vehicles and trailer. People were standing near vehicle with door open.	NL-Injury/Illness - Contractor Injury	
21508	Richmond, CA - Refinery	8/3/2011 4:00:00 PM	Closed	Near Loss	Green Card. EE talking on cell phone while driving. Location: Toulene St.	Green Card. An employee was talking on a cell phone while driving and he also didn't stop at a stop sign.	NL-Lessons Learned	
21570	Richmond, CA - Refinery	9/11/2011 5:45:00 AM	Closed	Loss	Leak on Fresh acid supply line to contactors.	EE performing end of shift rounds discovered a pinhole leak on the fresh acid transfer line from V-1440 to the contactors. The leak was located on the carbon steel section of the piping.	Environmental	(1) In 1999, data acquired during inspection found 16.7 MPY corrosion rate. This abnormal and accelerated corrosion rate should have triggered a follow up inspection based on current practices. However, the data was only logged and no follow up performed or information recorded regarding this accelerated corrosion. , (2) Not a Root Cause- A Broken Barrier: TEAM field technicians made a judgment call in the field against their company's policy. TEAMs policy requires that field technicians follow written procedures and shall not deviate from them without TEAM engineering approval. , (3) Not a Root Cause- A broken barrier: QA/QC documents were not received once the TEAM composite wrap was installed. Current Chevron policy requires that all composite wraps shall have quality control documents to ensure procedures and best practices were followed during installation., (4) Not a root cause or broken barrelr- Needs Improvment: Investigation team was unable to determine how far back the hydrogen grooving went as the xray film was unavalable for review. Therefore, team could not pinpoint if current inspection techniques would have identified the grooving in 2004 or 2008. The lack of xray results also cannot help to rule out if the hydrogen grooving has been occurring since plant start up in 1995 or if this was a recent phenomenon
21570	Richmond, CA - Refinery	9/11/2011 5:45:00 AM	Closed	Loss	Leak on Fresh acid supply line to contactors.	EE performing end of shift rounds discovered a pinhole leak on the fresh acid transfer line from V-1440 to the contactors. The leak was located on the carbon steel section of the piping.	Business Process	(1) In 1999, data acquired during inspection found 16.7 MPY corrosion rate. This abnormal and accelerated corrosion rate should have triggered a follow up inspection based on current practices. However, the data was only logged and no follow up performed or information recorded regarding this accelerated corrosion. , (2) Not a Root Cause- A Broken Barrier: TEAM field technicians made a judgment call in the field against their company's policy. TEAMs policy requires that field technicians follow written procedures and shall not deviate from them without TEAM engineering approval. , (3) Not a Root Cause- A broken barrier: QA/QC documents were not received once the TEAM composite wrap was installed. Current Chevron policy requires that all composite wraps shall have quality control documents to ensure procedures and best practices were followed during installation., (4) Not a root cause or broken barrelr- Needs Improvment: Investigation team was unable to determine how far back the hydrogen grooving went as the xray film was unavalable for review. Therefore, team could not pinpoint if current inspection techniques would have identified the grooving in 2004 or 2008. The lack of xray results also cannot help to rule out if the hydrogen grooving has been occurring since plant start up in 1995 or if this was a recent phenomenon
21621	Richmond, CA - Refinery	8/8/2011 5:45:00 AM	Closed	Near Loss	Green Card. Employee holding up traffic. Location: 91 Gate	Green Card. An employee held up about 10 cars in the parking lot while he stopped and talked to another employee.	NL-Lessons Learned	
21623	Richmond, CA - Refinery	8/8/2011 11:05:00 AM_	Closed	Near Loss	Green Card. A truck running with no one in it. Location: By Timec Tool Room	Green Card. I saw a truck running with no one in it.	NL-Lessons Learned	
21625	Richmond, CA - Refinery	8/9/2011 8:30:00 AM	Closed	Near Loss	Green Card. Contractor not wearing hard hat. Location: B&S TK3076	Green Card. A contractor delivery driver forgot to put on hard hat when unloading truck.	NL-Lessons Learned	
21628	Richmond, CA - Refinery	8/9/2011 5:45:00 AM	Closed	Near Loss	Green Card. Need a crosswalk for shutdown traffic. Location: NW of Ammonia St on Xylene St	Green Card. The 8 Plant Shutdown is here. We have a lot of foot traffic so we need a crosswalk to be repainted for us to use in the early morning.	NL-Lessons Learned	
21630	Richmond, CA - Refinery	9/12/2011 10:00:00 AM	Closed	Loss	Partical in the right eye, removed by clinic	Engineer was in the field looking at a job site where work would be performed at an elevated location. When the Engineer looked up, he felt a particle in his eye. Engineer was wearing prescription safety glasses.	Injury/Illness	(1) Why did Engineer get Particle in his eye? Because, he looked up when the particle was falling down. Why? Natural Phenomenon - gravity/angle of head.

21631	Richmond, CA - Refinery	8/10/2011 5:35:00 AM	Closed	Near Loss	Green Card. Two cars parked the wrong way. Location: 91 Gate	Green Card. When I was walking looking for my coworkers, I saw two cars parked the wrong way.	NL-Lessons Learned	
21632	Richmond, CA - Refinery	8/10/2011 8:00:00 AM	Closed	Near Loss	Green Card. Contractor had no fall protection on. Location: 8 Warehouse	Green Card. A contractor performing work on equipment over 6 ft high had no fall protection on.	NL-Injury/Illness - Contractor Injury	
21633	Richmond, CA - Refinery	8/11/2011 5:00:00 AM	Closed	Near Loss	Green Card. Driving the wrong way in parking lot Location: 91 Gate Parking Lot	Green Card. A man driving a pickup the wrong way in the parking lot.	NL-Lessons Learned	
21635	Richmond, CA - Refinery	8/11/2011 4:30:00 PM	Closed	Near Loss	Green Card. Replace the stop sign. Location: 91 Gate	Green Card. The stop sign at 144 Xylene St. needs to be replaced. The paint is faded and cannot see the red.	NL-Lessons Learned	
21637	Richmond, CA - Refinery	8/12/2011 7:00:00 AM	Closed	Near Loss	Green Card. No safety eye wash available. Location: The Ranch Weld Bay	Green Card. We started filling out the hazard and was looking for the safety eye wash and there wasn't one available.	NL-Lessons Learned	
21638	Richmond, CA - Refinery	8/12/2011 12:10:00 PM	Closed	Near Loss	Green Card. Truck crossed railroad tracks without stopping. Location: Channel St.	Green Card. I saw a truck turn to go into Alky-FCC and crossed the railroad tracks without stopping.	NL-Lessons Learned	
21652	Richmond, CA - Refinery	9/12/2011 9:00:00 AM	Closed	Loss	T-3162 sample pump blow a oil seal	during his rounds the Operator found less than 1/4 barrel of waxy oil under the sample pump at T-3162	NL-Environmental - Operational Leak	(1) Heat tracing and insulating flanges is not a standard practice
21652	Richmond, CA - Refinery	9/12/2011 9:00:00 AM	Closed	Loss	T-3162 sample pump blow a oil seal	during his rounds the Operator found less than 1/4 barrel of waxy oil under the sample pump at T-3162	Environmental	(1) Heat tracing and insulating flanges is not a standard practice
21657	Richmond, CA - Refinery	9/12/2011 11:30:00 AM	Closed	Loss	Contract employee noticed what looked like a bug bite on left wrist	Bug bite on left wrist	NL-Injury/Illness - Contractor Injury	(1) Possibly insect was in glove
21657	Richmond, CA - Refinery	9/12/2011 11:30:00 AM	Closed	Loss	Contract employee noticed what looked like a bug bite on left wrist	Bug bite on left wrist	Injury/Illness	(1) Possibly insect was in glove
21685	Richmond, CA - Refinery	9/12/2011 10:00:00 AM	Closed	Loss	pinhole leak in the 12-3 wharf line	Operator discovered a small amount of heavy oil in pipeway during his rounds. He reported his finding to his HO and after investigating they found the 12-3 wharf line weaping.	Environmental	(1) Pipe support was notched out, trapped water and soil to created the corrosion mechnism.
21708	Richmond, CA - Refinery	8/15/2011 8:00:00 AM	Closed	Near Loss	Green Card. Crew not trained properly. Location: B&S T-3076	Green Card. Crew is not trained properly on how to use breathing air trailers. Not use to rental carts.	NL-Lessons Learned	
21711	Richmond, CA - Refinery	8/15/2011 8:00:00 AM	Closed	Near Loss	Green Card. Rental bottle cart almost dropped from truck. Location: TK 3076	Green Card. Rental bottle cart almost dropped from truck being unloaded because of small wheels and no breaks. Also top heavy and hard to move in gravel.	NL-Lessons Learned	
21712	Richmond, CA - Refinery	9/1/2011 10:30:00 AM	Closed	Near Loss	Green Card. Contractor used handwash protable to wash his hands. Location: Bundle Pad, SW end	Green Card. Contractor used handwash portable to wash his hands.	NL-Lessons Learned	
21713	Richmond, CA - Refinery	9/1/2011 8:30:00 AM	Closed	Near Loss	Green Card. Temporary stop sign has fell over. Location: 8 Warehouse	Green Card. At the intersection of Main and Channel at 8 Warehouse, the temporary stop sign has fell over.	NL-Lessons Learned	
21716	Richmond, CA - Refinery	9/1/2011 1:30:00 PM	Closed	Near Loss	Green Card. Semi truck and trailer traveling too fast. Location: RLP - Mill St. curves	Green Card. Noticed a semi truck and trailer traveling too fast. This is a 15mph zone. It is clearly posted.	NL-Injury/Illness - Contractor Injury	
								(1) Several gallons of sludge and wash water were spilled when residual liquid sprayed out of a cargo hose onto the tank and the asphalt surface underneath the tank. The hose, which was being used to transfer the sludge between tanks, was disconnected from the tank after it had been cleared of bulk liquids but while it was still under pressure. Pressure came from the compressed air used to clear the line. The excess pressure had not been fully vented per procedure using the bleeder valve and remaining pressure was released abruptly as the line was disconnected. Worker claimed he thought pressure was fully released when he closed the bleeder valve. Conclusion reached is that worker's manner of executing the procedure for clearing lines and venting pressure had not been properly followed, but up to that point

21719	Richmond, CA - Refinery	9/13/2011 11:00:00 AM	Closed	Near Loss	Contractor spills 2-3 gallons of tank sludge to secondary containment during transfer operation.	After transfering sludge between tanks in the Haz Waste Annex, contractor(s) failed to fully clear and depressurize the portable cargo hose used for the transfer. Upon disconnecting the hose to connect and fill another tank, approx. 2-3 gallons of tank sludge was spilled from the hose to the secondary containment (asphalt).	NL-Environmental - Spill	In his experience had not resulted in significant pressure remaining in the hose. , (2) Hydrocarbon-containing tank bottoms sludge sprayed a portable tank and the asphalt underneath the tank because a cargo hose was disconnected while still under pressure . Material did not spray the worker opening the line, but it could have depending on the amount of liquid, the force of released pressure, and the location of the worker. The worker was not wearing a face shield while he was performing the disconnection. The procedure PPE did not call for a face shield for line disconnection. The procedure contains proper steps to release pressure prior to line disconnection, but does not accommodate extra PPE needed in the event that the operator fails to completely vent the line.
21722	Richmond, CA - Refinery	9/1/2011 10:55:00 AM	Closed	Near Loss	Green Card. Employee did not have a seatbelt on. Location: FCC Control Room Parking Lot	Green Card. An employee and a passenger in vehicle and did not have their seatbelt on.	NL-Lessons Learned	
21727	Richmond, CA - Refinery	9/1/2011 11:15:00 AM	Closed	Near Loss	Green Card. Need a bench/table to eat our lunch. Location: Conex next to Timec Tool Room	Green Card. We need a bench and a table to eat our lunch by the Timec Tool Room.	NL-Lessons Learned	
21728	Richmond, CA - Refinery	9/1/2011 2:00:00 PM	Closed	Near Loss	Green Card. Steam leak. Location: S. Isomax C-130	Green Card. Steam leak near Column 130. Manifold leaking steam.	NL-Lessons Learned	
21731	Richmond, CA - Refinery	9/7/2011 10:00:00 AM	Closed	Near Loss	Green Card. Deck is rusted through. Location: D&R, Top Deck of V-1650	Green Card. Deck is rusted through at Northend of deck.	NL-Lessons Learned	
21753	Richmond, CA - Refinery	9/13/2011 11:04:00 AM	Closed	Near Loss	P-1601tripped off line.	At 11:04 A.M. P-1601 tripped off line for no apparent reason. F-1610 went to min fires. Operations responded and restarted @ 11:06 A.M. Called Process control group and Electrical Analyst to investigate.	NL-Lessons Learned	
21766	Richmond, CA - Refinery	9/14/2011 4:15:00 AM	Closed	Loss	Operator sprayed on face and hands with DEBRU/DEWOP mix water	Operator was sprayed with DEBRU/DEWOP mix water while attempting to backflush carbon drum in DEBRU. DEBRU water is process water that has <0.5PPM benzene and DEWOP water is firewater. Potential exposure below PEL limits for benzene. The operator hooked up firehose to carbon drum, cracked open valve on drum then cracked open the ball valve on the firehose to begin backflush. After cracking open valve on drum DEBRU water leaked slightly out of camlock firehose connection. Operator continued task by opening ball valve despite leak. While opening ball valve, water sprayed out and hit the operator's face and hands. The water spray was mostly firewater, but action was taken as if benzene from DEBRU water was present. Operator was wearing normal PPE- gloves, hard hat, nomex, ear plugs, boots, and safety glasses. After incident STL and operator reviewed job and found the camlock o-ring was missing. Without the o-ring the camlock can leak. In the future the operator has agreed to check firehose and camlock connection to ensure equipment is fit for service. If equipment is broken/missing parts the operator will not use until fixed/replaced.	NL-Injury/Illness - Employee Injury	(1) Operator did not check if the camlock o-ring was in place before connecting firehose., (2) SOS:Training & Procedures; Operator Was Sprayed With DEBRU/DEWOP Water. Hose Connection Leaked/Sprayed. No "O" Ring in Cam-loc/ Hose Connection.Job Aid missing step to check for "O" Ring., (3) SOS:Personal Protective Factors: Operator Did Not Check For Gasket., (4) Sidebar Issues: Training & Procedures (Information Resources): - Had the operator been aware that the "O" Ring was missing, it is unclear where to get a replacement, especially at 0415, other than to write a work order for appropriate personnel (tool room) to service the Cam-loc, delaying the back flush of the carbon drums.
21786	Richmond, CA - Refinery	9/14/2011 4:15:00 AM	Closed	Loss	Operator sprayed on face and hands with DEBRU/DEWOP mix water	Operator was sprayed with DEBRU/DEWOP mix water while attempting to backflush carbon drum in DEBRU. DEBRU water is process water that has <0.5PPM benzene and DEWOP water is firewater. Potential exposure below PEL limits for benzene. The operator hooked up firehose to carbon drum, cracked open valve on drum then cracked open the ball valve on the firehose to begin backflush. After cracking open valve on drum DEBRU water leaked slightly out of camlock firehose connection. Operator continued task by opening ball valve despite leak. While opening ball valve, water sprayed out and hit the operator's face and hands. The water spray was mostly firewater, but action was taken as if benzene from DEBRU water was present. Operator was wearing normal PPE- gloves, hard hat, nomex, ear plugs, boots, and safety glasses. After incident STL and operator reviewed job and found the camlock o-ring was missing. Without the o-ring the camlock can leak. In the future the operator has agreed to check firehose and camlock connection to ensure equipment is fit for service. If equipment is broken/missing parts the operator will not use until fixed/replaced.	Injury/Illness	(1) Operator did not check if the camlock o-ring was in place before connecting firehose., (2) SOS:Training & Procedures; Operator Was Sprayed With DEBRU/DEWOP Water. Hose Connection Leaked/Sprayed. No "O" Ring in Cam-loc/ Hose Connection.Job Aid missing step to check for "O" Ring., (3) SOS:Personal Protective Factors: Operator Did Not Check For Gasket., (4) Sidebar Issues: Training & Procedures (Information Resources): - Had the operator been aware that the "O" Ring was missing, it is unclear where to get a replacement, especially at 0415, other than to write a work order for appropriate personnel (tool room) to service the Cam-loc, delaying the back flush of the carbon drums.
21809	Richmond, CA - Refinery	8/16/2011 8:30:00 AM	Closed	Near Loss	Green Card. 116 steam line has leak. Location: B&S 116 Steam Line	Green Card. 116 Steam Line has a leak.	NL-Lessons Learned	
21810	Richmond, CA - Refinery	8/16/2011 5:45:00 AM	Closed	Near Loss	Green Card. Flatbed truck holding up traffic picking up a pedestrian. Location: 91 Gate	Green Card. When I was walking into Gate 91 this morning, I saw a flatbed truck stop on the other side holding traffic up, picking up another employee. The traffic was heavy. The employee didn't stop and look when he ran across to catch the ride.	NL-Lessons Learned	
	Richmond,	8/16/2011			Green Card. Truck didn't			

21811	CA - Refinery	5:30:00 AM	Closed	Near Loss	have their headlights on. Location: 91 Gate	Green Card. When I got to the parking lot this morning, a black truck in back of me didn't have their headlights on.	NL-Lessons Learned	
21812	Richmond, CA - Refinery	8/18/2011 8:00:00 AM	Closed	Near Loss	Green Card. A large crane traveling without an escort. Location: Channel St.	Green Card. A large crane traveling without an escort. The crane was merging into an oncoming lane.	NL-Lessons Learned	
21813	Richmond, CA - Refinery	8/16/2011 5:45:00 AM	Closed	Near Loss	Green Card. Need to replace stop sign. Location: 144 Xylene St.	Green Card. Need to replace the stop sign at 144 Xylene St. The paint is fading away on old sign.	NL-Lessons Learned	
21815	Richmond, CA - Refinery	8/10/2011 3:00:00 PM	Closed	Near Loss	Green Card. Found a pipe shoe sitting unsecured. Location: Asphalt Plant	Green Card. Found a pipe shoe sitting unsecured atop existing 20' high structure. Pipe shoe was not attached to or supported by anything.	NL-Injury/Illness - Employee Injury	
21816	Richmond, CA - Refinery	8/18/2011 6:35:00 AM	Closed	Near Loss	Green Card. Truck didn't have their headlights on. Location: Channel St.	Green Card. A security truck driving down Channel St. didn't have their headlights on.	NL-Lessons Learned	
21817	Richmond, CA - Refinery	9/7/2011 9:30:00 AM	Closed	Loss	Fresh air equipment was not delivered to the job, delaying the job	Fresh air equipment was not delivered to the jobsite in time to start the job. Work had to be delayed until the following day.	Business Process	(1) Inefficent logistics to get fresh air equipment to jobsite in a timely manner
21819	Richmond, CA - Refinery	8/18/2011 9:00:00 AM	Closed	Near Loss	Green Card. Four long scaffold pipes came unattached. Location: Channel St/rail tracks	Green Card. Four long scaffold pipes came unattached, rolling into the street. Traffic was moving slow, no one was hurt.	NL-Injury/Illness - Contractor Injury	
21821	Richmond, CA - Refinery	8/19/2011 8:00:00 AM	Closed	Near Loss	Green Card. Some grading is missing. Location: SW end of Bridge 145 on corner of Xylene St and Channel St	Green Card. Bridge 145 on corner of Xylene/Channel is missing some grading.	NL-Lessons Learned	
21823	Richmond, CA - Refinery	8/22/2011 8:45:00 AM	Closed	Near Loss	Green Card. A truck is speeding up. Location: Main St/Railroad	Green Card. A truck is speeding up.	NL-Lessons Learned	
21824	Richmond, CA - Refinery	8/22/2011 2:15:00 PM	Closed	Near Loss	Green Card. A gradall did not make a full stop at stop sign. Location: Standard St crossing/railroad	Green Card. A gradall did not make a full stop at stop sign.	NL-Lessons Learned	
21826	Richmond, CA - Refinery	8/22/2011 2:15:00 PM	Closed	Near Loss	Green Card. A van without a backup alarm. Location. FCC Control Room	Green Card. A van trying to back out without a backup alarm and also didn't have a backup light.	NL-Lessons Learned	
21827	Richmond, CA - Refinery	8/22/2011 5:50:00 AM	Closed	Near Loss	Green Card. Need a crosswalk. Location: Xylene Street	Green Card. Early in the morning a lot of workers wearing dark clothing and trying to cross the street with a lot of traffic and we don't have a crosswalk to let drivers know to slow down.	NL-Lessons Learned	
21828	Richmond, CA - Refinery	8/22/2011 8:30:00 AM	Closed	Near Loss	Green Card. Employees without fall protection or hard hats. Location: Asphalt Plant S/O Trailers	Green Card. Multiple employees working at heights without fall protection or hard hats.	NL-Injury/Illness - Employee Injury	
21831	Richmond, CA - Refinery	8/24/2011 11:40:00 AM	Closed	Near Loss	Green Card. Missing guard rail. Location: Scalehouse/31 Gate	Green Card. Across street from scalehouse there is a bridge #145 with missing side guardrail on left side coming in from 31 Gate.	NL-Lessons Learned	
21846	Richmond, CA - Refinery	9/12/2011 4:40:00 PM	Closed	Near Loss	Off-test sulfur in diesel product due to cold feed change	Switched DHT Cold feed from T-1492 to T-1493 at 13:00 9/12/2011. Maintained cold feed rate of 10MBD, raised CAT from 615F to 625F in anticipation of tank switch. By 16:30, sulfur analyzer had trended up to 20ppm and then DSL T/L was routed off-test. Continued firing CAT to 640F and reduced cold feed to 5MBD. Routed back on test at 22:45. Cold feed rates were increased back to 10MBD, causing several hours of off-test product later in the shift until cold feed was reduced again. Similar issues with cold feed switches were seen during the week of 9/5/11.	NL-Quality - Product Quality (Int)	(1) In the past, crews have seen that a 5-10F increase CAT has been sufficient to handle changes to cold feed qualities. There is a lack of experience in processing import feeds with qualities that are different than normal 3s/c.
21866	Richmond, CA - Refinery	7/21/2011 12:00:00 AM	Closed	Near Loss	V-451 Sulfur Sorber changeout was submitted as extra work to the 4Q11 shutdown	V-451 Sulfur Sorber changeout was submitted as extra work to the 4Q11 shutdown. V-451 was last changed during August 2010 (scope input for Major was June 2010), typical run lengths are 1.5-2 years between changeouts. This was anticipated to line up with a 1Q12 Rhen regen. Sorber is loading quicker than expected & the Rheniformer run lengths have extended to 1+ years. This pushed the changeout to be requested as extra work.	NL-Business Process - Business Process	(1) In Feb 2011, V-451 was anticipated to be at Best Practice loading (8%) in Feb 2012. By July 2011, the 8% loading limit is projected to be reached in late Nov 2011. TKN light and medium sulfur levels have increased in recent months. , (2) Rheniformer run lengths are continuing to be extended as octane requirements are lowered. This provides fewer opportunities to line up V-451 changes to a regen.
21879	Richmond, CA - Refinery	9/15/2011 12:09:00 AM	Closed	Loss	Tube leak on E-711 fractionator overhead	Tube leak on E-711 fractionator overhead	Equipment/Property Damage	(1) Water injection below minimum nozzle turndown, (2) Stratified flow regime resulted in liquid in the bottom of the tubes and vapor in the top of the tubes. , (3) V717A not controlling sour water removal from V717, equipment problem. May be undersized.

21879	Richmond, CA - Refinery	9/15/2011 12:09:00 AM	Closed	Loss	Tube leak on E-711 fractionator overhead	Tube leak on E-711 fractionator overhead	Business Process	(1) Water injection below minimum nozzle turndown. (2) Stratified flow regime resulted in liquid in the bottom of the tubes and vapor in the top of the tubes. , (3) V717A not controlling sour water removal from V717, equipment problem. May be undersized.
21929	Richmond, CA - Refinery	9/15/2011 5:00:00 AM	Closed	Loss	K-1100A leak on 2nd stage loader.	Upon arriving at the control room at shift change, operations smelled the strong odor of process gas on the street when exiting the van. H2S and Crude Unit operators suited up and went out with a gas tester to the compressor area to find the leak. The gas tester pegged out when approaching the compressor area. The decision was made to shut down the compressor and called Chevron fire to respond.	Loss of Containment	(1) The shop procedure and guidance from the refinery Rotating Equipment Reliability team has a torque value for the cover and not the jam nut. Machinists apply torque to the jam nut based on feel, they do not want to over torque the equipment because it is cast material., (2) The design of the unloaders on K-1100A allows an operator to turn the valve unloader past the position where the plate valve is closed and responsive to compressor pressures and there is no way for operators to know when they have reached the desired position.
21929	Richmond, CA - Refinery	9/15/2011 5:00:00 AM	Closed	Loss	K-1100A leak on 2nd stage loader.	Upon arriving at the control room at shift change, operations smelled the strong odor of process gas on the street when exiting the van. H2S and Crude Unit operators suited up and went out with a gas tester to the compressor area to find the leak. The gas tester pegged out when approaching the compressor area. The decision was made to shut down the compressor and called Chevron fire to respond.	Equipment/Property Damage	(1) The shop procedure and guidance from the refinery Rotating Equipment Reliability team has a torque value for the cover and not the jam nut. Machinists apply torque to the jam nut based on feel, they do not want to over torque the equipment because it is cast material., (2) The design of the unloaders on K-1100A allows an operator to turn the valve unloader past the position where the plate valve is closed and responsive to compressor pressures and there is no way for operators to know when they have reached the desired position.
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21929	Richmond, CA - Refinery	9/15/2011 5:00:00 AM	Closed	Loss	K-1100A leak on 2nd stage loader.	Upon arriving at the control room at shift change, operations smelled the strong odor of process gas on the street when exiting the van. H2S and Crude Unit operators suited up and went out with a gas tester to the compressor area to find the leak. The gas tester pegged out when approaching the compressor area. The decision was made to shut down the compressor and called Chevron fire to respond.	Environmental	(1) The shop procedure and guidance from the refinery Rotating Equipment Reliability team has a torque value for the cover and not the jam nut. Machinists apply torque to the jam nut based on feel, they do not want to over torque the equipment because it is cast material., (2) The design of the unloaders on K-1100A allows an operator to turn the valve unloader past the position where the plate valve is closed and responsive to compressor pressures and there is no way for operators to know when they have reached the desired position.
21936	Richmond, CA - Refinery	8/25/2011 8:00:00 AM	Closed	Near Loss	Green Card. Employee not wearing a faceshield. Location: FCC, E-130	Green Card. I went in front of E-1020 getting tools I saw an employee working with an impact gun without a faceshield on.	NL-Lessons Learned	
21941	Richmond, CA - Refinery	9/12/2011 12:00:00 AM	Closed	Near Loss	Signalling between Trunking system and Repeater channels intermittant	Weak control signalling between Trunking Controler and Channels causes intermittant behavior.	NL-Operational Process/Procedures - Safety Systems	
21943	Richmond, CA - Refinery	9/15/2011 12:00:00 AM	Closed	Near Loss	Intermittant Radio Operation during the Night	Channels operating intermittantly	NL-Operational Process/Procedures - Safety Systems	
21992	Richmond, CA - Refinery	9/15/2011 12:00:00 PM	Closed	Near Loss	Employee slipped and fell	Employee slipped and fell - bruised tailbone	NL-Injury/Illness - Employee Injury	(1) Employee slipped and fell in cafeteria. Why - employee was rushing. Why - Employee felt pressure to complete task Why - Perceived pressure was on part of employee (felt they had a lot to do)
21995	Richmond, CA - Refinery	9/15/2011 12:00:00 PM	Closed	Near Loss	Employee scraped calf	Employee scraped calf slightly	NL-Injury/Illness - Employee Injury	(1) Employee scraped calf Why - employee slipped and calf came into contact with pedal on stationary bike. Why - employee slipped because they were hurrying and not fully concentrating on immediate task Why - employee trying to multi-task and lat their attention wander Why - employee felt under self-imposed pressure to complete several tasks in short order
21998	Richmond, CA - Refinery	9/14/2011 12:00:00 AM	Closed	Near Loss	wrong stem was supposed to be 347 PMI at 660ss	While performing the PMI function the material (stem) did not met the specifications. Stem was supposed to be stainless steel 347, material was wrong alloy stainless steel 660	NL-Quality - Incorrect Product	

22030	Richmond, CA - Refinery	9/16/2011 6:05:00 PM	Closed	Loss	EE strained knee	While getting back into a vehicle the EE felt a ting in their left knee.	Injury/Illness	(1) EE entered vehicle without following proper ergonomic techinques
22039	Richmond, CA - Refinery	9/16/2011 5:30:00 PM	Closed	Near Loss	On 9/16/11 Juan Medina was transporting a spent catalyst bin to the clean harbor yard and when he went to place the bin on the ground he notice that there was smoke coming from the back of the bin he notified Tina and Jose and Tinna emmediatly get the tempature gun to take the tempurature of the bin and saw that the temperature was at 189 degrees and Tina notified the supervisor and was told to notify plant protection and Ron allen said he was on his way. The bin was flooded by plant protection.	On 9/16/11 Contractor was transfering bin # 20180 from BSA to the Clean Harbors yard for pre-shipment. When he was putting the bin in place he noticed a strong odor from the bin and the bin was smoking from the back side. Another Technician immediately took the temperature using the temperature gun came up with 189 degrees C reading. He immediately notified his supervisor and was advised to call Plant Protection for assistance. Plant Protection arrived and flooded the open bin with water	NL-Fire/Explosion	(1) Inadequate procedures, i.e., temperature monitoring for container containing potentially self heating material. , (2) Inappropriate use of container, i.e. roll off bin, for potentially self healing material.
22045	Richmond, CA - Refinery	9/17/2011 6:52:00 PM	Closed	Near Loss	Tripped FCC totalizer 9/17/11 @ 1852 hrs	At ~ 1855 hrs C04 noticed flow increase to FGR compressors, called on radio to SISO & NISO operators to ask if anyone was going to relief. C04 requested that second FGR compressor K1070 be started, after a few minutes flow began to decrease.	NL-Environmental - Release	(1) Undetermined specific source, TKN was in start up mode, relief to V705 overwhelmed single FGR compressor before second compressor could be started.
22054	Richmond, CA - Refinery	9/16/2011 10:25:00 AM	Closed	Loss	While attempting to open a 10" valve, B&S operator felt discomfort in his/her lower back.	While attempting to open a 10" valve, B&S operator felt discomfort in his/her lower back. The valve is positioned approximately 4' from the ground. The operator lubricated the valve before attempting to open it and used a persuader.	Injury/Illness	(1) Condition of valve hand wheel extension (loose) accepted as normal, others in the area are in the same condition
22075	Richmond, CA - Refinery	9/15/2011 7:30:00 AM	Closed	Loss	Puncture wound to hand	Mechanic was in the process of replacing carbide inserts in a milling tool when the screwdriver for the insert retainer slipped causing a cut on his hand.	Injury/Illness	(1) Damaged or wrong tool for the job. Mechanic thought that the tool was worn so he ground off the worn area and tried to remove the fastener again.
22117	Richmond, CA - Refinery	9/12/2011 12:00:00 PM	Closed	Near Loss	CLM spare parts unavailable	During a planning session for the Pascagoula B&S Software upgrade, we were told that a critical part required for the upgrade was being delayed so they ask if other Chevron site could loan them the required part for the upgrade until their order was received. Chevron Richmond went through the process of checking their inventory and found no such parts causing a big concern since this indicated that they had no spare parts for their running CLM on hand.	NL-Quality - Product Unavailable	
22123	Richmond, CA - Refinery	9/19/2011 8:00:00 AM	Closed	Loss	Leak 259 line	Discovered leak 259 line on Petrolite Street	Environmental	(1) To be identified after the pipe failure analysis , (2) To be identified after the pipe failure analysis
22167	Richmond, CA - Refinery	9/19/2011 3:00:00 PM	Closed	Near Loss	Hot spots discovered on both the north and south sides of #3 Boiler.	TOP INVESTIGATION (SEE LINK FOR FULL TOP DESCRIPTION/ REPORT). INITIAL REPORT: While performing a walk through (PSSR) on neighboring #4 Blr hot spots were discovered on #3 Boiler, both north and south sides, approximately midway on the firebox. In at least one location the boiler wall had burned through completely. Operating normally on negative draft kept combustion contained within firebox.	NL-Equipment/Property Damage - Equipment Damage	(1) SOS: Design & Engineering: Cracked Refractory. Refractory is Not Very Flexible. Designed That Way., (2) SOS: Maintenance & Inspection: No Survey to Check for Hot Spots., (3) SOS:Mitigation Devices: Cracked Refractory. Pilots Turned Off When Boiler is Not in Use Emissions Regulations, (4) SOS:Training & Procedures: Cracked Refractory. Thermal Cycling of Boiler. Boilers are Used Only When Needed. Refinery Steam Lead., (5) Sidebar Issues -Tube leaks at the rolled connections. Expansion and contraction due to thermal cycling contributes to leaks.
22199	Richmond, CA - Refinery	8/31/2011 11:00:00 AM	Closed	Near Loss	Green Card. Contractor using ladder without fall protection. Location: New Hydrogen Project	Green Card. Contractor working the new Hydrogen Project at the Y. Contractor using a ladder plus standing on rooftop without fall protection.	NL-Injury/Illness - Contractor Injury	
22200	Richmond, CA - Refinery	8/31/2011 10:00:00 AM	Closed	Near Loss	Green Card. Contractor working without fall protection. Location: North Yard	Green Card. Contractor workig on rooftop without fall protection. Walking on Seatander.	NL-Injury/Illness - Contractor Injury	
22201	Richmond, CA - Refinery	8/31/2011 9:00:00 AM	Closed	Near Loss	Green Card. Contractors walking toward unit with H2S alarms. Location: North Yard	Green Card. Three contractors walking toward unit with H2S alarms.	NL-Lessons Learned	
22202	Richmond, CA - Refinery	8/31/2011 8:00:00 AM	Closed	Near Loss	Green Card. Truck having problems backing out. Location. 8 Warehouse	Green Card. Large truck at 8 Warehouse having problems backing out. Several cars creating a traffic jam.	NL-Lessons Learned	

22204	Richmond, CA - Refinery	8/31/2011 6:15:00 AM	Closed	Near Loss	Green Card. Traffic does not see pedestrians crossing street. Location: 91 Gate	Green Card. I crossed the street and a car went through and did not spot me. Location: 91 Gate	NL-Lessons Learned	
22210	Richmond, CA - Refinery	8/31/2011 1:45:00 PM	Closed	Near Loss	Green Card. Employee working on scaffold with no safety harness. Location: FCC E-102B	Green Card. Employee working on top of scaffold 12' high, yellow tag 100% tie off, with no safety harness in position.	NL-Injury/Illness - Employee Injury	
22211	Richmond, CA - Refinery	8/31/2011 6:20:00 AM	Closed	Near Loss	Green Card. Truck driving with headlights off. Location: Zylene St - Contractors Parking Area	Green Card. Truck driving with headlights off. Too dark and a lot of pedestrians walking this time of morning.	NL-Lessons Learned	
22212	Richmond, CA - Refinery	8/31/2011 5:30:00 AM	Closed	Near Loss	Green Card. Pedestrian not using the crosswalk flashing lights. Location: Gate 91	Green Card. Pedestrian was walking out in front of vehicles in the crosswalk without hitting the button for flashing light warning	NL-Lessons Learned	
22213	Richmond, CA - Refinery	8/31/2011 4:35:00 PM	Closed	Near Loss	Green Card. Employee driving the wrong way. Location: Gate 91	Green Card. When I was clocking out and walking to my car I saw an employee driving out of the parking lot the wrong way.	NL-Lessons Learned	
22214	Richmond, CA - Refinery	8/31/2011 4:28:00 PM	Closed	Near Loss	Green Card. Employee driving too fast near crosswalk. Location: Pedestrian crosswalk by Newtrons	Green Card. Employee driving toward crosswalk going too fast, would not slow down before we crossed.	NL-Injury/Illness - Employee Injury	
22215	Richmond, CA - Refinery	9/15/2011 2:00:00 PM	Closed	Near Loss	TIMEC welders were tasked to weld on a code repair using a BFM weld procedure	TIMEC welders were tasked to weld on a code repair using a BFM weld procedure	NL-Environmental - Release	(1) a. Lack of understanding, training, and guidance with in DED what repairs are considered code repairs with original equipment., (2) b. Lack of understanding and training within the Planning and Scheduling group with the details of weld procedures and who can use them. (3) c. Nothing in Planner and scheduler process to check that the weld procedure is appropriate for the personnel welding. Personnel doing work and the weld inspectors are provided with the work package. - Problem not anticipated
22216	Richmond, CA - Refinery	8/25/2011 8:00:00 AM	Closed	Near Loss	Green Card. Employee not wearing faceshield while using impact gun. Location: FCC E130	Green Card. Employee not wearing a faceshield while using an impact gun.	NL-Injury/Illness - Employee Injury	
22218	Richmond, CA - Refinery	8/25/2011 5:50:00 AM	Closed	Near Loss	Green Card. An employee didn't use crosswalk light. Location: Gate 91	Green Card. An employee didn't use crosswalk light to walk across to the other side and he also was running in the dark with dark coveralls on.	NL-Injury/Illness - Employee Injury	
22219	Richmond, CA - Refinery	8/25/2011 6:30:00 AM	Closed	Near Loss	Green Card. Semi truck and trailer driving with back doors loose. Location: RLP Loading Racks	Green Card. Semi truck and trailer driving with back doors loose. Doors moving back and forth. Doors should be secure when driving.	NL-Lessons Learned	
22221	Richmond, CA - Refinery	8/25/2011 2:00:00 PM	Closed	Near Loss	Green Card. No slings used for rigging a come along. Location: FCC	Green Card. There is a come along holding a 6" insulated pipe. The come along is over the bim hook and the chain is wrapped around insulation. No slings being used for rigging.	NL-Lessons Learned	
22223	Richmond, CA - Refinery	8/26/2011 7:30:00 AM	Closed	Near Loss	Green Card. Street sign fell down on back road. Location: Ammonia & Toluna	Green Card. Street sign fell down on back road.	NL-Lessons Learned	
22224	Richmond, CA - Refinery	8/26/2011 1:55:00 PM	Closed	Near Loss	Green Card. Rope supporting a 2" pipe. Location: FCC	Green Card. There is rope supporting a 2" pipe on the south side of E-102-B.	NL-Lessons Learned	
22226	Richmond, CA - Refinery	8/26/2011 9:30:00 AM	Closed	Near Loss	Green Card. A plate ready to fall off of E-131A&B. Location: FCC	Green Card. There is a plate about 3" tall and 8" wide, 1/4" thick with the name Braun on it that is ready to fall off of E-131 A&B. It could really hurt someone.	NL-Injury/Illness - Employee Injury	
22227	Richmond, CA - Refinery	8/26/2011 4:00:00 PM	Closed	Near Loss	Green Card. Contractor had no hard hat and safety glasses on. Location FCC	Green Card. A contractor in unit with no hard hat, no glasses and on cell phone.	NL-Injury/Illness - Contractor Injury	
22229	Richmond, CA - Refinery	8/28/2011 6:30:00 AM	Closed	Near Loss	Green Card. Stop sign was laying down. Location: Corner of Mill & Main St.	Green Card. The stop sign was laying down. This is a portable sign supported by concrete in a bucket. High winds knocked it down.	NL-Lessons Learned	
	Richmond,	8/29/2011			Green Card. The street sign needs to be			

22233	CA - Refinery	8:00:00 AM	Closed	Near Loss	reinstated. Location: Ammonia and Toulene St.	Green Card. The street sign at Ammonia and Toulene St. needs to be reinstalled. It is laying in pipeway north of Contra Costa Electric Yard.	NL Lessons Learned	
22234	Richmond, CA - Refinery	9/30/2011 2:00:00 PM	Closed	Near Loss	Green Card. Pipeway needs to be supported. Location: Pipeway North of Dresser-Rand	Green Card. Three 2" line north of Dresser-Rand pipeway is just hanging. Needs to be supported.	NL-Lessons Learned	
22235	Richmond, CA - Refinery	9/30/2011 7:30:00 AM	Closed	Near Loss	Green Card. Stop sign down at Zeralene and Mill St.	Green Card. Stop sign down at Zeralene and Mill St. The wind blew it down.	NL-Lessons Learned	
22236	Richmond, CA - Refinery	9/29/2011 1:30:00 PM	Closed	Near Loss	Green Card. Pot holes all through the road on Shop Rd.	Green Card. Pot holes all through the road on Shop Rd.	NL-Lessons Learned	
22238	Richmond, CA - Refinery	9/30/2011 8:00:00 AM	Closed	Near Loss	Green Card. An employee didn't have his lock on the box. Location: FCC E-102B	Green Card. An employee didn't have a lock on his lock box.	NL-Lessons Learned	
22240	Richmond, CA - Refinery	9/30/2011 8:00:00 AM	Closed	Near Loss	Green Card. contractor driving forklift with broken seatbelt. Location: Ranch	Green Card. Contractor driving forklift with seatbelt hanging to the street. Latch was broken on seatbelt.	NL-Injury/Illness - Contractor Injury	
22253	Richmond, CA - Refinery	9/20/2011 1:40:00 AM	Closed	Loss	Employee received scratch in face while disposing of scrap wood.	Employee was in the process of breaking a 10 foot long, 1"x4" board when one end of the board contacted and scratched his cheek as it broke	Injury/Illness	(1) Employee put himself in the line of fire while breaking scrap boards. Why? Employee was performing the task in a manner he had used in the past with no negative consequence. This time the board broke sooner than he expected and made contact with his face.
22261	Richmond, CA - Refinery	9/20/2011 9:45:00 PM	Closed	Near Loss	Loss of K-9 Air Compressor to Bioreactor. K-10 currently O/S	Loss of K-9 Air Compressor during a time when the 2nd air compressor K-10 is O/S for a motor repair. Motor tripped with no signs of S/D logic on the Moter's Mentin display or the Vibration/temperature monitors. The 86 lockout relay was in the "Tripped" position in the MCC, with the starter breaker in the closed position. The breaker was manually opened & tagged.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
22308	Richmond, CA - Refinery	9/6/2011 9:30:00 AM	Closed	Near Loss	CE used shower in Men's Reel Room on 4th Flr TC after biking to work. When stepping out of shower slipped on the floor and fell without injury.	After using shower dried off and dressed inside of shower enclosure. Shoes were left outside of shower area. Shower is raised about 3-4" above the floor in rest room. A 3-4" horizontal tiled curb is built up inside of the shower enclosure to ensure that all water stays inside of enclosure. Enclosure is equipped with a rubber mat that provides good footing inside of shower enclosure. To exit shower I stood just in front of the tile curb with clothes on but in bare feet. Stepped over curb a shifted weight to bring right foot over the curb and down to the floor level in rest room -- while moving right foot my weight was balanced on my left foot -- as the right foot came down to the tile floor I began to shift weight to the right foot but foot did not plant on floor instead it began to slide away across the tile floor because the bottom of the foot was still wet. As I realized I was falling I bent at the waist shifted my weight in the direction of the sliding foot and began twisting toward my left side. I landed on my left shoulder with my head about 6" from the wall. Some minor aches from fall but was able to get up safely get my shoes on and left.	NL-Injury/Illness - Employee Injury	
22340	Richmond, CA - Refinery	9/21/2011 8:00:00 AM	Closed	Near Loss	9/21 CSF Cancellation notice was not sent to all groups	9/21 CSF cancellation notice was not sent and therefore was not received by certain individuals, including the cafeteria. There were about 10 people who showed that were not notified.	NL-Lessons Learned	(1) New CSF Chair presumed the CSF Committee was in charge of notifying contractor CSF attendees and the cafeteria regarding breakfast orders based on the turnover received. Additionally, the CSF team was focused on the send off for the previous chair and missed notifying CSF attendees of the next months cancellation.
22341	Richmond, CA - Refinery	9/21/2011 8:00:00 AM	Closed	Near Loss	Transfer from T-3128 to 3107 went to T-1594 instead of T-3107	Transfer from T-3128 to T-3107 went to T-1594 instead of T-3107	NL-Business Process - Business Process	(1) Valve was not fully closed
22360	Richmond, CA - Refinery	9/22/2011 12:00:00 AM	Closed	Near Loss	K-3008 NHG compressor S/D	On 9/22/2011 at 3:22Am K-3008B (B train NG boosted compressor shutdown on low lube oil. This low lube oil shutdown was caused by MP-3033 tripping off with no spare. The lube oil pump tripped a second time at approx.4:00Am and could not be restarted. K-3008A was also s/d and the Natural gas bypass was open from the SNG line around the booster compressors. The Shutdown of the compressor Caused PC-256 to overpressure and the NG pev lifted temporarily until pressure was brought under control by operations. The FCC flare knoklizer tripped with no visible flame.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) K-3008 L/O pump tripped
	Richmond, CA -	9/21/2011 2:00:00		Near		Operations released the blinds for P-1453 Dresser Rand (the company blinding the pumps), later returned and said they were done for the day. When operations inspected the pump they found the suction flange of the pump without a bolitemeter (open flange to atmosphere) and the discharge was still attached to the process system (unblinded). This is a 3000# system. Any failure of the process valves isolating the discharge of the pump would have caused a release that could not have been isolated. Those discharge valves	NL-Operational Process/Procedures -	

22429	Refinery	PM	Closed	Loss	P-1453 Blinding.	have been known to leak by.	Safety Systems	(1) Communication between day shift and night shift not clear
22498	Richmond, CA - Refinery	9/24/2011 9:00:00 AM	Closed	Near Loss	Operator had checst pains and breathing issues.	Operator has checst pains and breathing issues. He said he had a appointment at his doctor at 11:00am for this issue. Concern if he was able to drive to appointment. Plant protection took his vitals and said he was able to drive to the hospital to see his doctor.	NL-Injury/Illness - RSI/MSD Discomfort	
22557	Richmond, CA - Refinery	9/26/2011 3:28:00 AM	Closed	Loss	Crude feed cut after tank switch. Hit by light material and foaming in the flash drum	After taking a tank switch (@ 0200) from Tk-3106 to Tk-3107 @ 0328, the crude unit got hit with light material the P-1102's gassed up and were cavitating. Feed was cut to 175 MBPD due to foaming in the flash drum.	Operational Process/Procedures	(1) Light products in feed causing foaming, (2) vortex breaker damaged
22569	Richmond, CA - Refinery	9/19/2011 8:00:00 AM	Closed	Loss	10": Wash oil pipeline detected hydrocarbon smell (Diesel) in the sleeve	Detected hydrocarbon smell in the sleeve of the 10" wash oil pipeline during a reinspection. No hydrocarbon liquid was observed leaking out of the sleeve.	NL-Environmental - Operational Leak	
22572	Richmond, CA - Refinery	9/23/2011 10:00:00 AM	Closed	Near Loss	D & R lab	Working at a lab bench, I noticed broken glass on the bench top that had been left there.	NL-Injury/Illness - Contractor Injury	
22583	Richmond, CA - Refinery	7/15/2011 12:00:00 AM	Closed	Loss	Recycle of Stock Balances for 2012-2013 Susiness Plans	Description of What Occurred The 2012 and 2013 Richmond Refinery Stock Balances required recycling due to inaccurate data entry for the fuel oil and natural gas pricing in the LP Petro model (LP). Key Factors Contributing to the Event 1) Price mapping for fuel oil and natural gas between a spreadsheet price linkage tool and the LP was incorrect. 2) A new untested generate of the LP was used to develop the stock balances. This has become the normal practice because we want to use the most up to date version of the LP; however, untested tools introduce risk for error. 3) There was insufficient support for the new LP planner relative to prior planning cycles. 4) The LROP planner was on-boarded late into the planning cycle. This was exacerbated because Richmond uses the Long Range Planner (LROP) role as a rotating development assignment. Why Tree Synopsis – (A flow chart is included in the linked document to assist with logic) 1) Price mapping was incorrect because a) The Richmond price transfer template is a complex spreadsheet with no assigned steward to maintain/update the template. A steward has not been defined because i) This practice has been acceptable in the past and no incident occurred. ii) Sidebar – as part of defining stewardship and accompanying work process, examine if corporate price model updates are communicated to all the right stakeholders 2) A new LP generate was used for the LROP vs. an older previously vetted model. New tools are prone to errors because a) The model review process is not sufficiently robust given the desire to have new planners assigned to the LROP because b) Existing work process does adequately define expectations for what constitutes a model review c) The new planner did not have the experience to detect the errors d) The model is not vetted by other users since it is used in the LROP process first. i) The decision to use a new LP for LROP is a business choice driven by the desire to have the most up to date tool used for LROP because this improves the business linkage with the shorter range planning process. No solution is required on this item since other solutions will mitigate the risk. 3) The support provided for the new LP planner wasn't sufficient because a) Timely experienced help wasn't provided and/or acquired because i) The normal planner turnover, which historically bridges this need, was cut short due to factors outside of the normal work process – abnormal conditions existed and the risk was not recognized. 4) The LROP planner was on-boarded late into the planning cyle because a) This position was not successfully filled on the original attempt because i) Multiple refinery positions were posted simultaneously for selection process efficiency – consequently, not enough adequate candidates applied to cover all positions. This was a business decision - the risk of not filling the LROP planner on the first attempt was not recognized.	Business Process	(1) Price mapping was incorrect because a) The Richmond price transfer template is a complex spreadsheet with no assigned steward to maintain/update the template. A steward has not been defined because i) Sidebar – as part of defining stewardship and accompanying work process, examine if corporate price model updates are communicated to all the right stakeholders, (2) A new LP generate was used for the LROP vs. an older previously vetted model. New tools are prone to errors because a) The model review process is not sufficiently robust given the desire to have new planners assigned to the LROP because b) Existing work process does adequately define expectations for what constitutes a model review c) The new planner did not have the experience to detect the errors d) The model is not vetted by other users since it is used in the LROP process first. i) The decision to use a new LP for LROP is a business choice driven by the desire to have the most up to date tool used for LROP because this improves the business linkage with the shorter range planning process. No solution is required on this item since other solutions will mitigate the risk., (3) The support provided for the new LP planner wasn't sufficient because a) Timely experienced help wasn't provided and/or acquired because i) The normal planner turnover, which historically bridges this need, was cut short due to factors outside of the normal work process – abnormal conditions existed and the risk was not recognized. , (4) The LROP planner was on-boarded late into the planning cycle because a) This position was not successfully filled on the original attempt because i) Multiple refinery positions were posted simultaneously for selection process efficiency – consequently, not enough adequate candidates applied to cover all positions. This was a business decision - the risk of not filling the LROP planner on the first attempt was not recognized.
22586	Richmond, CA - Refinery	9/20/2011 1:00:00 PM	Closed	Near Loss	T-3126 notice of return to service was not completed and will require delay in putting tank in service.	T-3126 notice of return to service was not completed and will require delay in putting tank in service.	NL-Quality - Paperwork Incorrect/Not Sent	(1) The Tank turnaround group was not aware that this was a MACT tank and that it had a 30 day notification requirement.
22586	Richmond, CA - Refinery	9/20/2011 1:00:00 PM	Closed	Near Loss	T-3126 notice of return to service was not completed and will require delay in putting tank in service.	T-3126 notice of return to service was not completed and will require delay in putting tank in service.	NL-Regulatory Compliance - Non Compliance - Air	(1) The Tank turnaround group was not aware that this was a MACT tank and that it had a 30 day notification requirement.
22588	Richmond, CA - Refinery	9/26/2011 6:50:00 AM	Closed	Loss	Tetramer spilled to the bay from the boiler maker flange after disconnecting hose from ship.	Around 06:50 after loading 21.9MB of tetramer to the Chembulk Lindy Alice was completed. The Loading hose was emptied and boiler maker was installed. During the process of rigging the hose out, about 1 gal (max) spilled to the bay from the boiler maker flange.	Environmental	(1) Inadequate procedure - procedure exists and is technically right. However, it needs to be improved., (2) Inadequate procedure - a deficiency in the quality check or inspection of work caused a problem to be missed., (3) Inadequate procedure – vessel QA/QC is less than adequate (a deficiency in the quality check or inspection of work caused a problem to be missed)

22614	Richmond, CA - Refinery	8/29/2011 5:30:00 AM	Closed	Near Loss	Green Card. Near miss for vehicle searches. Location: 91 Gate	Green Card. In the morning every 20 cars get searched. It's a near miss every morning while backing up between traffic to get your vehicle searched.	NL-Lessons Learned	
22617	Richmond, CA - Refinery	9/1/2011 1:30:00 PM	Closed	Near Loss	Green Card. Steam trap leaking. Location: S. Isomax - East of C-130	Green Card. Steam trap leaking East of C-130	NL-Lessons Learned	
22619	Richmond, CA - Refinery	9/7/2011 7:30:00 AM	Closed	Near Loss	Green Card. Grading is missing on bridge. Location: Xylene St/Channel St	Green Card. Bridge 145 on corner of Xylene St and Channel St some grading is missing on SW end of bridge.	NL-Lessons Learned	
22622	Richmond, CA - Refinery	9/26/2011 2:00:00 PM	Closed	Near Loss	Illness not work related	At approximately 2 pm today an Overaa worker complained that he was not feeling wel to the Overaa safety professional. The Overaa safety professional, who is a licensed EMT, determined that there was not an emergency. Because the employee is on various medications it was also determined that the employee should be taken to the Chevron Refinery Medical Services as a precaution prior to sending the employee home. The Chevron Refinery Medical Services found nothing wrong with the employee and and it was determined to be a personal illness, the employee was released back to full duty.	NL-Injury/Illness - Contractor Injury	
22662	Richmond, CA - Refinery	9/27/2011 7:45:00 AM	Closed	Near Loss	Employee slipped - did not fall	Employee trod wrong on steps out of 214 Main side entrance. Their foot slipped, but they did not fall - 3 points of contact (hand in hover position).	NL-Injury/Illness - Employee Injury	
22692	Richmond, CA - Refinery	9/8/2011 6:45:00 AM	Closed	Near Loss	Green Card. Get crosswalk repainted with reflectors. Location: Gate 91	Green Card. Get crosswalk repainted with reflectors before someone gets hit by a vehicle.	NL-Lessons Learned	
22694	Richmond, CA - Refinery	9/8/2011 5:50:00 AM	Closed	Near Loss	Green Card. We need a crosswalk to be painted. Location: Xylene St.	Green Card. We need a crosswalk to be painted. Lots of workers walk through here and cross the street in the morning.	NL-Lessons Learned	
22700	Richmond, CA - Refinery	9/13/2011 10:00:00 AM	Closed	Near Loss	Green Card. Steam tracing leak on E-102D. Location: FCC E-102D	Green Card. The steam tracing leak on E-102D needs to be fixed because it leaks on eye level and also near walkway. Someone can get burned if the leak doesn't get fixed soon.	NL-Lessons Learned	
22702	Richmond, CA - Refinery	9/13/2011 1:30:00 PM	Closed	Near Loss	Green Card. Scaffolding tag didn't have anything written in precaution area. Location: D&R near DHT	Green Card. While conducting an audit, noticed scaffolding tag on #7275151 didn't have anything written in "precautions" area.	NL-Lessons Learned	
22703	Richmond, CA - Refinery	9/14/2011 9:00:00 AM	Closed	Near Loss	Green Card. Wind sock needs replacing. Location: B&S TK-399 Pole Yards	Green Card. Wind sock needs replacing at TK-399 Pole Yard.	NL-Lessons Learned	
22705	Richmond, CA - Refinery	9/14/2011 6:30:00 AM	Closed	Near Loss	Green Card. Bench outside of classroom needs repair. Location: 91 Gate	Green Card. Bench outside of classroom coming apart. Probably would not support much weight or movement.	NL-Lessons Learned	
22710	Richmond, CA - Refinery	9/16/2011 10:40:00 AM	Closed	Near Loss	Green Card. Van came around the corner speeding. Location: Behind the Boiler Shop	Green Card. A van came around the corner from behind the Boiler Shop speeding while I was walking across the street.	NL-Injury/Illness - Employee Injury	
22719	Richmond, CA - Refinery	9/15/2011 7:30:00 AM	Closed	Near Loss	Green Card. Wind sock needs replacing. Location: B&S TK 397 Pole Yard	Green Card. Wind sock needs replacing.	NL-Lessons Learned	
22721	Richmond, CA - Refinery	9/19/2011 7:00:00 AM	Closed	Near Loss	Green Card. Wind sock needs replacing. Location: B&S TK-3107	Green Card. Wind sock need replacing.	NL-Lessons Learned	
22729	Richmond, CA - Refinery	9/27/2011 12:00:00 AM	Closed	Near Loss	Bee Sting	Timec; Bee sting to Left Ear.	NL-Injury/Illness - Contractor Injury	
22843	Richmond, CA - Refinery	9/28/2011 9:10:00 PM	Closed	Loss	P-126C blown OB seal	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. at ~ 21:10 the P-126C OB seal failed and started leaking pretty bad. Plant Protection was called out to standby while operations isolated the pump. All of which was completed safely and without further incident.	Equipment/Property Damage	(1) Unable to Determine Cause of Leak
22843	Richmond, CA - Refinery	9/28/2011 9:10:00 PM	Closed	Loss	P-126C blown OB seal	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. at ~ 21:10 the P-126C OB seal failed and started leaking pretty bad. Plant Protection was called out to standby while operations isolated the pump. All of which was completed safely and without further incident.	NL-Environmental - Operational Leak	(1) Unable to Determine Cause of Leak
						BAAQMD called the South Yard Environmental coordinator at 9:00 and reported an odor complaint that they felt was the Bio-Reactor. At 10:40 another		

22875	Richmond, CA - Refinery	9/28/2011 8:30:00 AM	Closed	Loss	2 confirmed outside odor complaints 9/28/11	complaint was called in to teh SY Environmental Coordinator. 8:30 am. Complainant described an oily, larry odor. According to Linda, met with complainant at 8:40 and traced odor to Mills and Castro. The wind direction from the time of the initial call (8:30 a.m.) was out of the N/NW (345.3) with wind speeds at approximately 7-8 mph. The ambient temperature was approximately 67F. CFRE was notified at 9:10 and dispatched units around the Refinery perimeter and in the Point - observing no odors. 10:20 am. Complainant described an petroleum and burnt oil odor. Linda again met with the complainant at 10:40 and traced odor to Castro and underneath the I-580 overpass. The wind direction from the time of the initial call (10:20 a.m.) was out of the N/NW (345) with wind speeds at approximately 7-8 mph. The ambient temperature was approximately 72F. CFRE was again notified at approximately 11:40 and dispatched units around the Refinery perimeter and in the Point - observing no odors. RTC had no issues to report. The wind was coming directly from the north.	Environmental	(1) Chevron is no longer immediately contacted nor do we get CFRE on site ASAP to confirm odors. This leads to a lack of odor to detect and help assess the actual odor. All odor complaints must be called into CFRE immediately to ensure they have as much time as possible to respond and assess., (2) The Odorant is routinely taken out of service in parts of the manifold so contractors do not have to work in the mist. Contractors think it might be harmful and is an annoyance.
22915	Richmond, CA - Refinery	9/28/2011 1:00:00 PM	Closed	Near Loss	Green Card. Wasp nest found in housing of P-24. Location: 21 Pump Pad	Green Card. Wasp nest found in housing of P-24.	NL-Lessons Learned	
22928	Richmond, CA - Refinery	9/29/2011 5:40:00 AM	Closed	Near Loss	Green Card. Poor lighting for crosswalks. Location: Channel St.	Green Card. I was driving in from Gate 91 towards Cent. Maint. As I approached the crosswalk at the bridge, I noticed a pedestrian at the last minute. Lighting was very poor. If he hadn't stopped or if I wasn't paying attention, there could have easily been an incident.	NL-Injury/Illness - Employee Injury	
23078	Richmond, CA - Refinery	10/1/2011 10:00:00 AM	Closed	Loss	Operator injures lower back while lifting an inspection hatch.	An EOD operator was in the process of removing a "seal mat" from a hatch for one of the effluent sewers and in the process strained their lower back.	Injury/Illness	(1) While performing task, used improper body positioning., (2) SOS:Design & Engineering: Mat had adhered to hatch. Heat of the day caused mat to become sticky/ tacky. Possibilty for mats becoming stuck was unknown to Management when ordered., (3) SOS: Training & Procedures: Information Resources: Heat of the day caused mat to become sticky/ tacky. Mats changing condition due to exposure to hot ambient temperature was not evident.
23103	Richmond, CA - Refinery	10/2/2011 10:00:00 AM	Closed	Near Loss	P-126C flange leak on U/S discharge flange of the discharge EBV	P-126C flange leak on U/S discharge flange of the discharge EBV while the pump was being put back in service after a seal repair job.	NL-Environmental - Release	(1) Sidebar SOS: Personal Protective Factors: Not enough torque/stress on bolts/flange. Impact gun used to tighten bolts rather than Hytorc wrench (to provide required torque). Mechanics decide not to wait and use a Hytorc wrench.Gasket was not replaced as directed on the work order. Mechanics decided to try to tighten up on the flange and see if that would stop the leak without opening it. Tightening up had worked in the past.
23111	Richmond, CA - Refinery	10/3/2011 3:30:00 AM	Closed	Loss	Tube rupture in F-1550	Area operator reported black smoke venting from F-1551 stack at ~0320. OWS responded and worked to un-gas F-1550. Area operator radioed that fire was coming from F-1550 box. HO/STI and crew responded and found liquid dripping from burn box (nearest HPCC house) and ignited into flames. CFD notified, HO instructed OWS 5 to remove pressure and flow to F-1550. Chopper valve and 50 foot block valves were closed. Plant evac was activated. HO upon inspected F-1550 box reported seeing flame from floor to ceiling. Crew evac the area and Fire monitor were placed (two) on F-1550. HO reviewed emergency procedures for tube rupture which required all furnaces on that bank to be shutdown. STL met with RLS and decided to shutdown LNC and HNC hot strip. CFD placed monitor from ladder truck onto F-1550. CFD call fire out at 0425.	Loss of Containment	(1) The Retroactive PMI program did not include refinery furnace inspections. PMI had never been conducted on the entire furnace to discover the carbon steel elbow because they were considered low risk (low probability of error)., (2) HNC unit feed rates were increased by 30% in recent years so prior inspection history may have been insufficient to predict future corrosion.
23111	Richmond, CA - Refinery	10/3/2011 3:30:00 AM	Closed	Loss	Tube rupture in F-1550	Area operator reported black smoke venting from F-1551 stack at ~0320. OWS responded and worked to un-gas F-1550. Area operator radioed that fire was coming from F-1550 box. HO/STI and crew responded and found liquid dripping from burn box (nearest HPCC house) and ignited into flames. CFD notified, HO instructed OWS 5 to remove pressure and flow to F-1550. Chopper valve and 50 foot block valves were closed. Plant evac was activated. HO upon inspected F-1550 box reported seeing flame from floor to ceiling. Crew evac the area and Fire monitor were placed (two) on F-1550. HO reviewed emergency procedures for tube rupture which required all furnaces on that bank to be shutdown. STL met with RLS and decided to shutdown LNC and HNC hot strip. CFD placed monitor from ladder truck onto F-1550. CFD call fire out at 0425.	Fire/Explosion	(1) The Retroactive PMI program did not include refinery furnace inspections. PMI had never been conducted on the entire furnace to discover the carbon steel elbow because they were considered low risk (low probability of error)., (2) HNC unit feed rates were increased by 30% in recent years so prior inspection history may have been insufficient to predict future corrosion.
					Employee was using a 7/16" wrench to attach	On September 21st 2011, Chevron electrician was working at the K-242 Electrical BUSS re-attaching leads when he noticed some pain in his palm of the right hand around the middle finger area. He stated that he had had this pain before while working with tools and that it went away but by the end of the shift it was still bothering him so he came in to me and reported the pain. I asked him to report to the clinic in the morning and have it evaluated which he did. He reported to the clinic on 9/22/11 at 6:15 AM and was seen by the nurse practicioner who put ice on the affected area and gave the employee Ibuprofin. He was returned to work with no restrictions that day (9/22/11) and was told to		

23110	Richmond, CA - Refinery	9/21/2011 3:00:00 PM	Closed	Loss	leads to a BUSS bar when they noticed a strained feeling in their right palm, middle finger area.	check in again on 9/26/11 for follow up. On 9/26/11 he was seen again by Dawn at the clinic and was given ice and more Ibuprofin and told to alternate usage of hands to relieve stressing the same hand. Employee was returned to work with no restrictions same day.	NL-Injury/Illness - Employee Injury	(1)
23116	Richmond, CA - Refinery	9/21/2011 3:00:00 PM	Closed	Loss	Employee was using a 7/16" wrench to attach leads to a BUSS bar when they noticed a strained feeling in their right palm, middle finger area.	On September 21st 2011, Chevron electrician was working at the K-242 Electrical BUSS re-attaching leads when he noticed some pain in his palm of the right hand around the middle finger area. He stated that he had had this pain before while working with tools and that it went away but by the end of the shift it was still bothering him so he came in to me and reported the pain. I asked him to report to the clinic in the morning and have it evaluated which he did. He reported to the clinic on 9/22/11 at 8:15 AM and was seen by the nurse practioner who put ice on the affected area and gave the employee Ibuprofin. He was returned to work with no restrictions that day (9/22/11) and was told to check in again on 9/26/11 for follow up. On 9/26/11 he was seen again by Dawn at the clinic and was given ice and more Ibuprofin and told to alternate usage of hands to relieve stressing the same hand. Employee was returned to work with no restrictions same day.	Injury/Illness	(1)
23167	Richmond, CA - Refinery	10/1/2011 1:00:00 PM	Closed	Near Loss	Green Card. Truck box broke open the tailgate. Location: D&R area	Green Card. From a complete stop, leaving D&R going onto Channel Street, (I believe that's the street, backside of D&R) we drove up the little hill and our truck box broke open the tailgate and dropped all our tools onto road.	NL-Injury/Illness - Employee Injury	
23194	Richmond, CA - Refinery	10/3/2011 7:20:00 PM	Closed	Near Loss	SRU 3 train shutdown trip	While performing the SRU train "Hot strip" procedure SRUNP3600, the natural gas to the thermal oxidizer was blocked in. Thus tripping the "fire-eye" and creating a plant trip. No effect to upstream units as it was planned to pull feed from SRU #3 at that point.	NL-Lessons Learned	(1) SOS:Mitigation Device: Plant Trip. No natural gas going to the furnace. Blocked in wrong line. Operator thought they had closed the correct valve. No label on the Valve. Unable to see label on line. Label was faded.. (2) SOS: Training & Procedures: Operator thought they had closed the correct valve. Did not review plant diagrams .
23232	Richmond, CA - Refinery	10/4/2011 12:00:00 AM	Closed	Loss	Contract Employee bitten by insect	Contract employee recieved insect bite while putting on his coveralls.	Injury/Illness	(1) enviromental / outside conditions
23238	Richmond, CA - Refinery	10/4/2011 2:45:00 PM	Closed	Near Loss	A contractor truck came into contact with a light fixture	The load on the back of a contractor truck came in contact with a light fixture on a pipeway road. The driver reversed course avoiding damage to conduit and possible further problems.	NL-Transportation - Contractor	
23238	Richmond, CA - Refinery	10/4/2011 2:45:00 PM	Closed	Near Loss	A contractor truck came into contact with a light fixture	The load on the back of a contractor truck came in contact with a light fixture on a pipeway road. The driver reversed course avoiding damage to conduit and possible further problems.	NL-Equipment/Property Damage - Equipment Damage	
23244	Richmond, CA - Refinery	10/4/2011 7:32:00 PM	Closed	Loss	RLOP Flaring due to Shutdown cleanup	During the RLOP shutdown cleanup process, the Flare Gas compressors suciton valve temperatures increased due to the steamout process. It was necessary to take RLOP off FGR to avoid valve damage to the compressors.	Regulatory Compliance	(1) There was a positive deviation from the RLOP flare plan (less flaring than planned) - The tool for estimating the planned flaring volumes is reasonably accurate, but possibly over-estimates the Hydrogen Sulfide (H2S) content of key vessels. In particular these vessels include the LNC & HNC Atmospheric and Vacuum Distillation columns as well as the LNC & HNC reactor loops, (2) There was a positive deviation from the RLOP flare plan (less flaring than planned) - 2. A temporary steam condenser was installed at RLOP's Gas Recovery Unit to limit the flow of gas to the relief system. This worked as intended to limit the amount of flaring and to allow the RLOP plants to be put back on to the Flare Gas Recovery system.
23244	Richmond, CA - Refinery	10/4/2011 7:32:00 PM	Closed	Loss	RLOP Flaring due to Shutdown cleanup	During the RLOP shutdown cleanup process, the Flare Gas compressors suciton valve temperatures increased due to the steamout process. It was necessary to take RLOP off FGR to avoid valve damage to the compressors.	Environmental	(1) There was a positive deviation from the RLOP flare plan (less flaring than planned) - The tool for estimating the planned flaring volumes is reasonably accurate, but possibly over-estimates the Hydrogen Sulfide (H2S) content of key vessels. In particular these vessels include the LNC & HNC Atmospheric and Vacuum Distillation columns as well as the LNC & HNC reactor loops, (2) There was a positive deviation from the RLOP flare plan (less flaring than planned) - 2. A temporary steam condenser was installed at RLOP's Gas Recovery Unit to limit the flow of gas to the relief system. This worked as intended to limit the amount of flaring and to allow the RLOP plants to be put back on to the Flare Gas Recovery system.
23205	Richmond, CA - Refinery	10/5/2011 2:20:00 AM	Closed	Near Loss	#2 Separator Flow Splitter overflowed due to heavy rain	The Flow Splitter for #2 Separator overflowed due to heavy rain. The Flow Splitter is designed to overflow into the 100' Channel whenever the inlet flow exceeds the capacity of the pumps to remove the water. This design prevents the drains from backing up causing possible flooding inside the process units. This Flow Splitter overflows on average once every two years based on storm intensity. Last night the Refinery received .63 inches of rain in less than 90 minutes from 1:00 am to 2:30 am.	NL-Environmental - Release	
	Richmond,	10/5/2011				Chevron employee felt swelling underneath their eye. Employee taken to the		

23315	CA - Refinery	12:00:00 PM	Closed	Near Loss	Employee experiencing swelling underneath eye	clinic for evaluation. Medical staff & employee uncertain of cause - possible allergic reaction to something.	NL-Injury/Illness - Employee Injury	
23325	Richmond, CA - Refinery	10/5/2011 1:45:00 PM	Closed	Loss	Small Scratch to Right Shin	While TIMEC employee was cutting asphalt with a walk behind rotating water lubricating saw on the south end of Marketing Area, a piece of the steel blade's lip dislodged and bounced off the asphalt striking the employees right shin.	NL-Injury/Illness - Contractor Injury	(1) Employee was cutting asphalt with a walk behind, self moving saw when a piece of the steel blade dislodged and struck the employees right shin
23325	Richmond, CA - Refinery	10/5/2011 1:45:00 PM	Closed	Loss	Small Scratch to Right Shin	While TIMEC employee was cutting asphalt with a walk behind rotating water lubricating saw on the south end of Marketing Area, a piece of the steel blade's lip dislodged and bounced off the asphalt striking the employees right shin.	Injury/Illness	(1) Employee was cutting asphalt with a walk behind, self moving saw when a piece of the steel blade dislodged and struck the employees right shin
23376	Richmond, CA - Refinery	8/19/2011 5:40:00 AM	Closed	Near Loss	Green Card. Poor lighting and no crosswalk. Location: 91Gate	Green Card. I was told by security to park in the northside parking lot at the 91Gate. The lighting was poor and there isn't any designated walkways for pedestrians. Traffice flow was very high.	NL-Lessons Learned	
23377	Richmond, CA - Refinery	9/18/2011 2:15:00 PM	Closed	Near Loss	Green Card. Tall weeds on the hill. Location: North of contractors	Green Card. Tall weeds on the hill north of contractors.	NL-Lessons Learned	
23378	Richmond, CA - Refinery	9/20/2011 5:15:00 AM	Closed	Near Loss	Green Card. Employee walked in front of car. Location: 91Gate	Green Card. When I pulled into the parking lot, an employee walking wearing dark coveralls cut in front of my car.	NL-Injury/Illness - Employee Injury	
23379	Richmond, CA - Refinery	9/20/2011 1:00:00 PM	Closed	Near Loss	Green Card. Found orfice plate in backwards. Location: D&R F-560	Green Card. Found orfice plate in backwards.	NL-Lessons Learned	
23381	Richmond, CA - Refinery	9/20/2011 5:50:00 AM	Closed	Near Loss	Green Card. No crosswalk. Location: Xylene St next to Newtron area	Green Card. I tried to cross the street with other employee but a pickup truck couldn't see us trying to cross because we don't have a crosswalk	NL-Injury/Illness - Employee Injury	
23382	Richmond, CA - Refinery	9/20/2011 9:00:00 AM	Closed	Near Loss	Green Card. One way street only now. Location: Asphalt Plant	Green Card. One-way street arrows now. People used to be able to go in and out both directions. Employee pointed out that now it's a one-way street.	NL-Lessons Learned	
23383	Richmond, CA - Refinery	9/20/2011 8:00:00 AM	Closed	Near Loss	Green Card. Bad steam trap leak. Location: S. Isomax 10' West of P-13A	Green Card. Bad steam trap leak at 10' West of P-13A	NL-Lessons Learned	
23384	Richmond, CA - Refinery	9/21/2011 2:00:00 PM	Closed	Near Loss	Green Card. Burner tip in wrong position. Location: D&R - F-570	Green Card. Discovered one burner tip in wrong position.	NL-Lessons Learned	
23385	Richmond, CA - Refinery	9/21/2011 2:30:00 PM	Closed	Near Loss	Green Card. Worker using grinder with no guard. Location: Boiler Shop	Green Card. Worker observed using grinder with no guard on 7" grinder.	NL-Injury/Illness - Employee Injury	
23386	Richmond, CA - Refinery	9/21/2011 8:30:00 AM	Closed	Near Loss	Green Card. Bad steam leak. Location: SDA S. Isomax by C-130	Green Card. Bad steam tracing leak by C-130	NL-Lessons Learned	
23391	Richmond, CA - Refinery	9/27/2011 6:20:00 AM	Closed	Near Loss	Green Card. Poor lighting. Location: Xylene St by Storehouse	Green Card. We need more light on Xylene St by Storehouse so drivers can see workers who need to cross the street. It's hard to see workers with their dark clothes or coveralls.	NL-Lessons Learned	
23392	Richmond, CA - Refinery	9/27/2011 8:20:00 AM	Closed	Near Loss	Green Card. Handrail broken. Location: B&S #17 Pump Station	Green Card. Handrail broken	NL-Lessons Learned	
23393	Richmond, CA - Refinery	9/27/2011 2:21:00 PM	Closed	Near Loss	Green Card. Studs on fresh air 6pack too close to ground. Location: JHT K242	Green Card. Fresh air 6pack studs are 3" from the ground, too close to ground.	NL-Lessons Learned	
23396	Richmond, CA - Refinery	9/29/2011 9:50:00 AM	Closed	Near Loss	Green Card. Pickup truck didn't have his tailgate up. Location: Channel St.	Green Card. A pickup truck driving down Channel St. with a big load didn't have his tailgate up.	NL-Injury/Illness - Employee Injury	
23397	Richmond, CA - Refinery	9/29/2011 12:15:00 PM	Closed	Near Loss	Green Card. Steam line 1/2" pipe leaking. Location: D&R Stairway on K-1171	Green Card. As I was walking up to the top deck I saw a steam line 1/2" pipe was leaking near walkway.	NL-Lessons Learned	
23403	Richmond, CA - Refinery	10/6/2011 10:00:00 AM	Closed	Loss	Employee was stung by a bee while on break.	Employee was sitting in the Crew Truck with his hand out the window during break time when a bee stung him.	Injury/Illness	(1) It was a bee
								(1) Incident Number 23413 Business Unit Cracking Location Alky Facility Name Richmond Incident date 9/23/2011 Type of Process: Sulfuric Acid/Hydrocarbon Type of Equipment: Vessel Team Members: Laura Leeds Mart Lemke Pranell Prasad Ron Moore Eric Grant Incident Description: Operations received the low level alarm for D-1482 Sulfuric acid sump (SAS) vessel; it was observed that the level went to zero. The operator field verified and found acid in the acid

23413	Richmond, CA - Refinery	9/23/2011 12:00:00 AM	Closed	Near Loss	D-1482 acid vessel leak to the sump.	Operations recieved the low level alarm. The level whent to zero. The operator checked it out and found the acid in the acid sump. The operator investigated and found that the level was leaking into the containment sump. Operations covered the sump to keep water out of it. They system is now being controlled by vaccum trucks.	NL-Environmental - Operational Leak	sump outside of the vessel enclosure but in the sump itself. The operator investigated and found that the level was leaking into the containment sump. Operations covered the sump to keep water out of it and vacuum trucks were set up to remove the acid from the sump. Current operation has all acid/hydrocarbons being routed to alternate location with no SAS available. This investigation covers why the vessel had failed. FIVE WHY'S 1. Why did "above" happen? D-1482 failed because the vessel is located in a below grade covered pit/sump that does not allow for on stream monitoring and allows for other corrosives to be present attacking the vessel externally. 2. Why did "1" happen? The vessel was originally placed in a covered pit in order to allow sample stations to drain to this SAS when in use from initial installation of the Alky plant in 1995. Sulfuric acid is settling in the sump and is then combined with water from seasonal rains causing an extremely corrosive environment to the carbon steel shell of this vessel. 3. Why did "2" happen? The sulfuric acid that is leaking into the sump is entering from the inlet piping where a failure had occurred on the inlet piping in 2003 were temporary repairs were made on the line. Water is entering the sump because the pit cover is not properly sealed due to many electrical and rotating components penetrate the cover to reach the vessel below. 4. Why did "3" happen? The sulfuric acid piping was never fully repaired because the ABU had alterna
23420	Richmond, CA - Refinery	9/29/2011 4:00:00 PM	Closed	Loss	Cut buried phone line on ridge road	Fenceing crew was digging holes for fence post. They discovered a 25 pair cable was damage from their diging tool.	Equipment/Property Damage	(1) Underground phone line was not mark corect above ground.
23436	Richmond, CA - Refinery	10/7/2011 12:00:00 AM	Closed	Near Loss	H2S moniter alarmed	H2S moniter was activated close to V-1410.	NL-Injury/Illness - Contractor Injury	
23456	Richmond, CA - Refinery	10/7/2011 12:00:00 AM	Closed	Near Loss	contractor sprayed	contractor sprayed with diesel @ E-410s (small amount)	NL-Injury/Illness - Contractor Injury	
23464	Richmond, CA - Refinery	10/7/2011 12:00:00 AM	Closed	Near Loss	almospheric PSV lifted to grade while reducing feed to TKN, E-732 Boiler feed water preheater .	almospheric PSV lifted to grade while reducing feed to TKN, E-732 Boiler feed water preheater .	NL-Operational Process/Procedures - Safety Systems	(1) Operator did not work with south ISO to get the LPBFW pressure down enough to rest PSV., (2) SOS: Warning Devices: No E-732 (LPBFW) high pressure alarm in place, (3) SOS:Training & Procedures: Pressure Bypass Valve Remained Closed. Delayed communication from NISO to SISO. NISO console operator tending to process changes due to reduced feed rates., (4) SOS:Training & Procedures: Pressure Bypass Valve Remained Closed. Delayed communication from NISO to SISO. NISO console operator tending to process changes due to reduced feed rates., (5) SOS: Sidebar Issue: Design & Engineering / Mitigation Devices: Danger to personnel from spraying pressurized hot BFW
23465	Richmond, CA - Refinery	10/7/2011 6:27:00 PM	Closed	Near Loss	MVC at 91 Gate parking lot. Both EE leaving to go home when collision occured.	Certified Safety/ Timec: As Contract EE moved forward across 1 parking stall, 1 Lane and across 2 parking stalls collision occured with other Contract EE exiting parking lot in regular Lane flow of Traffic.	NL-Equipment/Property Damage - General Liability	
23465	Richmond, CA - Refinery	10/7/2011 6:27:00 PM	Closed	Near Loss	MVC at 91 Gate parking lot. Both EE leaving to go home when collision occured.	Certified Safety/ Timec: As Contract EE moved forward across 1 parking stall, 1 Lane and across 2 parking stalls collision occured with other Contract EE exiting parking lot in regular Lane flow of Traffic.	NL-Transportation - Personal Use	
23469	Richmond, CA - Refinery	10/7/2011 9:15:00 PM	Closed	Loss	Operator felt discomfort in left knee while standing up.	Operator was croached down inspecting cleanup equipment. When the operator stood up, a pop was felt behind their left knee.	Injury/Illness	(1) Why did operator feel pain behind his knee. No cause could be determined.
23481	Richmond, CA - Refinery	10/7/2011 4:30:00 PM	Closed	Loss	Motor Vehicle Collosion in Parking Lot	At approximately 4:30pm Richard King(a Mistras employee) was backing out of a parking spot in a company van. He tried to look in all directions for clearance. Vision can only be achieved through the mirrors because of the van design. He proceeded to back up and came in contact with a Chevron truck. The Chevron truck had a small dent on the back side of the front passenger wheel well. Richard came in and told me about it immediately. We waited outside until we saw a Chevron employee and told him about what had happened. He said it was his truck and that we could wait until the next day (10-8)to figure out how to procede and who to contact.	Transportation	(1) Did not use a spotter while backing up and did not walk behind the vehicle to see if any obstructions existed, (2) Did not use a spotter while backing up and did not walk behind the vehicle to see if any obstructions existed, (3) Did not use a spotter while backing up and did not walk behind the vehicle to see if any obstructions existed
						The Crude Pump Station (CPS) Operator was at #7 Pump station to turn on P-6 for a displacement on the 16" crude after the Mississippi Voyager had		

23483	Richmond, CA - Refinery	10/8/2011 10:45:00 AM	Closed	Loss	Hydrocarbon spill (Approx. 100 BBLS) to secondary containment at #7 Pump Station	finished discharging HYFCC to T-1899. The CPS Operator noticed that there was a 2-3" layer of hydrocarbon throughout the entire area of the secondary containment of the Pump Station. The CPS Operator later related that during first rounds this morning at approximately 0800Hrs he could smell hydrocarbon but could not locate where it was coming from and the secondary containment was empty. Both the Crude Head Operator and Shift Team Leader were notified and Chevron Fire was called out. All transfers through the pump station were shutdown including a diesel discharge to T-3215 on the 2 DB and a diesel slops discharge on the 16" Ballast to T-1504 from the Mississippi Voyager. Chevron Fire conducted area monitoring and there was no detectable LEL and Benzene readings were at .10 (no PPE required). Notifications were made to the RSL, B&S Section Head and ABU manager. We are currently pumping out the secondary containment to T-1504 using the sump pumps and are also using two vacuum trucks to assist in draining the sump. When the secondary containment is drained we will be able to conduct a more thorough check of the piping in the pump station for leaks. We have an Operator standing by the pump station monitoring the area. Wharf Safety Operators are checking lines on their side of the pump station. We estimate this spill to be approximately 100 barrels.	Environmental	(1) Work Package/ Permit NI , (2) Hazard Analysis NI, (3) Inspection not required, (4) Additional Consideration, (5) Work Package/ Permit NI , (6) Hazard Analysis NI, (7) Hazard Analysis NI, (8) Inspection not required, (9) Inspection not required
23483	Richmond, CA - Refinery	10/8/2011 10:45:00 AM	Closed	Loss	Hydrocarbon spill (Approx. 100 BBLS) to secondary containment at #7 Pump Station	The Crude Pump Station (CPS) Operator was at #7 Pump station to turn on P-6 for a displacement on the 16" crude after the Mississippi Voyager had finished discharging HYFCC to T-1899. The CPS Operator noticed that there was a 2-3" layer of hydrocarbon throughout the entire area of the secondary containment of the Pump Station. The CPS Operator later related that during first rounds this morning at approximately 0800Hrs he could smell hydrocarbon but could not locate where it was coming from and the secondary containment was empty. Both the Crude Head Operator and Shift Team Leader were notified and Chevron Fire was called out. All transfers through the pump station were shutdown including a diesel discharge to T-3215 on the 2 DB and a diesel slops discharge on the 16" Ballast to T-1504 from the Mississippi Voyager. Chevron Fire conducted area monitoring and there was no detectable LEL and Benzene readings were at .10 (no PPE required). Notifications were made to the RSL, B&S Section Head and ABU manager. We are currently pumping out the secondary containment to T-1504 using the sump pumps and are also using two vacuum trucks to assist in draining the sump. When the secondary containment is drained we will be able to conduct a more thorough check of the piping in the pump station for leaks. We have an Operator standing by the pump station monitoring the area. Wharf Safety Operators are checking lines on their side of the pump station. We estimate this spill to be approximately 100 barrels.	Loss of Containment	(1) Work Package/ Permit NI , (2) Hazard Analysis NI, (3) Inspection not required, (4) Additional Consideration, (5) Work Package/ Permit NI , (6) Hazard Analysis NI, (7) Hazard Analysis NI, (8) Inspection not required, (9) Inspection not required
23486	Richmond, CA - Refinery	10/8/2011 9:30:00 AM	Closed	Loss	Line of Fire/ Employee hit himself in lip with tool while pulling on insulation	Employee was using a pair of pliers to remove a screw from pipe insulation, located on the relief deck for vessel 1410. at aprox 9:30 am, his pliers slipped from the head of the screw and struck him in the upper lip.	Injury/Illness	(1) Use of Iproper tool. The worker should have used a nut driver and not a pair of pliers to loosen and remove the screw.
23486	Richmond, CA - Refinery	10/8/2011 9:30:00 AM	Closed	Loss	Line of Fire/ Employee hit himself in lip with tool while pulling on insulation	Employee was using a pair of pliers to remove a screw from pipe insulation, located on the relief deck for vessel 1410. at aprox 9:30 am, his pliers slipped from the head of the screw and struck him in the upper lip.	NL-Injury/Illness - Contractor Injury	(1) Use of Iproper tool. The worker should have used a nut driver and not a pair of pliers to loosen and remove the screw.
23487	Richmond, CA - Refinery	10/8/2011 11:30:00 AM	Closed	Near Loss	H2S Monitor Activations (4)	During the process of preparing K-1400 for removal, residual liquid in the pipe spools being removed dripped out and activated the workers H2S monitors	NL-Injury/Illness - Contractor Injury	
23489	Richmond, CA - Refinery	10/8/2011 6:00:00 AM	Closed	Loss	Possible Bug Bite w/ Swollen Hand	EE reported possible insect bite to his right hand may have occured approx 0500 - 0530 while he was dressing out for the day. Noticed itching and a possible small white bump, but no insect was seen. At approx 1030, employee noticed mild swelling of his right hand, although no obvious bite mark was present. EE was evaluated by Chevron Fire EMTs. Further evaluation at Chevron Medical Clinic revealed a small insect bite wound / point-of-entry. EE received first aid treatment and was returned to work.	Injury/Illness	(1) Insect bites
23489	Richmond, CA - Refinery	10/8/2011 6:00:00 AM	Closed	Loss	Possible Bug Bite w/ Swollen Hand	EE reported possible insect bite to his right hand may have occured approx 0500 - 0530 while he was dressing out for the day. Noticed itching and a possible small white bump, but no insect was seen. At approx 1030, employee noticed mild swelling of his right hand, although no obvious bite mark was present. EE was evaluated by Chevron Fire EMTs. Further evaluation at Chevron Medical Clinic revealed a small insect bite wound / point-of-entry. EE received first aid treatment and was returned to work.	NL-Injury/Illness - Contractor Injury	(1) Insect bites
23496	Richmond, CA - Refinery	10/9/2011 12:00:00 AM	Closed	Loss	Contract EE reported arm pain.	Bigge: Contract EE reported arm pain seen by Chevron Fire and tranported to Chevron clinic for follow up.EE had been working on moving crane mats.	Injury/Illness	(1) Attempting to lift load by hand
23497	Richmond, CA - Refinery	10/9/2011 12:00:00 AM	Closed	Near Loss	Contract EE reported being Dizzy.	Contract EE reported being dizzy. Seen by Chevron Fire and transported to clinic for follow up.	NL-Injury/Illness - Contractor Injury	
	Richmond,	10/9/2011						

23518	CA - Refinery	12:00:00 AM	Closed	Near Loss	Contract EE's H2S Monitors Activated.	Matrix: Two Contract EE's had their H2S Monitors activate while installing Boiler Makers on K-1100.	NL-Injury/Illness - Contractor Injury	
23519	Richmond, CA - Refinery	10/10/2011 12:30:00 AM	Closed	Near Loss	Missing LOTO Box Key 222	Missing LOTO Box Key 222. This is an old LOTO style box. CFD did not have the spare key	NL-Business Process - Business Interruption	
23526	Richmond, CA - Refinery	10/10/2011 12:00:00 AM	Closed	Near Loss	Contract EE's H2S monitors Activated	Matrix: Two Contract EE's personal H2S Meinter alarm was set off in the area of E-1258.	NL-Injury/Illness - Contractor Injury	
23550	Richmond, CA - Refinery	10/6/2011 3:30:00 PM	Closed	Loss	A staging contractor sustained a first aid injury while disassembling staging at TKC Off Gas Compressor K-714A at North Isomax. The worker was hit on the hard hat and grazed on the face by a valve handwheel/chain that unexpectedly disconnected from the valve stem.	TOP INVESTIGATION: Initial description: A staging contractor sustained a first aid injury while disassembling staging at TKC Off Gas Compressor K-714A at North Isomax. The worker was hit on the hard hat and grazed on the face by a valve handwheel/chain that unexpectedly disconnected from the valve stem.	Injury/Illness	(1) SOS: •Design & Engineering •Maintenance & Inspection •Mitigation Devices Vibration from valve operation and routine compressor operation loosened the set screws over time , (2) Sidebar Issues: Design & Engineering: •Departure from practice to ensure hand wheel/chain assemblies are tethered or otherwise supported was not identified (or followed).
23659	Richmond, CA - Refinery	10/8/2011 3:00:00 PM	Closed	Near Loss	Potential fire hazard associated with material loaded onto a vacuum truck	Spent caustic material was loaded onto a vacuum truck from V-1936. The material was deemed to be high in H2S and to not contain hydrocarbon material. After the second load of this material was pressured off into a poly tank for storage, the contractor was instructed to test the vapor space for H2S level. When the vapor space was tested with the four gas meter, the LEL pegged out indicating there was hydrocarbon in the tank. The information given to the vacuum truck company was not correct and could have resulted a fire/explosion given the material was pressured off the vacuum truck and should have instead been pumped off the truck.	NL-Fire/Explosion	(1) The GRU Shutdown procedure (GRU-NP-3003) did not reference the V-1936 degassing procedure (GRU-XC-4310), (2) The V-1936 degassing procedure (GRU-XC-4310) does not include a step for operators to check the LEL of the material in V-1936, (3) It has not been standard practice to obtain H2S and LEL readings for all vacuum truck loads during shutdowns
23569	Richmond, CA - Refinery	9/21/2011 12:00:00 AM	Closed	Near Loss	Lab Bias for FCC Inferentials reset to zero	During a planned technical refresh on DMC APP node 59, all DMC at Cracking was turned off. It was decided that it would be a good opportunity to install Aspen Tech software patch on the DMC Server as well since all the controllers are off already. All the IQ applications were unloaded as per patch installation requirement. Prior to unloading the IQs, data was saved to IQF files. After the installation, the IQ applications were reloaded from the most recent IQF's. It was noticed that all the inferential calculations seem to have changed and we discovered that the lab bias value for all the inferentials were reset to zero. With "incorrect" lab bias value, if DMC were to run and control to the incorrectly biased inferentials, the product quality spec can be affected.	NL-Business Process - Business Process	(1) (RC) - poor training in online IQ aplication system procedures (do not perform this function very often) Action -
23572	Richmond, CA - Refinery	10/5/2011 9:00:00 AM	Closed	Near Loss	Cracking DMC Server multiple Collect files running CPU load to 100%	On 10/4/2011, a Cracking process control engineer was validating collect files on the DMC server for a future step test on the Alky Depropanizer. During one of the validation attempts, the return button stuck on the keyboard causing the DMC server session to be terminated due to a lock up of the collect file. The DMC Server session was re-started and validations were completed. The DMC Server was logged out. On 10/5/2011, DMC Server was observed to be running slow while using the Webviewer application, but was thought to be a temporary condition with no concerns. At 9:00AM, a Cracking process control engineer received a call from the PCN administrator that the Cracking DMC server was running hot and 100% loaded. A Cracking process control engineer went into the rack room and physically observed the DMC Server for signs of overheating or warning lights, but only a slight warmer temperature was noticed. Next the engineer logged on the DMC Server from the workstation to view the CPU load and identify any issues. Upon inspection of the DMC Server, it was found that four unknown collect files were running. The collect files were immediately terminated because on the previous day no collect files were intentionally started. The DMC Server CPU load dropped to 17% and the Webviewer speed returned to normal. Investigating the unknown collect files revealed that the keyboard sticking during collect file validation had unintentionally caused four collect files to be started at the same time. The keyboard was immediately replaced.	NL-Quality - Product Quality (Int)	(1) PCE did not have Collect Procedure on hand to review abnormal program termination handling., (2) PCE did not have Collect Procedure on hand to review abnormal program termination handling.
						On 10/4/2011, a Cracking process control engineer was validating collect files on the DMC server for a future step test on the Alky Depropanizer. During one of the validation attempts, the return button stuck on the keyboard causing the DMC server session to be terminated due to a lock up of the collect file. The DMC Server session was re-started and validations were completed. The DMC Server was logged out. On 10/5/2011, DMC Server was observed to be running slow while using the Webviewer application, but was thought to be a temporary condition with no concerns. At 9:00AM, a Cracking process control engineer received a call from the PCN administrator that the Cracking DMC server was running hot and 100% loaded. A Cracking process control engineer went into the rack room and physically observed the DMC Server for signs of overheating or warning lights, but only a slight warmer temperature was		

23572	Richmond, CA - Refinery	10/5/2011 9:00:00 AM	Closed	Near Loss	Cracking DMC Server multiple Collect files running CPU load to 100%	noticed. Next the engineer logged on the DMC Server from the workstation to view the CPU load and identify any issues. Upon inspection of the DMC Server, it was found that four unknown collect files were running. The collect files were immediately terminated because on the previous day no collect files were intentionally started. The DMC Server CPU load dropped to 17% and the Webviewer speed returned to normal. Investigating the unknown collect files revealed that the keyboard sticking during collect file validation had unintentionally caused four collect files to be started at the same time. The keyboard was immediately replaced.	NL-Business Process - Business Process	(1) PCE d.d not have Collect Procedure on hand to review abnormal program termination handling., (2) PCE did not have Collect Procedure on hand to review abnormal program termination handling.
23580	Richmond, CA - Refinery	10/4/2011 1:00:00 PM	Closed	Loss	Bump to right elbow	After tuning 2" purge valve on berth #4 vapor recovery operator turned away and struck elbow on nearby staging	Injury/Illness	(1) Operator did not take time to look around for operational clearence
23588	Richmond, CA - Refinery	9/23/2010 12:00:00 AM	Closed	Near Loss	E-102 WRONG DUE DATE SUBMITTED IN RECOMMENDATION	E-102E was reported to the ABU to be due for a permit inspection 11/1/11. The actual due date 9/13/11	NL-Business Process - Business Process	(1) - Inspector did not use last inspection date when updating Inspection Manager.(Actual Inspector not available for interview).
23624	Richmond, CA - Refinery	10/10/2011 3:00:00 PM	Closed	Loss	Natural gas routed to T-397	INITIAL DESCRIPTION: At 3:00 PM the operator was making rounds when he spotted the pressure valves on the tank roof burping liquid on the roof. TAPROOT DESCRIPTION: Natural gas was inadvertently routed to T-397 on October 8, 2011 at 16h37 when flow reversed from the headspace of V-153A/B at the SDA. This resulted in a hazardous condition as natural gas vented via the two breather valves and pressure relief door on the roof of T-397. Attempts to mitigate the risks included cordoning off the tank and introducing a nitrogen purge to the head space. Efforts to locate the source of the natural gas was complicated by startup activity on the TKC and shutdown activity on RLOP and the SDA. The source of the natural gas was identified and isolated on October 13, 08h04 The consequence of this incident was a Title V deviation for exceeding the vapor pressure limit of 0.5 psia for a tank in unregulated service BAAQMD Reg 8-5-117 and Permit Condition 20764. The refinery also received two odor complaints from the community. It was determined that the event met the requirements of a Tier I Loss of Containment (LOC) incident.	Loss of Containment	(1) Practice / repetition NI, (2) No procedure, (3) Practice / repetition NI, (4) Equipment Environment not considered, (5) Additional consideration, (6) Additional consideration, (7) Additional consideration, (8) Knowledge NI
23624	Richmond, CA - Refinery	10/10/2011 3:00:00 PM	Closed	Loss	Natural gas routed to T-397	INITIAL DESCRIPTION: At 3:00 PM the operator was making rounds when he spotted the pressure valves on the tank roof burping liquid on the roof. TAPROOT DESCRIPTION: Natural gas was inadvertently routed to T-397 on October 8, 2011 at 16h37 when flow reversed from the headspace of V-153A/B at the SDA. This resulted in a hazardous condition as natural gas vented via the two breather valves and pressure relief door on the roof of T-397. Attempts to mitigate the risks included cordoning off the tank and introducing a nitrogen purge to the head space. Efforts to locate the source of the natural gas was complicated by startup activity on the TKC and shutdown activity on RLOP and the SDA. The source of the natural gas was identified and isolated on October 13, 08h04. The consequence of this incident was a Title V deviation for exceeding the vapor pressure limit of 0.5 psia for a tank in unregulated service BAAQMD Reg 8-5-117 and Permit Condition 20764. The refinery also received two odor complaints from the community. It was determined that the event met the requirements of a Tier I Loss of Containment (LOC) incident.	Regulatory Compliance	(1) Practice / repetition NI, (2) No procedure, (3) Practice / repetition NI, (4) Equipment Environment not considered, (5) Additional consideration, (6) Additional consideration, (7) Additional consideration, (8) Knowledge NI
23624	Richmond, CA - Refinery	10/10/2011 3:00:00 PM	Closed	Loss	Natural gas routed to T-397	INITIAL DESCRIPTION: At 3:00 PM the operator was making rounds when he spotted the pressure valves on the tank roof burping liquid on the roof. TAPROOT DESCRIPTION: Natural gas was inadvertently routed to T-397 on October 8, 2011 at 16h37 when flow reversed from the headspace of V-153A/B at the SDA. This resulted in a hazardous condition as natural gas vented via the two breather valves and pressure relief door on the roof of T-397. Attempts to mitigate the risks included cordoning off the tank and introducing a nitrogen purge to the head space. Efforts to locate the source of the natural gas was complicated by startup activity on the TKC and shutdown activity on RLOP and the SDA. The source of the natural gas was identified and isolated on October 13, 08h04. The consequence of this incident was a Title V deviation for exceeding the vapor pressure limit of 0.5 psia for a tank in unregulated service BAAQMD Reg 8-5-117 and Permit Condition 20764. The refinery also received two odor complaints from the community. It was determined that the event met the requirements of a Tier I Loss of Containment (LOC) incident.	Environmental	(1) Practice / repetition NI, (2) No procedure, (3) Practice / repetition NI, (4) Equipment Environment not considered, (5) Additional consideration, (6) Additional consideration, (7) Additional consideration, (8) Knowledge NI
23668	Richmond, CA - Refinery	10/11/2011 2:45:00 PM	Closed	Loss	Chevron vehicle hit by contractor truck.	A Chevron car was parked front end first in a parking space at the Swan Associates parking lot. A Swan pick-up truck with a protruding tow hitch was backing into the space right next to the driver's side of the Chevron vehicle. While backing in, the tow hitch caught the left corner of the rear bumper on the car, and tore a 10 inch long gash in the bumper.	Transportation	(1) other driver
					The lube system that supplys the pressure packing and cylinder lube as damaged. The lack of oil to the pressure packing could cause a leak path			

23660	Richmond, CA - Refinery	10/10/2011 8:00:00 AM	Closed	Near Loss	down the piston rod into the crank case which is vented to atmosphere.	It was an environmental release of H2s about 7ppm at he time of repair.(per operation) This will need to be repaired to make the compressor reliable during the S/D.	NL-Environmental - Release	
23670	Richmond, CA - Refinery	10/11/2011 7:15:00 PM	Closed	Loss	Mosquitoe bites to neck and face.	multiple mosquitoe bite to face and neck causing welts	Injury/Illness	(1) large bodies of still water natural mosqitoes area
23696	Richmond, CA - Refinery	10/12/2011 5:30:00 AM	Closed	Loss	Gasoline over flow in compairtor building due to ESD plained shutdown	The fire eyes were being replaced in the comparator building which tripped power to the sumps and their alarms relays in the control room. Through out the night about 2 gallons backed up through the floor traps into the building	Environmental	(1) were unaware power to sump pumps were on the same as the emergency shutdown system so when power was tripped by work on the fire eyes.
23706	Richmond, CA - Refinery	9/21/2011 12:00:00 AM	Closed	Near Loss	D&R DMC applications lost connection to DMC license server located at Cracking	D&R DMC applications lost connection to the Cracking DMC license server due to a hardware upgrade on Cracking APP node designated as the backup DMC license server. D&R DMC applications generated error messages and initiated 10 day time-out count down timer. Some DMC controllers unexpectedly turned off.	NL-Business Process - Business Process	(1) Stopping and starting online controllers is not part of any of our existing procedures. (2) Stopping and starting online controllers is not part of any of our existing procedures or training.
23709	Richmond, CA - Refinery	8/15/2011 12:00:00 AM	Closed	Loss	GHT Shutdown for repair of 2 steam PRDs	GHT took an unplanned shutdown to repair 2 steam safety relief valves that would not fully reset after a steam system upset The Cogen Upset can be referenced at LI #19909	Equipment/Property Damage	(1) Internal damage can occur upon popping of the safeties to this model of relief valve. , (2) The Pilot Operated PRD's are a relatively new type of Safety device in U&E.
23759	Richmond, CA - Refinery	10/12/2011 10:37:00 PM	Closed	Loss	Oil on the roof of T-3127	In the final stages of of a 2 day chem clean to V-1102 Desalter, Nitrogen was used to pressure out the level in V-1102 to T-3127. This was a continuation from day shift. The previous day operations had been using a pump to remove the liquid level.When V-1102 was empty, N2 blew through to T-3127. Oil blew through on the roof through the slotted gauge well. The EOD operator noticed the gauge spiking. upon investigating they noticied a foul odor notified D & R who blocked in the Nitrogen. (note 5 why in NLI database)	Environmental	(1) Operator not having knowledge of potential impact to downstream equipment, no information documentec in (procedure to warn of risk to floating roof tank
23764	Richmond, CA - Refinery	10/13/2011 12:00:00 AM	Closed	Near Loss	H2S monitor alarm	Contract EE working on C-1220 Had H2S alarm.	NL-Injury/Illness - Contractor Injury	
23765	Richmond, CA - Refinery	10/12/2011 8:01:00 PM	Closed	Near Loss	4 Rhen recycle compressor K-3550 tripped	The 4 Rhen recycle compressor K-3550 tripped Vibration Increased After Feed Pulled on 10/12 Days: After feed was pulled earlier on 10/12/11 12 PM, the compressor speed decreased. Shortly after, when K-3550 speed dropped below 5850 RPM, there was a step change increase in vibrations as measured by the wireless vibration monitor . When responding to the K-3550 trip, the board operator saw that one of the vibration readings (35VA50D2) was in alert. Usually at least two need to be in alert to take action per operations. Once K-3550 came back online at 5:08 PM, the speed was 4950 RPM and the wireless vibration monitor was reading low again as it was before feed was pulled. Note: Ops was increasing the system pressure (35PC65) with nitrogen from 6:24 PM to 6:42 PM, and again from 7:37 PM to the trip. Ops later increased pressure with N2 again from 12:10 AM until 12:21 AM with no issues.	NL-Equipment/Property Damage - General Liability	
23811	Richmond, CA - Refinery	10/13/2011 5:00:00 AM	Closed	Loss	Foot Sprain, Toe Contusion	Koch: Foot Sprain, Toe Contusion, EE was decending a ladder on C-1210/1220 at shift change when his foot slipped on the ladder rung and he landed on the ground in an uncontrolled manner (Fall) landing on his feet from a height of about 4 ft. The deck above that he had to walk across to get to the ladder was very oily.	Injury/Illness	(1) Slippery surface
						The vent controller on V-1020 (C-1020 O/H) went open sending an instant flow of NC4's and IC4's to the relief system, this resulted in a tripping of the totalizer and short visible flare. *5 Why* * Why was the totalizer tripped and flow to the flare? V-1020 vented to the flare. * Why did V-1020 vent to the flare? V-1020 pressure controller (PV238A) was placed back in to Auto (Cascade) mode which resulted in V-1020 vent valve opening to the flare. * Why was V-1020 pressure controller (PV238A) initially in Manual mode? The control scheme for C-1020 overhead pressure control is such that 10PC237 monitors the pressure of C-1020 and adjusts the overhead flow through the condenser to V-1020. 10PC237 also writes the set point for 10PC238 via a bias control. The bias is designed to be set ~ 10 psi higher than normal operating pressure. If the pressure on the equalizing line that bypasses the condenser reaches the 10PC238 set point, 10PC238 will begin to close off PV238B which will force all of the vapor to go through the condenser. The pressure in the equalizing line reaching 10PC238 set point will also cause PV238A to start to open to relief, which is the vent valve off of V-1020. All that having been said, this control system hasn't worked quite right with all of the controllers in their normal cascade modes. PV238A is normally operated in the manual mode. * Why would placing PV238A into Auto (Cascade) mode cause V-1020 vent valve to open to flare? The operating dynamics of C-1020 were off, we were seeing more IC4's coming from C-1400 and C-1220 which resulted in C-1020 running hotter and with a higher pressure. As mentioned above, under normal operating conditions the control scheme for V-1020 was already suspect and PV238A was normally kept in manual. The CBO recognized that we were not in normal operation and wanted to place that controller back into its normal state, which would be Auto (Cascade). Prior to placing this loop into Cascade,		

23813	Richmond, CA - Refinery	10/13/2011 5:15:00 AM	Closed	Loss	V-1020 vent to relief system causing trip of totalizer and short visable flare	careful consideration would need to be given as to what appropriate bias set point should be entered. When the control loop was placed in auto (cascade) the appropriate set point for the existing conditions was not input into the bias controller which resulted in the vent valve opening to the flare.	NL-Environmental - Release	(1) Operator error. Operator entered the wrong setpoint into the bias controller which resulted in vent valve opening to flare.
23837	Richmond, CA - Refinery	10/13/2011 10:00:00 PM	Closed	Near Loss	Employee H2S monitor went off while opening bleed to check for cleanliness	While opening bleeder for E-1185B to check for cleanliness employee H2S monitor went off. Emloyee aware of potential H2S.	NL-Injury/Illness - Employee Injury	
23846	Richmond, CA - Refinery	10/13/2011 9:50:00 PM	Closed	Near Loss	2 contract EE H2S Badge alarmed. 1@12ppm and 1@15ppm.	2 Contract EE H2S Badge alarms sounded when Shutdown-Turnaround E-1185B clean-up piping low point blow down was opened.	NL-Injury/Illness - Contractor Injury	
23846	Richmond, CA - Refinery	10/13/2011 9:50:00 PM	Closed	Near Loss	2 contract EE H2S Badge alarmed. 1@12ppm and 1@15ppm.	2 Contract EE H2S Badge alarms sounded when Shutdown-Turnaround E-1185B clean-up piping low point blow down was opened.	NL-Environmental - Release	
23850	Richmond, CA - Refinery	10/14/2011 2:00:00 AM	Closed	Near Loss	Contract EE H2S monitor alarm went off	While fresh air job at 4Crude boundary deck is in progress. The JHT plant H2S evacuation alarm sounded off. Also contract EE personal H2S sounded off and reads at 11ppm.	NL-Environmental - Release	
23852	Richmond, CA - Refinery	10/12/2011 12:00:00 AM	Closed	Near Loss	Bundle contacted the ground at the wash pad.	Matrix: Tube baffle contacted the ground.	NL-Equipment/Property Damage - Equipment Damage	
23853	Richmond, CA - Refinery	10/13/2011 9:00.00 AM	Closed	Loss	Contract EE cut finger.	Bigge: While getting gear at the Ranch contract EE recived minor cut to thumb.	Injury/Illness	(1) No gloves
23896	Richmond, CA - Refinery	10/14/2011 12:00:00 AM	Closed	Near Loss	Flange wedge fell to ground	Riggers rigging out E-410F. Flange wedge fell from unknown location. (Upper decks) striking top of exchanger. No injurys.	NL-Injury/Illness - Employee Injury	
23897	Richmond, CA - Refinery	10/14/2011 10:20:00 AM	Closed	Loss	V-475 PSV lifed to relief	After Loss of A train , with NISO plants cutting feed, 4H2S began to lose feed and became unstable.Ops decideed to Transfer feed from 20 plant to 4H2S in order to stabilze the plant. The transfer was done too quickly and caused a feed spike in 4H2S which in turn caused a spike in Sweet gas to V-475 ny fuelgas drum and overpressured it to relief.	Operational Process/Procedures	(1) OPeratios too quickly switched feed from 20 plant to 10 plant
23899	Richmond, CA - Refinery	10/14/2011 3:00.00 PM	Closed	Loss	Employee recieved a particle in the eye	Operator was helping with A train startup. Operator was taking a break and was taking off his hardhat when he felt something go in his eye. Operator reported this to his HO and HO called PP ee Taken to clinic and Eye flushed. Returned to work	Injury/Illness	(1) Dust on hardhat landed in EE eye
23901	Richmond, CA - Refinery	10/15/2011 12:50:00 AM	Closed	Near Loss	Contract EE H2S Badge alarmed while working 4 Crude Boundary deck.	Contract EE H2S Badge alarmed at 42.5ppm when working 4 Crude boundary deck turning 1"in.steam hammer blind that connected to Naptha Line.	NL-Environmental - Release	
23902	Richmond, CA - Refinery	10/15/2011 1:25:00 AM	Closed	Near Loss	2 contract EE's and 1 CVX EE H2S Badge alarmed	2 contract EE's and 1 CVX EE H2S badge alarmed when going about work duties. 2 concract EE's were taking Temp. clean-up hose out of unit and CVX EE making rounds to fuel equipment. Reading on contract EE's badge's were 16ppm and 6ppm. CVX EE badge reading was 16ppm. Suspect is Grub Line.	NL-Environmental - Release	
23903	Richmond, CA - Refinery	10/14/2011 5:15.00 PM	Closed	Loss	H2A S/D due to a leak on the startup 450# BFW force circulation line	Shutdown of H2A Train twice due to a leak on H2A Train forced circulation BFW line during 10/14 startup and on 10/21 due to additional CUI found on intermittent blowdown and forced BFW circulation lines after startup. During start up of H2A Train after an electrical trip (see LI 23898), the 450# BFW forced circulation line leaked on a section of 1.5" horizontal piping. Plant was shut down to inspect/repair leak before proceding. Once this pipe was repaired, the H2A Train startup proceeded, and production resumed. During this time, the CUI group was also beginning inspections to prepare for the H2A Train 1Q2013 Major Turnaround. While inspecting, the CUI group discovered thin piping that was below calculated t-min on the E-305A WHB intermittent blowdown line and E-305C forced circ. BFW line, as well as additional spots on both lines below flag thickness due to CUI. After thin piping was discovered, the decision was made to shut down H2A Train on 10/21 to make piping repairs. At this point, the 4Q2011 unplanned pitstop workscope was executed, including vacuuming of the SCR, replacement of a 24" CO2 flange, and replacement of a 3" natural gas orifice flange. Once repairs were completed, H2A Train resumed H2 production on 10/31.	Equipment/Property Damage	(1) Work request to remove insulation and replace with personnel protection screen was not executed according to the scope of the work request. (Not able to determine who the person was or why they did not complete the Work Request as written.), (2) Technical error in the work order process management system, the work order process did not include a hold point whenever an IREC is completed to allow inspections to verify that it has been carried out according to their specification., (3) Additional Consideration (not a root cause): The MOC Process was not followed for replacing the insulation with personnel protection screens., (4) Process for submitting an IREC for Routine Maintenance was not followed. A verbal recommendation was given instead of a documented IREC. (Inspector could not recall why he chose to not follow the process.), (5) Categorization process for CUI didn't identify the need to strip insulation based on the more substantial consequences of CUI causing a plant shutdown. Currently the CUI Process only considers enviommental and safety consequences. It does not consider operational impact and the potential COI.
23904	Richmond, CA - Refinery	10/15/2011 5:14:00 AM	Closed	Near Loss	Contract EE H2S Badge alarmed at 7ppm while doing SCBA Bottle Watch duty	Contract EE H2S Badge alarmed at 7ppm while doing SCBA Bottle Watch attendant duty at the 4 Crude boundary deck.	NL-Environmental - Release	

23912	Richmond, CA - Refinery	10/15/2011 12:30:00 PM	Closed	Loss	Insect bite	EE was working on a pipe and felt a bite on the back of his neck.	Injury/Illness	(1) bug bite
23912	Richmond, CA - Refinery	10/15/2011 12:30:00 PM	Closed	Loss	Insect bite	EE was working on a pipe and felt a bite on the back of his neck.	NL-Injury/Illness - Contractor Injury	(1) bug bite
23913	Richmond, CA - Refinery	10/15/2011 3:00:00 PM	Closed	Loss	Laceration to Palm of Hand	Mistrss: EE was exiting a manway on C-1500, which is a tight fit and was having difficulity exiting due to a box section of the tray butted up to the manway. He reached back to push himself though the manway placing his hand on the box section of the tray. The box had a sharp edge causing a laceration to the palm of his hand. EE stated that he was wearing gloves but the edge cut though the glove.	Injury/Illness	(1) Body position
23915	Richmond, CA - Refinery	10/15/2011 10:19:00 AM	Closed	Near Loss	Potential violation Reg 85-111.3. Start/stop filling of T-3104 before the roof floated	Holes where noted in the fre foam system while T-3104 was being 1st filled after the major turnaround	NL-Environmental - Release	(1) No communication was done to the Shift Team Leader with regards to Air District requirement to continuously fill the tank until the roof is floated
23919	Richmond, CA - Refinery	10/15/2011 10:05:00 PM	Closed	Loss	EE contractor scraped left knuckle with minor abrasion.	While contractor EE was attaching tag lines to copus blower at the base of C-240, EE scraped left hand knuckle. EE stated that injury scraped through gloves.	Injury/Illness	(1) blower had some sharp edges. LPSA would've showed that, (2) Not aware of hand placement
23921	Richmond, CA - Refinery	10/15/2011 9:30:00 AM	Closed	Loss	Worker received a foreign body in left eye while grinding on a steel column. The worker was wearing PPE.	Foreign body in workers left eye. The object was easily removed with a flush, no embedment occurred.	NL-Injury/Illness - Contractor Injury	(1) The worker should have trained the sparks away from himself., (2) Their was no training beyond skilled craft training for this specific task.
23921	Richmond, CA - Refinery	10/15/2011 9:30:00 AM	Closed	Loss	Worker received a foreign body in left eye while grinding on a steel column. The worker was wearing PPE.	Foreign body in workers left eye. The object was easily removed with a flush, no embedment occurred.	Injury/Illness	(1) The worker should have trained the sparks away from himself., (2) Their was no training beyond skilled craft training for this specific task.
23922	Richmond, CA - Refinery	10/16/2011 12:18:00 AM	Closed	Near Loss	Minor MVC; Ford F-450 Flatbed Truck vs. 10 Passenger Van	Contract EE backed Ford F-450 Flatbed Truck into parked unoccupied 10 passenger van near the D&R S/D Turnaround Lunch Tent after getting and eating Lunch purchased from Lunch Truck. Minor damage: Left side parking light broken and front fender barely bent.	NL-Transportation - Contractor	
23923	Richmond, CA - Refinery	10/15/2011 11:45:00 PM	Closed	Loss	TOP INVESTIGATION :Contract EE struck on foot by Shackel	Bigge: Contract EE was struck on foot by approximatly 150 lbs. Shacket while rigging for the 600 ton crane.	Injury/Illness	(1) SOS: Training & Procedures: Lessons Learned Bruised Foot. 35lbs. "Bell" Shackle Rolled (fell) Onto Rigger's Foot. Shackle slipped from rigger's hand.
23925	Richmond, CA - Refinery	10/16/2011 2:00:00 AM	Closed	Loss	Operator hurt foot while desinding down from a ladder.	Operator was working on the E-102's. After completing the work the operator was desending down from the ladder and felt a pain in there foot. The operator felt they must have hurt it on the last rung of the ladder. The operators boot seemed to be very weak in the middle of the boot. They worked with the pain until later that shift. Then they informed the STL of the ptential injury.Immediately plant protection was called for a medical evaluation.	Injury/Illness	
23925	Richmond, CA - Refinery	10/16/2011 2:00:00 AM	Closed	Loss	Operator hurt foot while desinding down from a ladder.	Operator was working on the E-102's. After completing the work the operator was desending down from the ladder and felt a pain in there foot. The operator felt they must have hurt it on the last rung of the ladder. The operators boot seemed to be very weak in the middle of the boot. They worked with the pain until later that shift. Then they informed the STL of the ptential injury.Immediately plant protection was called for a medical evaluation.	NL-Injury/Illness - Employee Injury	
23928	Richmond, CA - Refinery	10/16/2011 6:00:00 AM	Closed	Loss	T-3104 Odor Complaint (confirmed)	An odor complaint was confirmed to be emanating from T-3104 during the tank first fill process. The tank was being filled with available mixed Arab barrels from T-3105	Regulatory Compliance	(1) Cannot be ascertain if the odor originated in T3104. All steps as outlined in the first fill procedure were all followed. Verification conducted by Operation around T3104 wind girder does not indicate any odor that can be attributed to the odor complaint in Ocean Avenue.
23929	Richmond, CA - Refinery	10/16/2011 5:00:00 AM	Closed	Near Loss	Violation of RI-341 Appendix VIII- Cut Line Tape procedure	Cut Line Tape Procedure was not followed resulting in cold cutting the wrong 2" Sour Water line at the boundary of 11/14 pit. 11 pit and 14 pit each have a Sour Water line that tie together at the boundary. Both Sour Water Lines were planned to be replaced during the 4Q11 RLOP TA and were already cleaned and blinded. The 14 pit Sour Water line was cut instead of the 11 pit Sour Water Line. Upon realizing this issue, Contract Company immediately stopped work and notified Operations. Field investigation revealed that the 14 pit Sour Water line did not have cut tape or pilot hole drilled prior to cut.	NL-Injury/Illness - Contractor Injury	(1) Cut Line Tape Procedures were not followed
						The incident this morning involved a Chevron Fuel truck running over a radiographer's crank . The Crank is a mechanical device that allows the Iridium Source to be sent down a guide tube to a component that requires an x-ray (i.e. pipe weld, corrosion on a pipe etc). The mechanism was damaged as a result of the vehicle driving over it , fortunately the fast thinking radiographer was able to retract the source with the damaged crank. This prevented a		

23932	Richmond, CA - Refinery	10/16/2011 6:00:00 AM	Closed	Loss	Fuel truck ran over contractor's guide tube crank. Fuel truck appears to have been moving forward and ran over crank that was just outside boundary tape for pipe weld x-ray inspection.	source retrieval and any disruption to work in that area . The following items were observations made by contractor who owned guide tube crank: 1.The fuel truck was not backing up , it was driving forward. 2.The cranks were 6 to 8 inches outside the barrier tape. 3.The fuel truck was brushing alongside the boundary tape trying to get to its destination (Crane) 4.The glude tube assembly was not broken open , just the winding handle was broken off. 5.The technician was still able to wind in the source by normal operation without the handle , not by use of a pliers. 6.Location bottom of C-1510 , plant # 15	Equipment/Property Damage	(1) OWNER OF THE MECHANICAL DEVICE LAID IT OUTSIDE OF THE RADAITON BARRIER TAPE ON THE ROADWAY UNATTENDED IN LOW LIGHT CONDITIONS NOT ALLOWING THE TRUCK OPERATOR NOR HIS ASSISTANT TO SEE IT.
23932	Richmond, CA - Refinery	10/16/2011 6:00:00 AM	Closed	Loss	Fuel truck ran over contractor's guide tube crank. Fuel truck appears to have been moving forward and ran over crank that was just outside boundary tape for pipe weld x-ray inspection.	The incident this morning involved a Chevron Fuel truck running over a radiographer's crank . The Crank is a mechanical device that allows the Iridium Source to be sent down a guide tube to a component that requires an x-ray (i.e. pipe weld, corrosion on a pipe etc). The mechanism was damaged as a result of the vehicle driving over it , fortunately the fast thinking radiographer was able to retract the source with the damaged crank. This prevented a source retrieval and any disruption to work in that area . The following items were observations made by contractor who owned guide tube crank: 1.The fuel truck was not backing up , it was driving forward. 2.The cranks were 6 to 8 inches outside the barrier tape. 3.The fuel truck was brushing alongside the boundary tape trying to get to its destination (Crane) 4.The glude tube assembly was not broken open , just the winding handle was broken off. 5.The technician was still able to wind in the source by normal operation without the handle , not by use of a pliers. 6.Location bottom of C-1510 , plant # 15	Transportation	(1) OWNER OF THE MECHANICAL DEVICE LAID IT OUTSIDE OF THE RADAITON BARRIER TAPE ON THE ROADWAY UNATTENDED IN LOW LIGHT CONDITIONS NOT ALLOWING THE TRUCK OPERATOR NOR HIS ASSISTANT TO SEE IT.
23934	Richmond, CA - Refinery	10/16/2011 1:00:00 PM	Closed	Loss	Damaged bundles	Damage to tubes on two seperate bundles(E-212A / E-213C) at washpad caused by improper placement of bundles on rollers. Also rolling of bundles while tubes are resting on rollers instead of resting on baffles.	Equipment/Property Damage	(1) Missed placement of bundle on to rollers. Due to the way the baffles are shaped.
23944	Richmond, CA - Refinery	10/16/2011 10:30:00 AM	Closed	Loss	Worker stung by bee	Bee sting causing swelling	Injury/illness	(1) Lack of training or procedure for working in environment where workers can be exposed to bee stings.
23951	Richmond, CA - Refinery	10/17/2011 2:00:00 AM	Closed	Loss	Strains from slip, trip and fall.	Worker strained right ankle and left wrist when she slipped on a step coming down from a two step equipment platform. The worker rolled her ankle on a fire hose and fell backward straining her wrist while trying to break her fall. Plant protection was notified, responded and referred worker to the Chevron Medical facility where the worker was examined and released back to full duty.	Injury/illness	(1) Work environment presented hazards i.e. dark, slippery surfaces, no hand rails on steps.
23951	Richmond, CA - Refinery	10/17/2011 2:00:00 AM	Closed	Loss	Strains from slip, trip and fall.	Worker strained right ankle and left wrist when she slipped on a step coming down from a two step equipment platform. The worker rolled her ankle on a fire hose and fell backward straining her wrist while trying to break her fall. Plant protection was notified, responded and referred worker to the Chevron Medical facility where the worker was examined and released back to full duty.	NL-Injury/illness - Contractor Injury	(1) Work environment presented hazards i.e. dark, slippery surfaces, no hand rails on steps.
23971	Richmond, CA - Refinery	10/13/2011 7:00:00 PM	Closed	Near Loss	Console operator unclear of the meaning of an Honeywell alarm	UPS alarm (91XA800G) came on in the DCS. Operations unclear as to what the alarm ment. Head Operator notified the STL on crew and gave turnover to the following Head Operator.	NL-Business Process - Business Interruption	
23995	Richmond, CA - Refinery	10/15/2011 11:00:00 AM	Closed	Near Loss	Green Card. Tank vapor caused an odor. Location: Pl. Richmond	Green Card. While filling T3104, vapor from the tank caused an odor in the Pl. Richmond community that impacted several of the residents and caused many complaints. The wind direction in the two-day period was from the refinery directly into Pl. Richmond. This will likely result in a BAAQMD violation and will be a scorecard event. Most important it was a negative impact to our neighboring community and did not help the Chevron impage.	NL-Lessons Learned	
23997	Richmond, CA - Refinery	10/17/2011 2:30:00 PM	Closed	Near Loss	Small flange leak at MOV 868 (21 charge to T-3106)	CVX Maint. noticed a small drip on the 21 charge at MOV 868.	NL-Environmental - Operational Leak	(1) Operators did not know that the 21 Charge line should always be vented to a tank.
23999	Richmond, CA - Refinery	10/17/2011 2:15:00 PM	Closed	Loss	Jet Spill to Containment	Jet spill from missing bleeder valve located on the twin seal valve on the 51 Line	Environmental	(1)
24007	Richmond, CA - Refinery	10/17/2011 2:45:00 PM	Closed	Loss	1/2" diameter size steam burn below right wrist on operator.	Operator was using the wash down hose with steam injection to move oil at 1A Separator near P-104. While moving the wash down hose in a side to side motion, the metal fitting on the nozzle came into contact with his right wrist, causing a small burn less then 1/2" inch in diameter. Operator was wearing leather gloves and his selves were in the full extended position.	Injury/illness	(1) Not aware of the consequences of their actions.
24007	Richmond, CA - Refinery	10/17/2011 2:45:00 PM	Closed	Loss	1/2" diameter size steam burn below right wrist on operator.	Operator was using the wash down hose with steam injection to move oil at 1A Separator near P-104. While moving the wash down hose in a side to side motion, the metal fitting on the nozzle came into contact with his right wrist, causing a small burn less then 1/2" inch in diameter. Operator was wearing leather gloves and his selves were in the full extended position.	NL-Injury/illness - Employee Injury	(1) Not aware of the consequences of their actions.
24015	Richmond, CA - Refinery	10/17/2011 8:00:00 PM	Closed	Loss	Contract EE Particle in Eye.	Contract EE in 4 Crude gravel lot doing JHA felt something in eye. EE walked across Plant to eye wash station. Eye wash alarmed to OPS. Control House. OPS. found EE flushing eye at eye wash. Chevron Fire Dept. called to administer aid. EE taken to Refinery Clinic by Chevron Fire Dept. for further evaluation.	NL-Injury/illness - Contractor Injury	(1) dusty area due to wind

24015	Richmond, CA - Refinery	10/17/2011 8:00:00 PM	Closed	Loss	Contract EE Particle in Eye.	Contract EE in 4 Crude gravel lot doing JHA felt something in eye. EE walked across Plant to eye wash station. Eye wash alarmed to OPS. Control House. OPS. found EE flushing eye at eye wash. Chevron Fire Dept. called to administer aid. EE taken to Refinery Clinic by Chevron Fire Dept. for further evaluation.	Injury/Illness	(1) dusty area due to wind
24023	Richmond, CA - Refinery	10/17/2011 7:00:00 PM	Closed	Loss	NOx exceedence on T-1000 & T-2000 at Cogen	At 03:40 hrs. on the morning of 10/17, nightshift noticed an increase in T-2000 vaporizer temp indicating H2o in the NH3. Moves were made on the NH3 system to deal with the wet NH3. Moves continued on dayshift with the NOx still within range. At 17:00 hrs., the temp in the vaporizer climbed dramatically. The amount of H2O in the NH3 significantly increased and was so high that it couldn't be handled and was carried over through the vaporizer and into the burner system. T-2000 went into violation at 21:00 hrs. T-1000 started reacting the same way approx. 2 hours later. The time lapse is due to it being downstream a bit. T-1000 reacted in the same manner due to the wet NH3 and went into violation at 23:00 hrs. SISO has incident #24056. We (U&E) will do our investigation and create corrective actions upon completion of their findings.	NL-Environmental - Release	(1) Double check valve stuck open on NH3 to V-894, allowing CPC to backflow with both 8 and 18 Plants shut down , (2) Double check valve stuck open on NH3 to V-894, allowing CPC to backflow with both 8 and 18 Plants shut down , (3) Management did not recognize that overall ammonia quality in the refinery was an issue. There was no adequate oversite to address recurring issues.
24054	Richmond, CA - Refinery	10/15/2011 9:29:00 PM	Closed	Near Loss	USB Keypad failed on FCC GUS12	Operators were unable to change setpoints due to a failure of a USB keypad on one of the GUS station at the FCC GIS console. This failure did impact unit operation because only one GUS statin was impacted.	NL-Business Process - Business Interruption	
24056	Richmond, CA - Refinery	10/17/2011 10:00:00 AM	Closed	Loss	NH3 contaminated with H2O, causing NOX violation.	Check valves hung open on the NH3 system going into V-894, causing the cold pump condensate to leak into the NH3 system, ending up in the NH3 bullits. This caused the NOX to spike in both A train and the Co-gen plants. This caused a Title V violation at the Co-gen trains.	Regulatory Compliance	(1) Double check valve stuck open on NH3 to V-894, allowing CPC to backflow with both 8 and 18 Plants shut down
24070	Richmond, CA - Refinery	8/26/2011 1:30:00 PM	Closed	Near Loss	Green Card. Too many hoses on ground. Location: 5 NHT	Green Card. Too many hoses on ground in the middle of our Fresh Air job.	NL-Injury/Illness - Employee Injury	
24071	Richmond, CA - Refinery	9/20/2011 7:00:00 AM	Closed	Near Loss	Green Card. Bridge #145 sideguard traffic rail still missing. Location: Gate 31 Scalehouse	Green Card. Bridge #145 across from scalehouse at Gate 31 still not getting repaired. The sideguard traffic rail still missing.	NL-Lessons Learned	
24077	Richmond, CA - Refinery	9/27/2011 11:00:00 AM	Closed	Near Loss	Green Card. Large crane travelling without escort. Location: 4 crude - Channel St	Green Card. Driving on Channel St., a large crane travelling without escort. Crane veered into oncoming lanes.	NL-Injury/Illness - Contractor Injury	
24078	Richmond, CA - Refinery	9/27/2011 9:45:00 AM	Closed	Near Loss	Green Card. Steam tracing line leaking. Location: S.Isomax compressor deck above E-903A	Green Card. At S. Isomax compressor deck above E-903A, there is a steam tracing line leaking at union connection and valves are leaking steam too at face level.	NL-Injury/Illness - Employee Injury	
24079	Richmond, CA - Refinery	9/28/2011 11:00:00 AM	Closed	Near Loss	Green Card. Contractor welding with no weld screen. Location: D&R 4 Crude	Green Card. Driving toward northyard contractor welding inside weldbay with no weld screen; ark flashed into my eyes twice.	NL-Injury/Illness - Contractor Injury	
24081	Richmond, CA - Refinery	9/28/2011 10:00:00 AM	Closed	Near Loss	Green Card. Forklift driver had no escort or flagman. Location: 4 Crude Parking Lot	Green Card. Forklift driver traveling with large pipe with no escort or flag man.	NL-Injury/Illness - Contractor Injury	
24082	Richmond, CA - Refinery	9/30/2011 11:00:00 AM	Closed	Near Loss	Green Card. Contractor working without a harness. Location: 4 Crude	Green Card. Contractor working on top a C-lander without a harness. Performing work at the edge with no tie off point.	NL-Injury/Illness - Contractor Injury	
24097	Richmond, CA - Refinery	10/18/2011 10:30:00 AM	Closed	Loss	Contract EE received a minor wrist scrape. First Aid.	Bigge: Load shifted while transfering timbers from a forklift to trailer Contract EE recived a scratch to the wrist. Seen by Chevron Fire and released back to work.	Injury/Illness	(1) Improper PPE
24099	Richmond, CA - Refinery	10/18/2011 6:20:00 PM	Closed	Loss	Maint. electrician injured left middle finger	CVX electrician injured left middle finger while doing PM on a 480v breaker Electrician pulled down on handle to charge springs for closing the breaker when handle suddenly sprang back causing electrician's hand to hit against front cover. Bruise and swelling on left middle finger. Was seen at clinic and released back to work.	Injury/Illness	(1) employee failed to maintain control of the stored energy of the breaker and allow her hand to be in the line of fire of the handle.
						A new source of LSSR from Nigeria was discharged to T3103 on 10/12/11. The chloride results prior to discharge were as high as 75 ppm based on samples taken in transit at the Panama Canal. At that point we made a decision to treat with demulsifier upon discharge. When it was discharged, there were some issues with the injection pump for 12 hours but the remaining 30 hours of discharge were well mixed and treated. The first 500 BBLS of all 12 cargo holds went to recovered oil in case there was some settlement of water in transit. Upon discharge the tank was 25 ppm. It was allowed to settle for 3 days and retested, at which time it was observed that the chloride level was unchanged. The tank was then heated from 107 up to 135 F and allowed		

24137	Richmond, CA - Refinery	10/12/2011 12:00:00 AM	Closed	Loss	High Chlorides in 3103	to settle for 24 hours. At this point a transfer was required or the FCC would have shut down. A dilution plan which included a feed cut from 65 MBPD down to 55 MBPD was required to get the feed below (6 ppm?). At $2/BBL, this is $20K/day for 6 days = $120K.	Quality	(1) Cargo sample was not obtained and sent to Richmond from 3rd party terminal at BORCO , (2) Cargo was not heated on the incoming ship prior to arrival in spite of elevated chloride levels
24141	Richmond, CA - Refinery	10/19/2011 11:00:00 AM	Closed	Loss	Burning scaffold deck inside C-1750	Koch. While arc gouging inside of #2 man way on C-1750 on a tray section, slag landed on the scaffold deck catching the scaffold deck on fire. Fire blanket was used but most of it was the old style.	Fire/Explosion	(1) Improper fire blanket, incomplete containment
24146	Richmond, CA - Refinery	10/3/2011 5:30:00 AM	Closed	Near Loss	Green Card. Need a light plant on backside of PSM bldg. Location: Gate 91	Green Card. We need a light plant on the backside of PSM bldg because lots of employees are nearby and drivers cannot see them while standing in the dark near the street.	NL-Injury/Illness - Employee Injury	
24154	Richmond, CA - Refinery	10/4/2011 3:00:00 PM	Closed	Near Loss	Green Card. Steam tracing leak. Location: SDA S.Isomax by C-130	Green Card. Steam leak by C-130. Steam tracing leak.	NL-Lessons Learned	
24155	Richmond, CA - Refinery	10/4/2011 6:45:00 AM	Closed	Near Loss	Green Card. Some grading is missing. Location: Bridge 145 on Xylene and Channel St	Green Card. Bridge 145 on corner of Xylene St and Channel St has some grading missing on the SW end of bridge.	NL-Lessons Learned	
24156	Richmond, CA - Refinery	10/4/2011 12:55:00 PM	Closed	Near Loss	Green Card. Pipe sticks out, tripping hazard. Location: Pond 2 South	Green Card. Pipe behind 2-South electrical distribution sticks up in an area often used as an area to enter Pond No. 2. Tripping hazards also sharp top could cut lower leg.	NL-Injury/Illness - Contractor Injury	
24157	Richmond, CA - Refinery	10/4/2011 2:00:00 PM	Closed	Near Loss	Green Card. Electrical cord without color coded tape. Location: RLP - Fab Shop	Green Card. Electrical cord without color coded tape.	NL-Lessons Learned	
24158	Richmond, CA - Refinery	10/5/2011 8:00:00 AM	Closed	Near Loss	Green Card. Co-worker backing up a truck without spotter. Location: FCC	Green Card. Co-worker backing up a truck without a spotter in a crowded area.	NL-Injury/Illness - Contractor Injury	
24159	Richmond, CA - Refinery	10/5/2011 7:15:00 AM	Closed	Near Loss	Green Card. Big steam leak. Location: S.Isomax P-130A	Green Card. Saw a big steam leak by P-130A. It needs to be fixed because it is in the walkway and someone could get burned.	NL-Injury/Illness - Contractor Injury	
24162	Richmond, CA - Refinery	10/19/2011 4:03:00 AM	Closed	Near Loss	The air supply tubing to P-22 disconnected causing PCV304 to fail closed. P-22, which was boosting a JP8 discharge off of the Oregon Voyager was dead-headed for approximately 2 hours.	At approximately 0400Hrs the instrument air supply to PCV304 on P-22 discharge disconnected from the control valve causing it to fail closed. This deadheaded the pump, which was boosting JP8 from the Oregon Voyager to T-1799 for approximately 1 hour.	NL-Business Process - Business Process	(1) PCV 304 failed close due to loss of air supply, (2) Operator response time allowed for P-22 to overheat before cause of problem was discovered, (3) P-22 common trouble did not alarm, I&E to inspect and prove out P-22 common trouble alarm
24163	Richmond, CA - Refinery	10/6/2011 10:45:00 AM	Closed	Near Loss	Green Card. Moving scissor lift before inspection. Location: RLP	Green Card. Moving scissor lift before inspection.	NL-Lessons Learned	
24190	Richmond, CA - Refinery	10/19/2011 10:40:00 PM	Closed	Near Loss	EE reported having stomach pain after lunch	Upset stomach due to an existing condition	NL-Injury/Illness - Contractor Injury	
24191	Richmond, CA - Refinery	10/19/2011 11:00:00 PM	Closed	Near Loss	JHT H2S alarm while installing blind	While installing a blind on K-270 fuel gas coalescer drain to relief, relief gas went to atmosphere through cracked flange and activated JHT H2S alarm. The maximum H2S indicated was 6 PPM during event. How did relief gas go to atmosphere through cracked flange? GHT off gas was routed to K-3950 Flare Gas recovery using K-242/52 relief manifold. JHT operators blocked in slide valve to relief, off gas from GHT V-1671, and relief gas to K-242/52 to isolate K-242/52 relief manifold for K-270 blinding. JHT operator's gas tested at bleeder, system was clean, and released line to maintenance for blinding. Maintenance fitters cracked flange to install blind and operator noticed relief line pressure was increasing. Operator immediately asked fitters to evacuate area and all other workers in JHT area. Operator's isolated K-270 relief line with valve coming off relief header in 5 minutes or less. When JHT operators closed line from GHT the line overpressured to max 73 PSIG, PSV C1-69 lifted at 60 PSIG to JHT relief. GHT offgas instead inadvertently traveled through relief line to atmosphere through K-270 cracked flange for blinding. GHT closed 43PC312A V-1671 offgas to JHT K-242/52 and opened 43PC312B to relief K-3950 compressor. No injuries during event.	NL-Injury/Illness - Employee Injury	(1) GHT V-1671 off gas routed to K-3950 through JHT K-242/52 relief manifold.
						While installing a blind on K-270 fuel gas coalescer drain to relief, relief gas went to atmosphere through cracked flange and activated JHT H2S alarm. The maximum H2S indicated was 6 PPM during event. How did relief gas go to atmosphere through cracked flange? GHT off gas was routed to K-3950 Flare Gas recovery using K-242/52 relief manifold. JHT operators blocked in slide valve to relief, off gas from GHT V-1671, and relief gas to K-242/52 to isolate K-242/52 relief manifold for K-270 blinding. JHT operator's gas tested at bleeder, system was clean, and released line to maintenance for blinding.		

24191	Richmond CA - Refinery	10/19/2011 11:00:00 PM	Closed	Near Loss	JHT H2S alarm while installing blind	Maintenance fitters cracked flange to install blind and operator noticed relief line pressure was increasing. Operator immediately asked fitters to evacuate area and all other workers in JHT area. Operator's isolated K-270 relief line with valve coming off relief header in 5 minutes or less. When JHT operators closed line from GHT the line overpressured to max 73 PSIG, PSV C1-69 lifted at 60 PSIG to JHT relief. GHT offgas instead inadvertently traveled through relief line to atmosphere through K-270 cracked flange for blinding. GHT closed 43PC312A V-1671 offgas to JHT K-242/52 and opened 43PC312B to relief K-3950 compressor. No injuries during event.	NL-Injury/Illness - Contractor Injury	(1) GHT V-1671 off gas routed to K-3950 through JHT K-242/52 relief manifold.
24191	Richmond, CA - Refinery	10/19/2011 11:00:00 PM	Closed	Near Loss	JHT H2S alarm while installing blind	While installing a blind on K-270 fuel gas coalescer drain to relief, relief gas went to atmosphere through cracked flange and activated JHT H2S alarm. The maximum H2S indicated was 6 PPM during event. How did relief gas go to atmosphere through cracked flange? GHT off gas was routed to K-3950 Flare Gas recovery using K-242/52 relief manifold. JHT operators blocked in slide valve to relief, off gas from GHT V-1671, and relief gas to K-242/52 to isolate K-242/52 relief manifold for K-270 blinding. JHT operator's gas tested at bleeder, system was clean, and released line to maintenance for blinding. Maintenance fitters cracked flange to install blind and operator noticed relief line pressure was increasing. Operator immediately asked fitters to evacuate area and all other workers in JHT area. Operator's isolated K-270 relief line with valve coming off relief header in 5 minutes or less. When JHT operators closed line from GHT the line overpressured to max 73 PSIG, PSV C1-69 lifted at 60 PSIG to JHT relief. GHT offgas instead inadvertently traveled through relief line to atmosphere through K-270 cracked flange for blinding. GHT closed 43PC312A V-1671 offgas to JHT K-242/52 and opened 43PC312B to relief K-3950 compressor. No injuries during event.	NL-Environmental - Release	(1) GHT V-1671 off gas routed to K-3950 through JHT K-242/52 relief manifold.
24193	Richmond, CA - Refinery	10/20/2011 3:45:00 AM	Closed	Near Loss	E-1546's area Hydro Blasting hose filling loose	Veolia: E-1548's area while Hydro blasting a high pressure hose filling was loose and the weep hole safety device directed pressure to grade and lifting the hose.	NL-Injury/Illness - Contractor Injury	
24213	Richmond, CA - Refinery	10/18/2011 10:00:00 AM	Closed	Near Loss	Green Card. Too many cars parked in the red zone. Location: Behind RLOP Control House	Green Card. Too many cars parked in the red zone behind the RLOP Control House causing a serious hazard to traffic. There is a good size hump in the road at the corner of the building that might cause a problem for the vehicles to navigate safely through the area.	NL-Injury/Illness - Employee Injury	
24251	Richmond, CA - Refinery	10/20/2011 3:00:00 PM	Closed	Near Loss	Small process line leak.	A small leak was detected in the 10" above ground carbon steel line used for routing the Hazardous Waste area's process water to #1 separator.	NL-Environmental - Operational Leak	
24254	Richmond, CA - Refinery	10/20/2011 5:55:00 AM	Closed	Loss	One contractor truck hit another contractor pickup truck door	A flatbed truck caught the pickups open door while making a sharp turn	Transportation	(1) not using spotters when driving in tight areas
24256	Richmond, CA - Refinery	10/20/2011 2:00:00 PM	Closed	Near Loss	Entry on an Expired Permit	Chevron, Certified Safety: Chevron EE reported to F-1251 for final closure to inspect the inside for cleariness and reported to the Entry Attendant that he needed to lock inside. EE had what he thought was all the required PPE to enter. Attendant signed him on the entry log and removed the red tape over the opening and turned around to check his packet for the PPE Matrix to verify that it was correct, at which time Chevron EE thought it was okay to enter and started to climb inside. Entry Attendant asked for him to come back outside, Tyvex was on the permit but not in the entrants possession because he didn't notice it when he looked at it. Entry Permit was not updated since 7 days prior due to no entry and had reached it's expiration date. Ceramic Fiber tape had been removed during this period and had not been put back up at the time of this incident, a new permit had been generated but was not at entry location yet. Both EE's involved are SSE's.	NL-Regulatory Compliance - Non Compliance - Company Policy	(1) Removal of the red tape from manway, not ready to enter yet.
24257	Richmond, CA - Refinery	10/20/2011 3:40:00 PM	Closed	Near Loss	#7 Boiler South Radiant Wall Split Open	The South Wall of #7 Boiler is split open ~6' to 8' long with a gap of ~8"to 12".	NL-Equipment/Property Damage - Equipment Damage	
24259	Richmond, CA - Refinery	10/20/2011 12:10:00 PM	Closed	Loss	uneven surface on staging deck, rolled ankle	On October 20, 2011 at approximately 12:10 hrs an East Side Operator tracing lines rolled their right ankle descending staging. Operator was tasked to trace line for future work; part of line is located 40' overhead. Staging was set up with both metal and wood planks (wood used to cover holes cause by process lines running vertical). Second platform from ground level, is an additional platform (18") Operator stepped from this platform onto wood and rolled ankle. Operator continued to descend, drove to control room where they felt more discomfort and called supervisor. CFD was notified, treated Operator and taken to Refinery Clinic for further observation.	Injury/Illness	(1) staging board made uneven surface, (2) SOS: Mitigation Devices: Platform was uneven. Process lines were running vertical through the platform, requiring wooden planks to cover the holes. Minimum requirement was met but it created an uneven surface., (3) SOS: Personal Protective Factors: Operator stepped on the uneven platform. Operator did not see that the platform was uneven.
24260	Richmond, CA - Refinery	10/20/2011 4:15:00 PM	Closed	Loss	Loss of electrical power to flares.	Lost FCC and Alky flare flow indication due to Electrical PM work in RLOP power center One. Why: Not aware of the fact that this equipment was powered from this location. Why, was not marked, SEE Journal	Operational Process/Procedures	(1) Loss of power, shut off
						The Morro Bay was in berth 2 loading three products, 28.5 MB ULSD, 34.0 MB SUPCAE-C3 (regular gasoline) from T-1688 and 3.5 MB SPCAE-C2 (premium		

24277	Richmond, CA - Refinery	10/20/2011 10:00:00 PM	Closed	Near Loss	Inadvertantly transfered 901 bbls of T-1688 regular gasoline to T-991 premium gasoline	gasoline) from T-991. Around 22:30 operations switched the 12" wharf line from T1688 > T-991. 22:36 the RBO received an alarm that the level on T-991 was increasing and noticed that T-1688 was still decreasing. Operations went out to investigate. At 23:12 it was discovered that the 12" wharf line was open on another manifold allowing approximately 901 bbls of T-1688 (regular gasoline) to drop to T-991 (premium gasoline).	NL-Quality - Product Contamination (Int)	(1) Operator did not comply with the manifolding / switching procedure. (2) Audit on Manifolding process not enforced
24278	Richmond, CA - Refinery	10/21/2011 1:00:00 AM	Closed	Loss	Exhaust fume exposure	Certified Safety: While working on V-1931 first deck contract EE was exposed to exhaust fumes from internal combustion engine. Reported a head ache	Injury/Illness	(1) Exhaust fumes
24313	Richmond, CA - Refinery	10/21/2011 1:30:00 PM	Closed	Near Loss	JHT / Pinched hand. Safety fell approx 20 feet	Timec EE was lowering 4" safety from top deck of V-244 in the JHT to the ground. Cradling the Safety with one arm and holding rope with other hand. When EE let go of Safety the weight on the rope pinched hand between handrail and rope causing him to let go of the rope.	NL-Injury/Illness - Contractor Injury	
24316	Richmond, CA - Refinery	10/20/2011 2:30:00 PM	Closed	Near Loss	Wrench fell from deck	Wrench fel from deck above rope inspectors	NL-Injury/Illness - Contractor Injury	
24321	Richmond, CA - Refinery	10/21/2011 10:30:00 PM	Closed	Loss	Contract EE Bent down-crawl under pipe heard or felt pop upper Back-Shoulder	Contract EE bent down-crawl under pipe (about 4'FT). Heard or felt pop upper back-shoulder. EE took 1st break. Reported incident to his supervisor after break on way back to Job Site. Welltech Red Hat Safety radioed requesting aid. Chevron Red Hat Safety called Chevron Fire Dept. who was on scene in about 2 minutes to aid.	Injury/Illness	(1) Tight working enviroment , (2) Poor body positioning
24321	Richmond, CA - Refinery	10/21/2011 10:30:00 PM	Closed	Loss	Contract EE Bent down-crawl under pipe heard or felt pop upper Back-Shoulder	Contract EE bent down-crawl under pipe (about 4'FT). Heard or felt pop upper back-shoulder. EE took 1st break. Reported incident to his supervisor after break on way back to Job Site. Welltech Red Hat Safety radioed requesting aid. Chevron Red Hat Safety called Chevron Fire Dept. who was on scene in about 2 minutes to aid.	NL-Injury/Illness - Contractor Injury	(1) Tight working enviroment , (2) Poor body positioning
24326	Richmond, CA - Refinery	10/22/2011 12:10:00 AM	Closed	Near Loss	Contract EE Abdominal Pain	Contract EE having Abdominal Pain. While in portable bathroom Chevron Fire Dept was notified by Contract supervisor that EE could not get up. CFD already onsite in response to another call.	NL-Injury/Illness - Contractor Injury	
24327	Richmond, CA - Refinery	10/22/2011 1:00:00 AM	Closed	Loss	Fire occured in space between vent stack and R-315.	Fire was reported in A train, Fire was located at R-315 in small space between R-315 and the H2 vent stack.	Fire/Explosion	(1) Tar based insulation became loose and rested on the vent. Once A train was shutdown and we started venting 700 degree steam the tar auto ignited.
24327	Richmond, CA - Refinery	10/22/2011 1:00:00 AM	Closed	Loss	Fire occured in space between vent stack and R-315.	Fire was reported in A train, Fire was located at R-315 in small space between R-315 and the H2 vent stack.	NL-Fire/Explosion	(1) Tar based insulation became loose and rested on the vent. Once A train was shutdown and we started venting 700 degree steam the tar auto ignited.
24329	Richmond, CA - Refinery	10/22/2011 2:18:00 AM	Closed	Near Loss	Contract EE Stomach pain	Received call on Motorola Radio from Welltech Red Hat Safety Rep. that EE was in Lunch Tent with Stomach Pain that's been on going for the past 3 days.	NL-Injury/Illness - Contractor Injury	
24330	Richmond, CA - Refinery	10/21/2011 9:10:00 PM	Closed	Near Loss	Miss Communication at Wash Pad when Overhead Crane repairs in progress.	Miss Communication at Wash Pad Exsisting Overhead Crane being worked on for repairs and possibly energized while Craneriggers lifting and rolling Exchanger Bundles with Mobile Crane.	NL-Lessons Learned	
24340	Richmond, CA - Refinery	10/22/2011 7:36:00 AM	Closed	Loss	F305 FSC Chopped during shut down	A train - F305 FSC Chopped during controled shut down due to high fuel gas header pressure. This also shut down the H2A auxiliary burners for steam production and the 800# steam system sagged causing the S/D of 8 plant for steam load shed.	Operational Process/Procedures	(1) 5 Why is in the Journal The root cause was the operators closing did not recognize that the pressure increase would be rapid as the last few burners were blocked in.
24342	Richmond, CA - Refinery	10/22/2011 12:15:00 PM	Closed	Near Loss	smoldering in C-1180	Laborers had been muking out the column. A light was left on in the column during lunch. There was muck on the light and it started to smolder	NL-Fire/Explosion	
24344	Richmond, CA - Refinery	10/22/2011 4:00:00 PM	Closed	Loss	particle in the eye	While grinding in V-3205 (.with faceshield, EE felt something in his eye.	Injury/Illness	(1) Was wearing a faceshield while working but still got something in his eye. May want to wear goggles as well
24346	Richmond, CA - Refinery	10/22/2011 12:00:00 AM	Closed	Near Loss	MVA on SP -Hill by 991 tank	While driving on SP hill Road by 991 tank Fire fighter side swiped a guard rail causing damage to the passenger's side of duty rig (Monitor 60A).	NL-Transportation - Company	
24346	Richmond, CA - Refinery	10/22/2011 12:00:00 AM	Closed	Near Loss	MVA on SP -Hill by 991 tank	While driving on SP hill Road by 991 tank Fire fighter side swiped a guard rail causing damage to the passenger's side of duty rig (Monitor 60A).	NL-Equipment/Property Damage - Equipment Damage	
24351	Richmond, CA - Refinery	10/22/2011 8:30:00 PM	Closed	Loss	Sore and Swollen Left Hand Pinky Finger.	Contract EE on LTS Piping Job noticed Pinky Finger was a little sore and swollen and thought it may be a Bug Bite. EE notified supervisor who called Welltech Red Hat Safety who called Chevron Fire Dept. for assistance.	NL-Injury/Illness - Contractor Injury	(1) Bug bite
24351	Richmond, CA - Refinery	10/22/2011 8:30:00 PM	Closed	Loss	Sore and Swollen Left Hand Pinky Finger.	Contract EE on LTS Piping Job noticed Pinky Finger was a little sore and swollen and thought it may be a Bug Bite. EE notified supervisor who called Welltech Red Hat Safety who called Chevron Fire Dept. for assistance.	Injury/Illness	(1) Bug bite
								(1) Five Why Investigation 1. Why was the person injured

24356	Richmond, CA - Refinery	10/23/2011 3:45:00 AM	Closed	Loss	Contract EE cut little finger.	While removing a control valve contract EE wrench slipped and resulted in a cut to their left little finger. The EE was treated by Chevron fire and transported to an outside ER.	Injury/Illness	performing the task ? a. Wrench slipped off of the nut while applying downward pressure to remove or break the nut loose. 2. Why did this occur ? a. The open end of the wrench was used to loosen the bolt. b. Two workers were operating one wrench. 3. Why was the open end of the wrench used ? a. the valve body prevented the use of the boxed in portion of the wrench. 4. Why were two workers operating one wrench. a. The nut was seized onto the bolt additional force was needed. 5. Why was this style of wrench chosen ? a. The proper tool for the job should have been a torque wrench , hydraulic tool etc. The chosen tool was readily available and the employee made a bad decision (short cut). 6. Why did the employee make take the short cut and make a bad decision ? a. Taking the time to get the right tool would take too long. b. The tool room was to far away. c. Did not think it would happen too him. d. Training / experience.
24365	Richmond, CA - Refinery	10/22/2011 2:40:00 PM	Closed	Near Loss	On 10/22 at approx 14:40 hrs the FCC totalizer was tripped.	On 10/22 at approx 14:40 hrs the FCC totalizer was tripped.	NL-Environmental - Release	(1) Undetermined specific source from GRU-TKN-ISO relief to V705 overwhelmed single FGR compressor before second compressor could be started.
24388	Richmond, CA - Refinery	10/24/2011 2:00.00 AM	Closed	Near Loss	Contract EE near fall due to staging ladder disconnected	Contract EE was inside V-1100 descending a staging ladder when it disconnected and almost fell down ten feet to bottom.	NL-Lessons Learned	(1) no call for scaffold modification
24389	Richmond, CA - Refinery	10/24/2011 3:30:00 AM	Closed	Loss	Contract EE Swollen Lower Lips	Contract EE was working at 4Crude moving piping (demo) when the lower lip started swelling. EE do not know if insect bite or not.	Injury/Illness	(1) bug bite, (2) bug bite
24389	Richmond, CA - Refinery	10/24/2011 3:30:00 AM	Closed	Loss	Contract EE Swollen Lower Lips	Contract EE was working at 4Crude moving piping (demo) when the lower lip started swelling. EE do not know if insect bite or not.	NL-Injury/Illness - Contractor Injury	(1) bug bite, (2) bug bite
24390	Richmond, CA - Refinery	10/24/2011 4:00:00 AM	Closed	Near Loss	minor finger cut	Very minor cut to the finger. While inspecting E-1410 contract EE finger contacted a burr.	NL-Injury/Illness - Contractor Injury	
24408	Richmond, CA - Refinery	10/22/2011 2:30:00 PM	Closed	Near Loss	Working in Unsafe Conditions	Smoke was reported coming from the first manway of C1180 to which Chevron Fire Department (CFD) responded. After mitigating the incident, CFD personnel informed Chevron Operations and Chevron Safety that no persons were allowed onto the ladder or first deck of C1180 due to the extreme build-up and contamination from the sludge being removed from the column. (The deck and ladder were heavily contaminated with a heavy, oily sludge.) Both the deck and ladder were deemed too slippery be be used safely, and Stop Work Authority was excercised to ensure the ladder would be cleaned before use, and the deck thereafter before re-entry and restart of the cleanup work inside the column. CFD left the area after being ensured that the cleanup process would begin before anyone was allowed to continue. Five (5) minutes later, a CFD member came back to C1180 and noticed two (2) Timec employees (Timec job foreman and Timec safety) up on the first deck of C1180. The ladder and deck cleanup had not been initiated as of yet, and they had used them both. When Chevron Safety was questioned about this, they had given permission to Timec to access the deck for cleanup. The ladder was so heavily contaminated, an injury could have occurred had either or both of them slipped and fell.	NL-Lessons Learned	
24449	Richmond, CA - Refinery	10/24/2011 6:15:00 AM	Closed	Near Loss	Particle in eye, Gate 91	While walking into the refinery from Gate 91 entrance, contract EE got something in his eye due to the wind. No problem was noted at the time, but when it started bothering him later in the day, he reported the incident.	NL-Injury/Illness - Contractor Injury	(1) EE not wearing PPE as workday had not begun. No injury to the eye occured.
24452	Richmond, CA - Refinery	10/20/2011 11:30:00 AM	Closed	Near Loss	Miscommunication between operators on opening a manway on vessel during shutdown	PVD, V-1103 grouped with C-1100 for PVD not communicated to CFD at time of entry Operations moved to open manway based on miscommunication , CFD checked TOC ppm over 30,000 ppm, 2nd check on nights TOC ppm less than 250 ppm -	NL-Operational Process/Procedures - Safety Systems	
24494	Richmond, CA - Refinery	10/20/2011 1:05:00 PM	Closed	Near Loss	Green Card. Steam Leak. Location: S.Isomax, Stanion 204(S) next to Control Rm	Green Card. Urgent! Extreme Safety Concern! Reported yesterday a steam leak at Stanion 204(S) and twice today. Shooting steam 15' yesterday to about 30' today. It's eating a bigger hole in the pipe. My concern was shared by an operator who said the only way it will get fixed is to write a green card and say how very dangerous this steam leak is and it needs repair immediately. NOTE - There was already a Work Order in the system for this issue.	NL-Injury/Illness - Employee Injury	
24494	Richmond, CA - Refinery	10/20/2011 1:05:00 PM	Closed	Near Loss	Green Card. Steam Leak. Location: S.Isomax, Stanion 204(S) next to Control Rm	Green Card. Urgent! Extreme Safety Concern! Reported yesterday a steam leak at Stanion 204(S) and twice today. Shooting steam 15' yesterday to about 30' today. It's eating a bigger hole in the pipe. My concern was shared by an operator who said the only way it will get fixed is to write a green card and say how very dangerous this steam leak is and it needs repair immediately. NOTE - There was already a Work Order in the system for this issue.	NL-Injury/Illness - Contractor Injury	
	Richmond,	10/25/2011				While removing locks from LOTO on the 35" crude line, the key was dropped	NL-Operational	

24502	CA - Refinery	9:00:00 AM	Closed	Near Loss	Lost key for LOTO box	and lost in the bay. Per R 9900, in order for Plant Protection to unlock the locks for us we need an NLI in the system.	Process/Procedures - Safety Systems	
24518	Richmond, CA - Refinery	10/10/2011 12:00:00 AM	Closed	Near Loss	Several employees observed climbing and entering C-1180 without hard hats.	C-1180 became available for dirty inspection. An employee observed a small group in full PPE prepare to climb and enter the column. Before climbing several removed the hard hats at the suggestion of one person in the group	NL-Injury/Illness - Employee Injury	(1) Hole-watch did not stop the Chevron employees from entering the column without proper PPE., (2) Employees did not evaluate methods to keep from losing their hardhats., (3) The group made a poor decision in deciding not to wear their hardhats. Employees did not adequately weigh all risks and violated the entry permit requirements for PPE required to enter the column.
24565	Richmond, CA - Refinery	10/26/2011 4:40:00 AM	Closed	Near Loss	Contract EE H2S Badge alarmed while Hydro Blasting E-1190 C1	Contract EE Badge Alarmed while Hydro Blasting E-1190 C1 at 4 Crude S/D Turnaround. EE OK when checked on by Safety Red Hat. Could not get reading from H2S Badge as it was Reset by EE per Contract Supervisor as instructed over motorola radio.	NL-Environmental - Release	
24573	Richmond, CA - Refinery	8/23/2011 12:00:00 AM	Closed	Loss	Received an NOV for open paint cans	Received an NOV dated 10/25/11 regarding the following incident: During a compliance inspection of the GMG (Jeffco) Paint Booth area on August 23rd 2011 open containers containing coating/solvent residue were observed outside of the paint building and air filelor system. This had not been counted as a scorecard everny prior to receiving the NOV.	Regulatory Compliance	(1) Paint crew foreman thought it was acceptable practice and was not aware of any new regulation regarding drying of paint.
24584	Richmond, CA - Refinery	10/10/2011 2:00:00 PM	Closed	Near Loss	Green Card. Operator fell walking over a thin bed of sand. Location: Across from FCC Control Room	Green Card. A Chevron operator fell when walking over a thin bed of sand caused by erosion. Drainage washed out the asphalt into a drain downstream. The drain cover is rusted and thin with sharp edges.	NL-Injury/Illness - Contractor Injury	
24585	Richmond, CA - Refinery	10/10/2011 10:00:00 AM	Closed	Near Loss	Green Card. Trash on ground causing tripping hazard. Location: 91 Gate Parking	Green Card. Gloves and trash on ground in between the cars at 91 Gate parking lot making a tripping and slipping hazard.	NL-Injury/Illness - Contractor Injury	
24586	Richmond, CA - Refinery	10/10/2011 7:00:00 AM	Closed	Near Loss	Green Card. Wind sock needs to be replaced. Location: Calol/Forge St.	Green Card. Wind sock at Calol St and Forge St needs to be replaced.	NL-Lessons Learned	
24590	Richmond, CA - Refinery	10/10/2011 12:00:00 AM	Closed	Loss	C-1940 Analyzer sample probe crushed	C-1940 anlyzer sample probe was crushed when the isolation valve was closed without retracting probe first.	Equipment/Property Damage	(1) Inadequate labeling/identification of valve with analyzer probe inserted.
24597	Richmond, CA - Refinery	10/26/2011 10:30:00 AM	Closed	Near Loss	EE shaking violently	EE had stuffed a bundle E-1112 and started to feel bad. Went to the lunch tent. Someone hit the red button and CFD was on the way.	NL-Injury/Illness - Contractor Injury	(1) Pre-existing condition
24614	Richmond, CA - Refinery	10/17/2011 10:15:00 AM	Closed	Near Loss	Green Card. Weld Bay entrance has a blind corner when driving. Location: RLP	Green Card. Pickup truck passed Weld Bay entrance at an uncomfortably high speed. This entrance is at a narrow road immediately adjacent. It is also a blind corner from the direction truck was heading. Two people were standing at that corner when the truck traveling 15-20 mph passed within 3 ft. Had either of the two workers stepped out a full step, they would have been struck.	NL-Injury/Illness - Contractor Injury	
24615	Richmond, CA - Refinery	10/18/2011 9:30:00 AM	Closed	Near Loss	Green Card. LOTO not right. Location: Tank Farm T-3105	Green Card. LOTO not right. No locks on valve. Did not do job until proper procedure was followed (locks on valve).	NL-Lessons Learned	
24616	Richmond, CA - Refinery	10/28/2011 8:00:00 AM	Closed	Loss	A loss of 4 drums of 227058982 and a gain of 4 cases of 227058497 were recorded during a physical count.	A loss of 4 drums of 227058982 and a gain of 4 cases of 227058497 were recorded during a physical count. On order #559704STI we rec'd 4 cases instead of 4 drums - 6/23/11. Contract plant entered the C & R on 7/6/11. RLP never made the correction. A BDC edit occurred on another order because the correction was not completed and a trace on 7/27 was sent to the Warehouse for investigation. Response on 8/8 from the Warehouse stated "did not see any problem with inbound". Asked Warehouse to trace Contract plant for further information. Warehouse sent a trace to the Contract plant on 8/8, got no response and did not follow up. Stock control traced contract plant directly on 9/27 and rec'd a response on 10/11. A trace was sent out on 10/12 from Stock control to the Warehouse with all necessary corrections that needed to be entered into OCS. Entries for the inventory corrections have yet to be made and another BDC edit on 9/19 for the same material cannot be corrected which is now causing an imbalance between OCS and SAP (MI20).	Business Process	(1) What: BDC edit wasn't cleared Why? RLP didn't complete C&R for products shipped in error to RLP Why? RLP wasn't notified that LSC completed C&R Why? LSC didn't communicate to RLP that C&R was complete.
24617	Richmond, CA - Refinery	10/18/2011 8:00:00 AM	Closed	Near Loss	Green Card. Line not locked out from bypass. Location: Long Wharf	Green Card. Walking down LOTO to remove spool, I noticed the line was not locked out from bypass.	NL-Lessons Learned	
24621	Richmond, CA - Refinery	10/18/2011 7:30:00 AM	Closed	Near Loss	Green Card. Big steam leak. Location: S. Isomax P-130A	Green Card. Walking to the job site saw a big steam leak that covered two walkways.	NL-Lessons Learned	
24622	Richmond, CA - Refinery	10/19/2011 10:00:00 AM	Closed	Near Loss	Green Card. Firewatch was not wearing red vest. Location: RLP	Green Card. Firewatch was not wearing red vest.	NL-Lessons Learned	
	Richmond,	10/19/2011			Green Card. Concrete has			

24623	CA - Refinery	10:00:00 AM	Closed	Near Loss	rebar sticking out. Location: FCC V-13	Green Card. Concrete next to Vessel 13 at FCC has rebar sticking out of floor. Creates slip, trip and fall hazard.	NL-Injury/Illness - Employee Injury	
24626	Richmond, CA - Refinery	10/20/2011 9:30:00 AM	Closed	Near Loss	Green Card. Big hole on steam line. Location: S. Isomax next to V-153B	Green Card. There is a big hole on steam line with a big leak at S. Isomax next to V-153B northeast side.	NL-Injury/Illness - Employee Injury	
24627	Richmond, CA - Refinery	10/21/2011 12:00:00 PM	Closed	Near Loss	Green Card. Wooden walkway needs to be repaired. Location: SDA Boundary	Green Card. Wooden walkway needs to be repaired or replaced. Midrails missing and nails are sticking up.	NL-Injury/Illness - Employee Injury	
24629	Richmond, CA - Refinery	10/21/2011 8:30:00 AM	Closed	Near Loss	Green Card. Wooden walkway needs repair. Location: S. Isomax - SDA	Green Card. Wooden walkway has deteriorated wood planking. One midrail is hanging loose. Nails sticking up and can cause tripping hazard.	NL-Injury/Illness - Contractor Injury	
24637	Richmond, CA - Refinery	10/26/2011 9:00:00 AM	Closed	Near Loss	Electricans tripped Mk-10 off line while working on MK-9	On 10/26/2011 Electricians were troubleshooting K-9 which would not start. At @ 9.00 AM, while testing the internal contacts on the starter they had removed from the cubical, one of the test probes came in contact with a live 120 VAC lug and the housing. As a result, foreign voltage from a different source unknown to the mechanics was wired through the cubicle of both K-9 and K-10 which share the same control power. K-10 tripped off-line prompting the Electricians to immediately notify the field Operator. The tripped power source was located and reset. The 86 lock-out relay was also reset and then K-10 was restarted and placed back on line. Prior to restarting K-10 it was requested that Operations attempt to start K-9 with starter back in cubicle. K-9 failed to start and electrical troubleshooting continued.	NL-Equipment/Property Damage - Equipment Damage	
24638	Richmond, CA - Refinery	10/26/2011 8:15:00 AM	Closed	Loss	scraped hand on pipe	While straightening a pipe stand the pipestarted to fall. EE went to catch it and scraped his hand. EE was wearing gloves and the skin wasn't broken	Injury/Illness	(1) In a hurry
24648	Richmond, CA - Refinery	10/26/2011 7:25:00 PM	Closed	Near Loss	Contract EE Pain in Left Knee	Contract EE Pain in Left Knee. Contract EE stated: Stepped off Bus and it just popped.	NL-Injury/Illness - Contractor Injury	
24651	Richmond, CA - Refinery	10/26/2011 8:59:00 PM	Closed	Near Loss	Contract EE not feeling well.	Contract EE not feeling well. EE stated to Welltech Safety Red Hat (on way to work was not feeling well). Thought being outside in fresh air would make her feel better.	NL-Injury/Illness - Contractor Injury	
24664	Richmond, CA - Refinery	10/27/2011 3:30:00 AM	Closed	Near Loss	EE Right Knee Hurting	EE Right Knee Hurting.	NL-Injury/Illness - Employee Injury	
24670	Richmond, CA - Refinery	10/27/2011 4:45:00 AM	Closed	Near Loss	Tripped & almost fell on stairs	Tripped & almost fell going up stairs. Would have fallen except was holding handrail. Problem was that I was distracted & not paying proper attention to what I was doing.	NL-Injury/Illness - Employee Injury	
24674	Richmond, CA - Refinery	10/26/2011 10:00:00 AM	Closed	Near Loss	Green Card. Vehicle was idling unattended. Location: D&R parking lot	Green Card. While searching for someone, I noticed a truck in the lot with the door open. When I returned about a minute later, it was still open, and someone walked out. I asked it it was their vehicle - No. So I approached the vehicle to shut the door and noticed it was idling unattended	NL-Lessons Learned	
24690	Richmond, CA - Refinery	10/27/2011 7:30:00 AM	Closed	Near Loss	Washpad overhead crane cable jumped sheves	Recieved call on radio to look at the overhead crane at the washpad. The wire had jumped the sheve on the headblock and was laying between the sheves. Some contract EEs were standing on a pipe reaching out to fix the wire lodged between the sheves while the headblock & wire were being lowered. Used SWA to get the right people for the job.	NL-Equipment/Property Damage - Equipment Damage	
24705	Richmond, CA - Refinery	10/26/2011 5:00:00 PM	Closed	Near Loss	Certified Safety, Sore Knee	Certified Safety: EE yesterday toward the end of the shift, started to feel some discomfort in his knee. He doesn't remember anything that he did or have happen to him that would cause any discomfort. This morning after the All Call meeting EE reported his condition to his Red Hat who in turn notified Chevron and he was taken to the Refinery Clinic to be checked.	NL-Injury/Illness - Contractor Injury	
24726	Richmond, CA - Refinery	10/27/2011 2:00:00 PM	Closed	Near Loss	H2S monitor went off	EE was sitting in the smoking post with 3 other people when his H2S monitor went off. The other 3 did not go off.	NL-Injury/Illness - Contractor Injury	
24746	Richmond, CA - Refinery	10/27/2011 4:40:00 PM	Closed	Loss	Foreign body in right eye.	A worker suffered from a foreign body in his right eye while in the process of installing pipe. The worker was wearing the proper protective equipment.	Injury/Illness	(1) Falling particles from elevated work area.
24746	Richmond, CA - Refinery	10/27/2011 4:40:00 PM	Closed	Loss	Foreign body in right eye.	A worker suffered from a foreign body in his right eye while in the process of installing pipe. The worker was wearing the proper protective equipment.	NL-Injury/Illness - Contractor Injury	(1) Falling particles from elevated work area.
24806	Richmond, CA - Refinery	10/28/2011 1:30:00 PM	Closed	Loss	Particle in the eye	EE was grinding, with faceshield on, and a spark got in his eye.	Injury/Illness	(1) Safety glasses allowed the spark to get into EE's eye.
	Richmond, CA -	10/28/2011 2:15:00				EE had her hands in her pockets while she was firewatching. When she took		(1) Placed hands somewhere without the right protection, (2)

24809	Refinery	PM	Closed	Loss	splinter in finger	them out there was a splinter in her finger.	Injury/Illness	not aware of hand placement
24812	Richmond, CA - Refinery	10/28/2011 1:40:00 PM	Closed	Near Loss	H2S Monitor went off	H2S Mionitor went off	NL-Injury/Illness - Contractor Injury	
24822	Richmond, CA - Refinery	10/28/2011 6:15:00 PM	Closed	Loss	Smoldering Staging boards in C-1500	During the task of arc gouging inside the #2 manway on C-1500, some sparks fell on some staging boards in the bottom of the column. The boards started to smolder. A Hole Watch on F-1550 reported to operations the smell of burning material. Operators determined it to be coming from inside C-1500.	NL-Fire/Explosion	(1) Hot slag
24827	Richmond, CA - Refinery	10/29/2011 10:00:00 AM	Closed	Near Loss	Bay Valve: 2 EE's sprayed with diesel	Bay Valve: 2 EE's while working on opening up a EBV on the P-1205's, came in contact with a diesel and water mixture on their clothing.	NL-Injury/Illness - Contractor Injury	
24828	Richmond, CA - Refinery	10/29/2011 10:45:00 AM	Closed	Loss	small fire 15" square	TOP INVESTIGATION, FOR COMPLETE REPORT SEE ATTACHED LINK. INITIAL REPORT - EE was holding a piece of fire blanket so that grinding sparks were controlled. The blanket caught fire where the sparks were directed.	Fire/Explosion	(1) The was an oily substance on the fire blanket. When the sparks were directed to the blanket the stream of sparks ignited the blanket, (2) SOS: Training & Procedures: Hydrocarbon on Weld Blanket Ignited. Hydrocarbon had not been removed from the previous job area.Hydrocarbon was not noticed during JHA by welders or attendants, (3) SOS: Training & Procedures: . Fire Report was not filed by company employee as required. Incident was deemed minor (smoldering only) and weld curtain was immediately put out without any further consequences. The smoldering lasted for only a few seconds.
24828	Richmond, CA - Refinery	10/29/2011 10:45:00 AM	Closed	Loss	small fire 15" square	TOP INVESTIGATION, FOR COMPLETE REPORT SEE ATTACHED LINK. INITIAL REPORT - EE was holding a piece of fire blanket so that grinding sparks were controlled. The blanket caught fire where the sparks were directed.	NL-Fire/Explosion	(1) The was an oily substance on the fire blanket. When the sparks were directed to the blanket the stream of sparks ignited the blanket, (2) SOS: Training & Procedures: Hydrocarbon on Weld Blanket Ignited. Hydrocarbon had not been removed from the previous job area.Hydrocarbon was not noticed during JHA by welders or attendants, (3) SOS: Training & Procedures: . Fire Report was not filed by company employee as required. Incident was deemed minor (smoldering only) and weld curtain was immediately put out without any further consequences. The smoldering lasted for only a few seconds.
24839	Richmond, CA - Refinery	10/30/2011 12:17:00 AM	Closed	Near Loss	Contract EE stomach ache	Call from Welltech Safety Red Hat that was with Contract EE in D&R S/D Turnaround Lunch Tent with Stomach Ache. Chevron Fire Dept. called to administer aid.	NL-Injury/Illness - Contractor Injury	
24840	Richmond, CA - Refinery	10/29/2011 10:31:00 PM	Closed	Near Loss	Forklift vs. Cranerigger	Forklift at base of 4 Crude C-1160 moving tail palletized Flex Grid Packing. Forklift was rolling forward when Cranerigger was bumped-brushed in the area of Left Calf just below knee. Cranerigger was looking up watching load of Flex Grid Packing being lifted when bumped-brushed.	NL-Lessons Learned	
24843	Richmond, CA - Refinery	10/30/2011 3:40:00 AM	Closed	Loss	Contract EE Particle in Eye	Contract EE Particle in eye while Grinding pipe at 4 Crude LTS piping job.	Injury/Illness	(1) Improper PPE
24843	Richmond, CA - Refinery	10/30/2011 3:40:00 AM	Closed	Loss	Contract EE Particle in Eye	Contract EE Particle in eye while Grinding pipe at 4 Crude LTS piping job.	NL-Injury/Illness - Contractor Injury	(1) Improper PPE
24844	Richmond, CA - Refinery	10/30/2011 4:15:00 AM	Closed	Near Loss	Contract EE Particle in Eye	Welder working D&R LTS piping job lifted welding hood up, took off glasses and wiped the sweat near his eye, felt Right Eye burn and was not sure if it was the sweat or something in Eye Called his Safety Red Hat as we tell everyone to report everything no matter how small it may seem to be. Called Chevron Fire Dept. to administer aid.	NL-Injury/Illness - Contractor Injury	(1) Removed safety glasses
24942	Richmond, CA - Refinery	10/31/2011 12:30:00 PM	Closed	Near Loss	FSC min fire on F340	During routine burner cleaning of F340 a operator blind on a burner that was recently put into service was found to be leaking fuel gas was blocked in to minimize fuel gas leakage to atmosphere. This created a high fuel gas FSC trip to min fire.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) FSC min fire trip on F-340 Why – fuel gas header high pressure tripped the FSC Why – an operator blind on a burner was leaking so the burner was blocked in, fuel gas header pressure went high Why – did not communicate with board operator so they could work header pressure down Why – reacted to leaking blind without thinking one burner would overpressure header
24955	Richmond, CA - Refinery	10/31/2011 6:30:00 AM	Closed	Loss	Chemical exposure at RARE caustic injection facilities	Nalco employee was bleeding pressure off a blocked in caustic injection line to repair a line leak. He had on an acid suit over his nomex, splash goggles, face shield with chin cup, hard hat, acid resistant gloves, hearing protection, and safety shoes. He was relieving pressure by breaking a compression fitting. Caustic squirted out of the tubing, spraying him.	Injury/Illness	(1) 1. Why did "above " happen? Verification There was pressure in the caustic line at the PRD Through interview/reviewing Job site post incident 2. Why did "1" happen? There was no bleeder installed on the feed system Job site review 3. Why did "2" happen? The chemical pump /tubing was field fitted with no written engineering design. There was no EWO regarding installation , (2) In the past did not follow acceptable practice and no loss occurred., (3) No written engineering plans for installation
						Preliminarily reported by Redwood Supervisor. 2 Redwood EEs, completed a		

24959	Richmond, CA - Refinery	10/31/2011 1:00:00 PM	Closed	Loss	Partial finger amputation	CUI task on E-575A and were loading their tools in the tool box attached to their truck. They were trying to close the lid on the tool box that was obstructed when 1EE stuck his finger in to free up the lid when the lid slammed down on his finger cutting off the tip. At this time it is unknown if there is bone involved with the detached portion of the finger. EE was transported to the clinic with the detached portion of this finger on ice, the clinic did not treat rather transported directly to John Muir Medical Center in Walnut Creek. Redwood Safety Representitive has notified OSHA of a possible amputation and is in route to John Muir to follow up. Safety Rep has been asked to contact CVX Supervisors with any new information.	Injury/Illness	(1) Current tool box cover shocks do not work - Shocks were 10 yrs old and evaluating tool boxes is not on the maintenance checklist used when performing maintenance on the truck - Shock failure was perceived as a minor and non-critical repair and they have had them fail in the past with no consequences., (2) No verbal Loss Prevention Self Assessment (LPSA) was completed between the 2 contractors and the contractor on the passenger side did not check that the line of fire was clear prior to shutting the tool box lid.
24968	Richmond, CA - Refinery	10/25/2011 12:00:00 AM	Closed	Near Loss	Several SSE's from the same company did not know their Mentors.	SSE Audit team conducted 26 SSE audits during the week of 10/24/11 thru 10/30/11. On 10/25/11, 2 different auditors discovered 3 different SSE's did not know who their Mentor was and did not have a conversation with them. All were from the same company. Two of three did not have an adequate understanding of LPSA.	NL-Lessons Learned	(1) Why: Contracting company Mentors may have been unclear with SSE's. Why: Mentors misunderstood role as Mentors. Why: No Mentor training was provided. Why: Mentor training was not part of Pre-shutdown activities.
24956	Richmond, CA - Refinery	10/31/2011 10:45:00 PM	Closed	Loss	Contract EE Facial Laceration while Grinding.	Contract EE was Grinding in tight qaurters when Grinder bounced, hitting and cutting through Face Shield resulting in cut to Face around Left Cheek Bone area.	NL-Injury/Illness - Contractor Injury	(1) 1. Why did "above" happen? The grinder slipped from the right hand and caused the left hand to jerk 2. Why did "1" happen? Grinder was positioned toward face with very little room to maneuver. 3. Why did "2" happen? No other position to place grinder to clean the bead 4. Why did "3" happen? 16" line was cut in a place that was adjacent to perpendicular insulated line that was 4" away.
24996	Richmond, CA - Refinery	10/31/2011 10:45:00 PM	Closed	Loss	Contract EE Facial Laceration while Grinding.	Contract EE was Grinding in tight qaurters when Grinder bounced, hitting and cutting through Face Shield resulting in cut to Face around Left Cheek Bone area.	Injury/Illness	(1) 1. Why did "above" happen? The grinder slipped from the right hand and caused the left hand to jerk 2. Why did "1" happen? Grinder was positioned toward face with very little room to maneuver. 3. Why did "2" happen? No other position to place grinder to clean the bead 4. Why did "3" happen? 16" line was cut in a place that was adjacent to perpendicular insulated line that was 4" away.
25036	Richmond, CA - Refinery	11/1/2011 10:00:00 AM	Closed	Loss	Derko valve acid leak (shut down of the V-1410F settler and contactors)	Acid leak in the valve body of the derko valve, located at the bottom of the acid settler. V-1410F settler and contactor R1410 K/F. will have to be shut down and cleaned up for repair.	Equipment/Property Damage	(1) The valve liner was mechanically damaged which resulted in acid induced corrosion on the Cast CS valve body.
25067	Richmond, CA - Refinery	10/31/2011 4:30:00 PM	Closed	Loss	Poison Oak Contact on Mechanic	Contractor employee had an apparent reaction to poison oak. He was not sure when he made contact.	Injury/Illness	(1) 1. All poison oak had been removed prior to start of job - removal by Enyon. Residual oil likley remained in dirt and areas near by where the poison oak was located.
25145	Richmond, CA - Refinery	11/2/2011 9:20:00 AM	Closed	Loss	FC3074 chopped at ammonia injection system for A train SCR	FC3074 chopped at ammonia injection system for A train SCR causing the loss of NH3 injection to the SCR. Nox emisions were high for about an hour before injection was re-established and brought under control.	Environmental	(1) See Journal for investigation and findings to date - investigation ongoing need to politicn BAAQMD for a maintenance window to troubleshoot system.
25150	Richmond, CA - Refinery	11/2/2011 4:40:00 PM	Closed	Loss	Particle in the eye	The Officer had just completed mirroring a bus prior to entry into 91 Gate. As she was walking back to the gate house she noticed an irritation in her eye.	Injury/Illness	(1) The Officer was performing her regular duties at 91 Gate. Signing in visitors and inspecting trucks before entry into the refinery. The Officer was wearing all her required P.P.E. (Hard Hat, Safety Vest, and Safety Glasses). When the Officer noticed her eye was irritated she informed the lead Officer and went inside the restroom to look in the mirror. When she came out of the restroom the lead Officer asked her if she saw anything, she said "no but it still feels irritated as if something is in it". The Lead Officer then called Chevron Fire to report a possible particle in the eye. When Chevron fire arrived they also did not find anything in the Officers eye but to be sure they decided to go ahead and flush her eye. They then recommend the Officer go to the clinic for further evaluation. The Officer was transported to the Chevron clinic and evaluated and no source of an irritation was found. It was not determined what caused the irritation. The nurse at the clinic said it was possible a piece of lint or even an eyelash could have been the source. Also the nurse said the irritation could have been caused by a dry eye. There was no damage to the eye and the irritation was gone by the time the Officer arrived at the clinic. The nurse cleared the Officer to return to work. , (2) The Officer was performing her regular duties at 91 Gate. Signing in visitors and inspecting trucks before entry into the refinery. The Officer was wearing all her required P.P.E. (Hard Hat, Safety Vest, and Safety Glasses). When the Officer noticed her eye was irritated she informed the lead Officer and went inside the restroom to look in the mirror. When she came out of the restroom the lead Officer asked her if she saw anything, she said "no but it still feels irritated as if something is in it". The Lead Officer then called Chevron Fire to report a possible particle in the eye. When Chevron fire arrived they also did not find anything in the Officers eye but to be sure they

25150	Richmond, CA - Refinery	11/2/2011 4:40:00 PM	Closed	Loss	Particle in the eye	The Officer had just completed mirroring a bus prior to entry into 91 Gate. As she was walking back to the gate house she noticed an irritation in her eye.	NL-Injury/Illness - Contractor Injury	(1) The Officer was performing her regular duties at 91 Gate. Signing in visitors and inspecting trucks before entry into the refinery. The Officer was wearing all her required P.P.E. (Hard Hat, Safety Vest, and Safety Glasses). When the Officer noticed her eye was irritated she informed the lead Officer and went inside the restroom to look in the mirror. When she came out of the restroom the lead Officer asked her if she saw anything, she said "no but it still feels irritated as if something is in it". The Lead Officer then called Chevron Fire to report a possible particle in the eye. When Chevron fire arrived they also did not find anything in the Officers eye but to be sure they decided to go ahead and flush her eye. They then recommend the Officer go to the clinic for further evaluation The Officer was transported to the Chevron clinic and evaluated and no source of an irritation was found. It was not determined what caused the irritation. The nurse at the clinic said it was possible a piece of lint or even an eyelash could have been the source. Also the nurse said the irritation could have been caused by a dry eye. There was no damage to the eye and the irritation was gone by the time the Officer arrived at the clinic. The nurse cleared the Officer to return to work. , (2) The Officer was performing her regular duties at 91 Gate. Signing in visitors and inspecting trucks before entry into the refinery. The Officer was wearing all her required P.P.E. (Hard Hat, Safety Vest, and Safety Glasses). When the Officer noticed her eye was irritated she informed the lead Officer and went inside the restroom to look in the mirror. When she came out of the restroom the lead Officer asked her if she saw anything, she said "no but it still feels irritated as if something is in it". The Lead Officer then called Chevron Fire to report a possible particle in the eye. When Chevron fire arrived they also did not find anything in the Officers eye but to be sure they
25166	Richmond, CA - Refinery	10/30/2011 1:15:00 PM	Closed	Near Loss	Loss of Nh3 to the 2000 HRSG.	Train 2000 NH3 chopper tripped closed due to a false high high level in the level bridal	NL-Business Process - Business Interruption	(1) Have been receiving dirty "wet" NH3 from SISO causing a multiple of temperature and level swings.
25180	Richmond, CA - Refinery	10/19/2011 10:30:00 AM	Closed	Near Loss	Green Card. Steam line leaking from fittings. Location: S Isomax P130A	Green Card. Steam line leaking from fittings.	NL-Lessons Learned	
25182	Richmond, CA - Refinery	10/20/2011 10:30:00 AM	Closed	Near Loss	Green Card. Union leaking steam a lot. Location: S. Isomax V2531	Green Card. Union leaking steam a lot behind Tank V2531	NL-Lessons Learned	
25184	Richmond, CA - Refinery	10/26/2011 10:00:00 AM	Closed	Near Loss	Green Card. Person driving using cell phone. Location: Lubricant Plant	Green Card. Person was driving too fast and talking on the phone. Tried to get the drivers attention but he did not see me.	NL-Lessons Learned	
25185	Richmond, CA - Refinery	10/25/2011 7:00:00 AM	Closed	Near Loss	Green Card. Steam leak. Location: S. Isomax MP-102	Green Card. When I tried to help a crew member setup the job, saw a steam leak overhead that needs to be fixed before someone gets burned.	NL-Lessons Learned	
25187	Richmond, CA - Refinery	10/27/2011 7:00:00 AM	Closed	Near Loss	Green Card. Light standard for weld bay. Location: RLP	Green Card. Light standard for Weld Bay.	NL-Lessons Learned	
25201	Richmond, CA - Refinery	11/2/2011 3:30:00 PM	Closed	Near Loss	Pipe dropped while being lowered from column	Veolia - While lower 2-20ft lengths of aluminum pipe from C-1100 the lower length became disconnected. The lower length fell about 8 ft. The area had been taped and tagged before the job started. No Damage to anything	NL-Equipment/Property Damage - Equipment Damage	(1) Had not checked the ties and clamps before lowering the pipe
25228	Richmond, CA - Refinery	11/3/2011 8:45:00 AM	Closed	Loss	Operator was sprayed with Carbon Disulfide solution on arm while filtering material into a vial.	The Operator was transfering a solution of FCC Medium Cycle Oil (MCO) and Carbon Disulfide (CS2) into a 2 mL target vial for GC Analysis. The QCO was pressure filtering the solution using a 3 mL syringe passing thru a 13 mm diameter 2um filter. The solution was too viscous and caused material to spray out from the syringe filter assembly. It is unknown if a portion of the CS2 splash unto the Operator. The Operator had the proper PPE and performed the transfer inside a fume hood. The proper use of the sash of the hood prevented material spraying onto other surfaces ofthe body. A major portion of the solution was sprayed on NOMEX sleve and portion of the wrist of the Operator	NL-Injury/Illness - Employee Injury	(1) Operator was filtering material onto vial containing CS2.
					Operator was sprayed with	The Operator was transfering a solution of FCC Medium Cycle Oil (MCO) and Carbon Disulfide (CS2) into a 2 mL target vial for GC Analysis. The QCO was pressure filtering the solution using a 3 mL syringe passing thru a 13 mm diameter 2um filter. The solution was too viscous and caused material to spray out from the syringe filter assembly. It is unknown if a portion of the CS2 splash unto the Operator. The Operator had the proper PPE and performed the		

25228	Richmond, CA - Refinery	11/3/2011 8:45:00 AM	Closed	Loss	Carbon Disulfide solution on arm while filtering material into a vial.	transfer inside a fume hood. The proper use of the sash of the hood prevented material spraying onto other surfaces ofthe body. A major portion of the solution was sprayed on NOMEX slave and portion of the wrist of the Operator	Injury/Illness	(1) Operator was filtering material onto vial containing CS2.
26280	Richmond, CA - Refinery	11/3/2011 1:45:00 PM	Closed	Loss	Pt. Orient Feeder 12 KV Power Outage.	Power outage occurred when 12 KV Tie-line 1 (12-57 breaker) and Pt. Orient Feeder (12-56 Breaker) opened due to fault current affecting SP Hill / Main Tank Field, 17 Pump Station, RIE (tank data), and Administaration Building.	Equipment/Property Damage	(1) Tree trimming list given to Facilities end of July but tree trimmers didn't show up until mid November.
25305	Richmond, CA - Refinery	11/5/2011 11:00:00 AM	Closed	Near Loss	Lost key for Operator lock #0043 at T-3159 waterdraw	The Operator was unable to open the Lock #0043 because there was no lockbox with a key nearby. Opertions unable to locate key.	NL-Business Process - Business Interruption	
25306	Richmond CA - Refinery	11/5/2011 1:30:00 PM	Closed	Loss	Contract EE stood up hitting hard surface kinking his neck	EE was working at the NHT doing ground support. His task was to clean up the trash from the fin fan decks (E-412s)west side. There's a scaffolding that runs approx 40' long and 41/2 ft high that he had to work under. AT some pionl he stood up making contact with scaffold jamming his neck.	NL-Injury/Illness - Employee Injury	(1) EE not aware of surroundings
25306	Richmond CA - Refinery	11/5/2011 1:30:00 PM	Closed	Loss	Contract EE stood up hitting hard surface kinking his neck	EE was working at the NHT doing ground support. His task was to clean up the trash from the fin fan decks (E-412s)west side. There's a scaffolding that runs approx 40' long and 41/2 ft high that he had to work under. AT some pionl he stood up making contact with scaffold jamming his neck.	Injury/Illness	(1) EE not aware of surroundings
25307	Richmond CA - Refinery	11/5/2011 9:09:00 AM	Closed	Near Loss	Needed to unlock MOV locks, asked for loto key # 2088	Needed to unlock loto #2088, IMI needed to stroke/ check MOV's for P-1101"s	NL-Lessons Learned	
25311	Richmond, CA - Refinery	11/5/2011 7:20:00 PM	Closed	Near Loss	At 19.20 H2S sensor activated (20 PPM) alarm AI006 (near P-1925 in GRU/19 plant) that H2S was present. Area operators and CFD/rep investigated and found bleeder open near V-1910.	At 19:20 H2S sensor activated alarm AI006 (near P-1925 in GRU/19 plant) that H2S was present. Area operators and CFD/rep investigated and found 3/4" bleeder open near V-1909 udder control valve (liquid puddle at grade) . Operators and contractor near 13/16 plant notice an odor of Relief, Hydrocarbons and light gasoline vapor throughout the plant. Operations move from a control by plant evacuation, to sounding the evacuations siren. Lt Gasoline vapors were venting from med pump condensate valve packing in 13/16 plant also gasoline and water was drained from the header. Operations verified and isolated 40# and 150# steam and condensate at GRU boundary. Once the boundary was isolated and leaking valve packing was repaired the odor of Relief/HC/Lt Gasoline dissipated before gradually disappearing altogether.	NL-Operational Process/Procedures - Safety Systems	(1) Failure to ensure proper isolation between 150# steam header and relief source
25312	Richmond, CA - Refinery	11/8/2011 5:30:00 AM	Closed	Loss	Paticle in eye	EE working at NHT on piping at the E-410s received a particle in his eye. While grinding a piece of pipe a small piece of metal got into his eye.He was wearing all of his PPE.	NL-Injury/Illness - Contractor Injury	(1) Had all required PPE on. V2G(spoggles) upgrade may have made a difference.
25312	Richmond, CA - Refinery	11/0/2011 5:30:00 AM	Closed	Loss	Paticle in eye	EE working at NHT on piping at the E-410s received a particle in his eye. While grinding a piece of pipe a small piece of metal got into his eye.He was wearing all of his PPE.	Injury/Illness	(1) Had all required PPE on. V2G(spoggles) upgrade may have made a difference.
25315	Richmond, CA - Refinery	11/6/2011 11:15:00 AM	Closed	Near Loss	Personel medical	EE reported tingling in his finger tips an swollen fingers.	NL-Injury/Illness - Contractor Injury	
25316	Richmond, CA - Refinery	11/6/2011 10:00:00 AM	Closed	Near Loss	Insect bite	Bay Valve employee (Coleman Stevens) working at 5 CAT on control valve was bitten by an insect to his left thumb causing his thumb to swell.	NL-Injury/Illness - Contractor Injury	
25405	Richmond, CA - Refinery	11/7/2011 9:11:00 PM	Closed	Near Loss	Contract EE complain of H2S exposure but H2S personal monitor did not went off	Contract EE complain of H2S exposure while working at C-250 second deck. He evacuated the area and walked to the D&R lunch tent. EE personal H2S monitor appears normal and did not went off. Area JHT H2S monitor went off and all D&R areas (JHT, NHT,4CRUDE) were all evacuated at 9pm. Ops will input the plant monitor going off	NL-Injury/Illness - Contractor Injury	
25407	Richmond, CA - Refinery	10/27/2011 6:00:00 AM	Closed	Near Loss	Yellow paint on bumper and damaged grill	Yellow paint on bumper and damaged grill. Looks like damage may have been caused by a yellow pole and it's handles	NL-Transportation - Contractor	
25469	Richmond, CA - Refinery	11/6/2011 10:00:00 AM	Closed	Loss	LCO elbow leak at SOA boundary.	Elbow of 2 inch pipe has a pin hole leak in it.	Environmental	(1) Pin hole leak, (2) Suspect cause could be CUI, need inspections to varify.
25469	Richmond, CA - Refinery	11/6/2011 10:00:00 AM	Closed	Loss	LCO elbow leak at SOA boundary.	Elbow of 2 inch pipe has a pin hole leak in it.	NL-Environmental - Spill	(1) Pin hole leak, (2) Suspect cause could be CUI, need inspections to varify.
25471	Richmond, CA - Refinery	11/8/2011 1:30:00 PM	Closed	Near Loss	RLOP Flare Totalizer Tripped due to nitrogen purging of the relief header prior to startup	RLOP is in the processing of being started up following a Major Turnaround. The relief header was exposed to oxygen due to Maintenance repairs. The relief header was purged with nitrogen to remove oxygen (generates corrosion) from the system. RLOP was not on Flare Gas Recovery at the time. As a result, the nitrogen flow broke the 24" water seal in the flare and tripped the totalizer.	NL-Environmental - Release	
						.		(1) Used past experience to complete task., (2) SOS: Training & Procedures: The impeller was being heated with torches. It

25517	Richmond, CA - Refinery	11/9/2011 5:00:00 AM	Closed	Loss	Impeller broke while heating for removal	TOP INVESTIGATION Impeller was being removed from the balance mandrel. During the heating process impeller broke into three pieces. No mechanics injured	Equipment/Property Damage	is standard machining practice to heat the impeller this way for balancing. , (3) SOS.Design & Engineering: There is no warning on Machinist Manual to not heat the impeller., (4) •Sidebar Issue. Design & Engineering (Design & Engineering of Equipment): • Crack in original impeller. The impeller that was on the pump when it was sent to the Machine Shop had a full length crack in the bore (about 6 inches long) approximately 180 degrees opposite of the keyway and had propagated into a balance hole. • Metallurgy of new impeller. The impeller was made of white heat treated cast iron (according to the OEM). This metallurgy creates a hard, brittle material.
25551	Richmond, CA - Refinery	11/7/2011 7:00:00 AM	Closed	Loss	safety cartridge tripped	While cutting plexiglass on table saw, safety device tripped, causing saw to be unusable untilk replacment cartrage can be bought.	Equipment/Property Damage	(1) saw shut down due to safety trip
25559	Richmond, CA - Refinery	10/26/2011 10:15:00 AM	Closed	Near Loss	Green Card. Many handrails that are loose. Location: #7 Pump Station	Green Card. At 7 Pump Station there are many handrails that are loose. It is mostly wood handrails.	NL-Injury/Illness - Employee Injury	
25561	Richmond, CA - Refinery	10/27/2011 4:30:00 AM	Closed	Near Loss	Green Card. The wood deck is loose. Location: #1 Pump Station	Green Card. At #1 Pump Station the wood deck is loose and has been removed many times.	NL-Injury/Illness - Employee Injury	
25563	Richmond, CA - Refinery	10/30/2011 2:15:00 AM	Closed	Near Loss	Green Card. Broken weld on guard rail. Location: D&R C-1100	Green Card. While coming down from C-1100 I noticed some broken weld on guard rail (flat bars)	NL-Lessons Learned	
25565	Richmond, CA - Refinery	10/31/2011 10:00:00 AM	Closed	Near Loss	Green Card. Found a leak on gauge (fuel gas). Location: S. Isomax F-340A	Green Card. While working on a furnace, F340A, found a leak on gauge (fuel gas).	NL-Lessons Learned	
25566	Richmond, CA - Refinery	11/1/2011 3:00:00 PM	Closed	Near Loss	Green Card. Contractor unsafely towing weld machine with forklift. Location: RLOP	Green Card. Witnessed a contractor unsafely towing a weld machine with forklift. Forklift eventually fell off forks.	NL-Injury/Illness - Contractor Injury	
25567	Richmond, CA - Refinery	11/1/2011 2:30:00 PM	Closed	Near Loss	Green Card. Missing windsock. Location: Tank 1633	Green Card. Tank 1633 has a missing windsock and no other windsock in sight.	NL-Lessons Learned	
25570	Richmond, CA - Refinery	11/2/2011 8:30:00 AM	Closed	Near Loss	Green Card. A forklift carrying fresh air with only the forks. Location: 4 Crude	Green Card. Seen a forklift carrying a six pack of fresh air with only the forks.	NL-Injury/Illness - Contractor Injury	
25571	Richmond, CA - Refinery	11/3/2011 10:00:00 AM	Closed	Near Loss	Green Card. Valve leaking steam. Location: D&R F-3550	Green Card. Top deck of F-3550 by the steam drum there's a valve leaking steam.	NL-Lessons Learned	
25572	Richmond, CA - Refinery	11/2/2011 12:30:00 PM	Closed	Near Loss	Green Card. "Safety Suggestion Only" - Oily Gloves. Location: D&R 4 Crude Plant	Green Card. On several occasions I found contractors wearing oily gloves when drinking water from the cooler. I found greasy gloves and dirty rags sitting on top of the water igloo.	NL-Lessons Learned	
25589	Richmond, CA - Refinery	11/9/2011 10:19:00 PM	Closed	Near Loss	Lost LOTO Key 2004	Lost 4CU plot limit loto key 2004.	NL-Business Process - Business Process	
25619	Richmond, CA - Refinery	11/9/2011 1:15:00 PM	Closed	Loss	Ankle Sprain	Worker was coming down scaffolding stairs. As he stepped with right foot onto last step, he "rolled" his ankle, twisting it and immediately felt intense pain. His co-worker, Justin Walker, drove him to the Chevron Fire Station #60 where he was met by UST Services Safety Manager Jim Jastram and was examined by Chevron Fire Fighters/EMT's. Worker was seen at Chevron Medical Clinic and was transported to CareOnSite (at clinic's request) in Martinez, CA for precautionary X Rays. X Rays were negative and worker was released to Regular work status effective immediately. THIS INJURY IS A FIRST AID CASE ONLY.	NL-Injury/Illness - Contractor Injury	(1) Employee was unaware of his surroundings. Employee was unattentive to his work activities
25619	Richmond, CA - Refinery	11/9/2011 1:15:00 PM	Closed	Loss	Ankle Sprain	Worker was coming down scaffolding stairs. As he stepped with right foot onto last step, he "rolled" his ankle, twisting it and immediately felt intense pain. His co-worker, Justin Walker, drove him to the Chevron Fire Station #60 where he was met by UST Services Safety Manager Jim Jastram and was examined by Chevron Fire Fighters/EMT's. Worker was seen at Chevron Medical Clinic and was transported to CareOnSite (at clinic's request) in Martinez, CA for precautionary X Rays. X Rays were negative and worker was released to Regular work status effective immediately. THIS INJURY IS A FIRST AID CASE ONLY.	Injury/Illness	(1) Employee was unaware of his surroundings. Employee was unattentive to his work activities

25627	Richmond, CA - Refinery	11/8/2011 1:30:00 PM	Closed	Near Loss	Green Card. LOTO was not properly documented. Location: 3 Substation	Green Card. While auditing a crew who was pulling a large supply wire to an existing reactor, discovered LOTO was not properly documented with a CVX JHA/JJSV form. Action had been completed but not documented. Additionally, there was no lock box present for single point isolation LOTO.	NL-Lessons Learned	
25628	Richmond, CA - Refinery	11/8/2011 1:30:00 PM	Closed	Near Loss	Green Card. A Vault Box has a broken weight-rated lid. Location: 3 Substation parking area	Green Card. While pulling into parking area near jobsite, noticed a vault box has a broken weight-rated lid.	NL-Lessons Learned	
25629	Richmond, CA - Refinery	11/8/2011 2:00:00 PM	Closed	Near Loss	Green Card. Bridge is deteriorating. Location: Bridge 145 near Gate 31/Scales	Green Card. Brought to my attention by co-worker that a bridge is deteriorating and needs maintenance.	NL-Lessons Learned	
25631	Richmond, CA - Refinery	11/9/2011 5:00:00 PM	Closed	Near Loss	H2S monitors alarm	3 Personal H2S alarms went off during a scott air job. They were bottlewatch and stand by personel.	NL-Injury/Illness - Contractor Injury	
25638	Richmond, CA - Refinery	11/2/2011 2:00:00 AM	Closed	Loss	E-142A Tube Leak	The area operator noticed a hydrocarbon odor coming from the steam of the non-condensable vent from E-142A on his round. He collected condensate into a bottle from the drain off the non-condensable vent to the ground near V-142 & used a gas tech & got a LEL of 5, H2S of 3, CO of 8ppm in the bottles' headspace. The Head Operator and STL confirmed the gasoline odor on the ground.	Equipment/Property Damage	(1) E-142A tube leak
25640	Richmond, CA - Refinery	11/10/2011 9:45:00 AM	Closed	Loss	While negotiating a turn onto Quarry Road from Main Tank Field road a Sub-Contract Hauler clipped a pickup truck coming down Quarry Road just past the stop sign.	While negotiating a turn onto Quarry Road from Main Tank Field Road a Sub-Contract Hauler clipped a pickup truck coming down Quarry Road just past the stop sign. The Pickup Driver (Chevron Operator) stopped at the stop sign and pulled forward to give the Truck Driver more clearance to make the turn. When the Truck Driver made the turn he didn't realize the Operator stopped his vehicle until it was too late, as a result the dump truck clipped the rear end of the pickup.	Transportation	(1) There was mis communication between the two drivers as the Dump Truck Driver was making the turn onto Quarry Road from MTF Road. The DT Driver assumed the Driver of the pickup was going tp continue moving around the bend but, instead he stopped.
25640	Richmond, CA - Refinery	11/10/2011 6:28:00 AM	Closed	Loss	Loss of 800# steam production due to water entrapment the fuel gas.	The Cogeneration plant is equipped with auxiliary DUCT burners that are used for pressure control and demands on the refinery 800# steam system. These Duct burners are fired with Refinery fuel gas that is supplied from the #1 Power Plant via #6 F.G. line. The F.G. enters the Cogen plant and passes through a K.O. drum V-5290, before it passes on to the Duct burner elements. This K.O. drum is equipped with a high level S/D that will trip the duct burners in case of a high liquid level. The #6 F.G. can also supply other neighboring plants as operational needs dictate. During this particular incident, we were tied to a neighboring plant that was going through it's planned annual S/D. WE were supplying Cogen and The neighboring plant via #6 F.G. line from #1 P.P.. This was a very rare manifolding situation that required no change to the #1PP/Cogen tie, it only involved opening a normally closed valve to the neighboring plant. We were in this situation for weeks, with no impact to either plant. The neighboring plant completed the work that required any need of the #6 F.G. supply. They asked us to close our block valve, as they were now on their normal supply of fuel. When we closed this block valve, this is when a large amount of liquid surged into the Cogen V-5290 K.O. drum and activated the high level alarm that S/D the Cogen Duct Burners. This loss of heat to the Cogen Heat Recovery Steam Generator (HRSG) caused a refinery wide loss of pressure on the 800# stem system.	NL-Operational Process/Procedures - Safety Systems	(1) Excessive entrapped liquid in the FG line to V5290 Cogen
25654	Richmond, CA - Refinery	11/3/2011 1:00:00 PM	Closed	Near Loss	Loss of power to Data Center	Short power outage to Richmond Refinery Data Center - A/C units did not come on when power outage ocurred. Power outage was due to a transformer malfunction elsewhere in the refinery.	NL-Equipment/Property Damage - Equipment Damage	
25654	Richmond, CA - Refinery	11/3/2011 1:00:00 PM	Closed	Near Loss	Loss of power to Data Center	Short power outage to Richmond Refinery Data Center - A/C units did not come on when power outage ocurred. Power outage was due to a transformer malfunction elsewhere in the refinery.	NL-Business Process - Business Interruption	
25708	Richmond, CA - Refinery	11/11/2011 9:30:00 AM	Closed	Near Loss	Missing LOTO Keys	2 LOTO boxes, 1969 and 2063, used for isolation of the NHT reactor system for a shutdown are missing. LOTO was established ~4 weeks ago and as the system has been delete'd the keys cannot be found. P-411A needs to be unlocked for start up. PSSR 6420 for the NHT shutdown is complete.	NL-Operational Process/Procedures - Safety Systems	
25732	Richmond, CA - Refinery	11/5/2011 10:00:00 AM	Closed	Near Loss	Double Block and Bleed clean up manifold fell to ground	Chevron: EE was disconnecting a 3/4 inch clean up manifold and hose used for plant clean up on the first deck below V-1920 and V-1950. EE dropped the manifold on the deck, which was warped and the manifold bounced and landed in a way that allowed it to go over the toe rail and fall to the ground between the vessel foundation and P-1922. No one was in the area at the time but EE's working on C-1910 noticed the incident.	NL-Injury/Illness - Contractor Injury	(1) Improper lifting/lowering
						At approximately 11:00am on 11/5/2011 operations while setting up the DAO and of SOA for dryout circulation unblocked 67LC126. This separated the DAO/Solvent Column C126(Full of Pentane at that time) from the DAO flash tower(FULL of LCO per procedure. This effectively left one block valve		

25735	Richmond, CA - Refinery	11/5/2011 11:00:00 AM	Closed	Loss	During SDA 100 module startup Pentane was allowed to enter the DAO side and routed down 10 tar line to T234	separating the two columns.This single block valve (ORBIT) was found to be leaking by based on plant levels. Ops continued to try to circulate the back end while attempting to Trouble shoot the orbit. This went on for several hours.Ops was controlling level in the DAO system by opening PC2534 which dumps to the 10 tar line. Nightshift came in and after several more hours S/D the dryout circulated C-130 bottoms to flash off as much pentane they could from the DAO system recharged pentane levels in the Accumulators and put feed into the SDA. At this point pressures and temps as well as levels were normalized and plant operation has continued to be stable.	Operational Process/Procedures	(1) Leaking orbit block valve off C-126, (2) SDA Startup Procedure does not warn of pentane contamination down the 10 Tarline
25742	Richmond, CA - Refinery	11/11/2011 6:50:00 PM	Closed	Loss	While back washing E-138 lost vacuum to E-135 causing PC-100A to open to relief	The NGRU outside operator was performing his routine duty of back washing E-138. E-138 is part of the vacuum system of TK-130. The vacuum system removes non condensables from E-135 to keep a vacuum on the system. TK-130 discharges into E-135 supercondensor. The vacuum reduces the 650 steam use needed to drive TK-130. The operator was following his procedure listed on the hand Held device by back washing E-138. This process requires the hogging jet to be put into service. The operator opened the hogging jet with out opening the steam first. This cause slot of air to be sucked into the E-135 . The E-135 pressured up and caused the atmospheric safety to lift. This caused the TK-130 to slow down and the pressure to build up on V-100 which caused PC-100A to open 45% to the flare. The pressure bounce upset the FCC and caused the CBO to reduce Reactor temp and feed to keep the unit on line. This event was a training issue on theuse of procedures.	Operational Process/Procedures	(1) Problem Statement (What is the key issue that needs to be addressed?): E-135 atmospheric safety lifted FIVE WHY'S 1. Why did "above" happen? Verification Because of too many non condenseables in the system 2. Why did "1" happen? The hogging jet sucked in air into the system 3. Why did "2" happen? The hogging jet was not put into service correctly 4. Why did "3" happen? Steam was not opened to jet prior to commissioning the jet. 5. Why did "4" happen? Procedure was not followed. 6. Why did "5" happen? Training or misunderstanding of the procedure.
25760	Richmond, CA - Refinery	11/13/2011 2:00:00 AM	Closed	Near Loss	Wrong LOTO lock installed on valve. Unable to find key. LOTO lock #0900 needs to be unlocked or cut off.	The LOTO box that South Isomax used for the Hydrogen export valve to RLOP had one lock that did not belong with that box, and that lock was installed on the export valve. Can not locate the key.	NL-Operational Process/Procedures - Safety Systems	
25763	Richmond, CA - Refinery	11/13/2011 12:00:00 PM	Closed	Near Loss	Off test amylene stream in FCC resulted in Alky plant feed rate reduction	At approximately 1200 on 11/13, the FCC CBO noticed that the test results for the amylene stream indicated 10% C6s in the C5 stream, maximum C6 content is limited to 2%. The FCC CBO informed the Alky CBO operator of the high C6 content and the decision was made by the Alky Head Operator to initiate procedure ALKE455; response to high C6 content in the amylene stream. Feed rates to the Alky plant were reduced as a result.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) No mention of moves made on column or sample results showing high C6's in filemaker turnover, (2) Multiple crews/head operators saw high C6 sample results and took as false results without repeat sample, (3) Move made on column to reduce reflux but no other indications looked at to confirm change in column operation had desired effect other than one indication that had gone bad
25776	Richmond, CA - Refinery	11/13/2011 7:50:00 PM	Closed	Near Loss	F-3901 flare totalizer activity with visible flame	F-3901 flaring event with visible flame for less than 15 minutes due to additional relief gases overwhelming FGR relief compressor K-3950. Additional relief gases were from V-1175 skim line.	NL-Environmental - Release	
25833	Richmond, CA - Refinery	11/14/2011 10:20:00 AM	Closed	Near Loss	Need lock 1059 unlocked. Key missing	There is no key for lock #1059 at 2 locations on the 16" LSFO TL. These locks have been on for a long period of time.	NL-Business Process - Business Interruption	
25842	Richmond, CA - Refinery	11/11/2011 12:00:00 AM	Closed	Loss	K-1600, missing gasket on a 4' 1500# RTJ flange	Bay Valve: Gasket not installed on K-1600 Blind List, 4" 1500# RTJ flange. Flange Log and Job Complete Form submitted by Contractor containing the following information: Gasket size and type: 4" 1500# RTJ. R number and composition was not noted. Applied torque 460fp per GEN-5209 and verified by BV QC.	Quality	(1) Lack of focus, not verifying the work done previously.
25871	Richmond, CA - Refinery	11/14/2011 3:10:00 PM	Closed	Loss	Mule ears on Southwest corner of F-1160 (5th pass) flared up, approximately 36-40" in diameter.	Mule ears had slight drip coming from the Southwest corner of F-1160, pass 5. Steam Hoses with lance attached was in place to control potential flare up. Steam lance in service at 07:30 hrs., Operations called in flare up at 15:10 hrs attempt made to increase steam in order to snuff out flare up. Hoses not allowing steam to flow though, Fre extinguishers used to snuff out flare.	Fire/Explosion	(1) leaking mule ears
25885	Richmond, CA - Refinery	11/14/2011 5:53:00 PM	Closed	Loss	Fire at 4CU K-1165 residuum filters	While switching K-1165 residuum filters a bleeder leaked hydrocarbon and caught fire.	Fire/Explosion	(1) The Shift Turnover between personnel was inadequate and did not cover all the necessary information, (2) None of the existing Job Aids specifically addressed the work that was being performed on the Vacuum Residium Filters, (3) The bleeder valve that was used to vent K-1165B was not closed prior to backing stock into the Filter. (4) The lighting in the area of K-1165A/B was perceived as insufficient
25885	Richmond, CA - Refinery	11/14/2011 5:53:00 PM	Closed	Loss	Fire at 4CU K-1165 residuum filters	While switching K-1165 residuum filters a bleeder leaked hydrocarbon and caught fire.	Loss of Containment	(1) The Shift Turnover between personnel was inadequate and did not cover all the necessary information, (2) None of the existing Job Aids specifically addressed the work that was being performed on the Vacuum Residium Filters, (3) The bleeder valve that was used to vent K-1165B was not closed prior to backing stock into the Filter. (4) The lighting in the area of K-1165A/B was perceived as insufficient
25888	Richmond, CA - Refinery	11/14/2011 5:50:00 PM	Closed	Loss	Operator first aid facial burn due to fire	Operator received 1st and 2nd degree facial burns due to radiant heat from K-1165 fire.	Injury/Illness	(1) Burns caused by unexpected fire.
	Richmond,	10/13/2011			Green Card. Three 2" lines need to be supported.			

25921	CA - Refinery	7:00:00 AM	Closed	Near Loss	Location: Pipeway West of Dresser Rand	Green Card. Three 2" lines need to be supported. Just handing loose in pipeway.	NL-Lessons Learned	
25923	Richmond, CA - Refinery	11/15/2011 7:00:00 AM	Closed	Loss	Loss of Quarry Feeder (portion)	Electric fault. A wire jumper failed on pole 122. Occurred on an open air, 12,000 volt circuit ((Quarry Feeder).	Equipment/Property Damage	(1) copper corrosion
25934	Richmond, CA - Refinery	10/28/2011 8:00:00 AM	Closed	Near Loss	Green Card. Porta pottys are very dirty. Location. 91 Parking by Tool Trailer	Green Card. The porta pottys are very dirty.	NL-Lessons Learned	
25935	Richmond, CA - Refinery	10/31/2011 4:00:00 PM	Closed	Near Loss	Green Card. Truck came around corner too fast. Location Behind Boiler Shop	Green Card. "Blind Corner". Was driving behind Boiler Shop when a delivery truck came around the corner too fast.	NL-Injury/Illness - Contractor Injury	
25938	Richmond, CA - Refinery	11/2/2011 4:30:00 PM	Closed	Near Loss	Green Card. A water cooling tower was leaking. Location: FCC Cooling Tower	Green Card. A water cooling tower was leaking from the flame up about 30' on the back side.	NL-Lessons Learned	
25941	Richmond, CA - Refinery	11/3/2011 1:00:00 PM	Closed	Near Loss	Green Card. Multiple leaks on 3/4" piping on 150lb steam. Location: SDA at pillar TM-A-4	Green Card. 3/4 piping on 150lb steam - multiple leaks waist and head high. Potential for a bad burn.	NL-Injury/Illness - Employee Injury	
25942	Richmond, CA - Refinery	11/3/2011 8:00:00 AM	Closed	Near Loss	Green Card. Some grading is missing on south end of Bridge 145. Location: Corner of Xylene/Channel St.	Green Card. Some grading is missing on south end of Bridge 145.	NL-Lessons Learned	
25943	Richmond, CA - Refinery	11/7/2011 1:30:00 PM	Closed	Near Loss	Green Card. Some of the grading around burners is bent and loose. Location: 4Cat F-3550	Green Card. Some of the grading around the bottom of the burners is bent and was loose.	NL-Lessons Learned	
25944	Richmond, CA - Refinery	11/7/2011 12:00:00 PM	Closed	Near Loss	Green Card. Steam leak on 8" pipe. Location: Near tank 3106 boundary.	Green Card. Steam leak on 8" pipe near Tank 3106 boundary.	NL-Lessons Learned	
25945	Richmond, CA - Refinery	11/8/2011 4:30:00 PM	Closed	Near Loss	Green Card. Conduit sticking out the back of truck bed. Location: Contractor parking lot	Green Card. Pickup parked with conduit sticking out of the back of bed. This could be a hazard in the early morning hours. Should have yellow caution tape tied to conduit.	NL-Injury/Illness - Contractor Injury	
25949	Richmond, CA - Refinery	11/8/2011 7:30:00 AM	Closed	Near Loss	Green Card. Two steam leaks. Location: S. Isomax SDA 20' South of 126i	Green Card. We found two more steam leaks at the same location and it needs to be fixed because it's blowing near the eye level and someone will get burned if not fixed.	NL-Lessons Learned	
25950	Richmond, CA - Refinery	11/8/2011 7:15:00 AM	Closed	Near Loss	Green Card. Steam leak from C-130. Location: S. Isomax , backend or south side of C-130	Green Card. Steam leaking out bad from C-130. We need someone to walk the job in SDA and write work order so someone can fix them.	NL-Lessons Learned	
25951	Richmond, CA - Refinery	11/8/2011 7:00:00 AM	Closed	Near Loss	Green Card. Bad steam leak. Location: S. Isomax P-130	Green Card. When I walked out to control room and walked to P-126, I couldn't get to the other side because steam leak so bad and it's hard to see the walkway.	NL-Lessons Learned	
25952	Richmond CA - Refinery	11/8/2011 8:00:00 AM	Closed	Near Loss	Green Card. Overhead steam leak needs to be fixed. Location: S. Isomax SDA 50' South of C-126	Green Card. Overhead steam leak needs to be fixed because it's leaking out steam very bad. We need someone to look at the line to see what needs to be done or write a work order so someone can fix them.	NL-Injury/Illness - Employee Injury	
25953	Richmond, CA - Refinery	11/8/2011 12:00:00 PM	Closed	Near Loss	Green Card. An argon bottle left in the unit after shutdown. Location: S. Isomax A Train	Green Card. An argon bottle left in the unit after a shutdown didn't tie down with chain or wire. Someone did tie down but with rope.	NL-Lessons Learned	
26039	Richmond, CA - Refinery	11/16/2011 8:15:00 AM	Closed	Loss	Fire Water Line Rupture	Fire Line rupture occurred in Main Yard area of refinery while preparing to perform fire water flow tests.	Equipment/Property Damage	(1) Many sections of the fire line are old carbon steel pipe that suffers from internal corrosion. Often times these lines experience failures when exposed to the increased pressure during flow testing. Keeping the tank open to the system limits the system pressure during flow tests.
26039	Richmond, CA - Refinery	11/16/2011 8:15:00 AM	Closed	Loss	Fire Water Line Rupture	Fire Line rupture occurred in Main Yard area of refinery while preparing to perform fire water flow tests.	NL-Equipment/Property Damage - Equipment Damage	(1) Many sections of the fire line are old carbon steel pipe that suffers from internal corrosion. Often times these lines experience failures when exposed to the increased pressure during flow testing. Keeping the tank open to the system limits the system pressure during flow tests.
	Richmond, CA -	11/16/2011 5:20:00		Near	F-3901 flaring visible flame while opening HEL H2 to	While opening HEL H2 to K-900's due to sagging Penhex pressure, H2	NL-Environmental -	

26072	Refinery	PM	Closed	Loss	K-900's.	overpressured relief system and caused flaring.	Release	
26077	Richmond, CA - Refinery	11/16/2011 7:00:00 PM	Closed	Loss	Cherry picker outrigger struck PRD pipe	Cherry Picker's outrigger struck PRD outlet pipe on TP-1402A while comming up to move.	Equipment/Property Damage	(1) Lack of visibility or a spotter
26145	Richmond, CA - Refinery	11/16/2011 3:00:00 AM	Closed	Near Loss	Yellow Line process has no procedure	PSSR is a redundant (audit) process mandated by law and reinforced by OE to ensure that certain activities have been completed. Before a PSSR can be completed, Operators are required to walk a system and "yellow line" and sign a P&ID. This is then transferred to a master copy binder, which they also have to sign. There is no formal procedure or job aid for this process. The process has changed several times throughout the RLOP 2011 Major Turnaround. These changes have confused many people on this process. Several systems were PSSR'd without yellow lined P&ID's turned in. More than half of 19 Plant's yellow lines were missing, and weren't transferred into the master copy binder until after 19 Plant was running. Most are still unsigned in the master copy binder. It was decided to forgo the yellow lining process, taking only an operator's word that the system was walked and verified. This means that P&ID's in the database were marked as 100% completed, marked with an operator's CAI, and then would be marked on the master copy assuming the operator walked every single line on that P&ID. The operator would then have to be tracked down at a later time to sign the master copy. It seems like the PSSR process is being rushed. What is the worst that could happen? Something could be missed that can cause injury, death, or damage to equipment. Do it safely or not at all. We need to have a formal procedure for yellow lining, and how it fits into the PSSR process.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
26169	Richmond, CA - Refinery	11/18/2011 9:50:00 AM	Closed	Loss	Mechanic was using a crow foot wrench and wrench snapped causing laceration to his arm.	Mechanic was using a crow's foot wrench to remove a bolt. When the mechanic pulled on the wrench the wrench snapped and the mechanic hit his wrist on a nearby valve causing a laceration to his right wrist. EMT's were called out and the mechanic was taken to the clinic for further evaluation. Clinic release mechanic back to work with no restrictions.	Injury/Illness	(1) Poor quality tool.
26188	Richmond, CA - Refinery	11/17/2011 1:00:00 PM	Closed	Near Loss	Refinery Blend Recipe update failed	On Thursday, 11/18/2011 at approx. 1300hrs, the Refinery Products Blending Coordinator (PBC) attempted to update the Recipe file for an upcoming Blend recipe change using a three (3) Phase Automated File Transfer system. The updated recipe (.bpc file) was placed in the "Blending Repository" on the PIN (Level 4), a network file share restricted to authorized personnel. Through the automated process, the file was successfully relocated (i.e., moved) to the interim file transfer location in the DMZ (Level 3.5) as expected (aka PHASE 1). When it arrived at the interim location, it remained there and never propagated to the B&S PCN AppNode (Level 3) destination as normally expected (aka PHASE 2). When the bcp file that was previously placed in the Blending repository was moved (i.e., no longer present in that folder), the PBC expected to receive a file transfer confirmation (aka PHASE 3). This is indicated by checking the "modified date" on the resident output.txt (confirmation file) in the blend repository (usually in a span of less than 10 minutes). When this did not occur in the expected timeframe, the PBC attempted the manual update on Refined GUS workstation 10 (GUS 10) the move failed, indicating that the shortcut was invalid? The secondary support PCN Administrator was contacted and upon investigation, the PeerSync service on the PDDSC server was started (i.e., Running) on the PeerSync Profiler (Phase 2 Data mover) but the file was not being moved. With the Blend recipe window rapidly closing, it was decided to reattempt the Contingent File transfer method. At approximately 1550, the manual file transfer was re-tested by the PBC with the PCN Admin present. Without realizing any difference, it was retested on GUS 07. Much to their surprise, it completed successfully, unaware of any misconfiguration. The Blend repository output.txt modified date reflected that the recipe update was completed at 1405 hrs. After further inspection, it was discovered that pointing to the old (Pre-Technology Refresh) AppNode server name. This PHASE 2 destination sdarver was replaced in August 2011 but the shortcut was not updated on GUS10.	NL-Business Process - Business Process	(1) There were two GUS stations that needed to have their shortcuts updated, only one GUS station was updated since Network Administrator was uninformed that other GUS station had a shortcut. Documentation has been corrected to show the correct environment and setup.
26200	Richmond, CA - Refinery	11/18/2011 1:15:00 PM	Closed	Loss	While resetting OST EE experienced pain in right elbow	Operators were performing turbine over speed trip checks on TP-710. This was the 3rd time the lever was tripped. On the first two trips two operators worked together to pulled up on reset lever. On the 3rd trip reset EE lifted up reset lever himself with right hand felt a shock sensation in fold of elbow. Let go of lever and let the other operators complete reset. Came into hydro control house and reported it to the STL.	Injury/Illness	(1) Operator used an arm curling lifting motion to lift the load and put full load on bicep
26200	Richmond, CA - Refinery	11/18/2011 1:15:00 PM	Closed	Loss	While resetting OST EE experienced pain in right elbow	Operators were performing turbine over speed trip checks on TP-710. This was the 3rd time the lever was tripped. On the first two trips two operators worked together to pulled up on reset lever. On the 3rd trip reset EE lifted up reset lever himself with right hand felt a shock sensation in fold of elbow. Let go of lever and let the other operators complete reset. Came into hydro control house and reported it to the STL.	NL-Injury/Illness - Employee Injury	(1) Operator used an arm curling lifting motion to lift the load and put full load on bicep
	Richmond,	11/18/2011			Breaker tripped causing a		NL-Operational	

26222	CA - Refinery	11:00:00 AM	Closed	Near Loss	power outage in the D&R Control House	Breaker #254-1 @ TX 254/255 tripped for unknown reasons causing a power outage in the D&R Control House.	Process/Procedures - Safety Systems	(1) Breaker opened unexpectedly
26242	Richmond, CA - Refinery	11/19/2011 3:02:00 PM	Closed	Near Loss	T-1504 Odor Issue	The Mississippi Voyager was discharging water and recovered oil into T-1504. This is not a typical process and all involved were aware of a potential H2S issue with the material being moved. All involved were aware that the transfer required transfer at rates considerably slower than normal for the ship; approximately 2MB/hr. At 14:30 on 11/19, the ship began discharging the material at the slowest rate possible for their pumps, approximately 3MB/hr, into T-1504 At 15:02 the STL recieved a "heads-up" from a company employee that was crossing the Richmond/San Rafael Bridge that there was an odor of H2S at the toll plaza. Plant Protection was called to verify the odor, and once it was determined the source was T-1504, the transfer was shut down immediately.	NL-Regulatory Compliance - Non Compliance - Air	(1) Requirements for a slower transfer rate were not communicated to the vessel coordinator. , (2) F. Inadequate communication of expectations regarding procedures or standards
26244	Richmond, CA - Refinery	11/20/2011 9:15:00 AM	Closed	Near Loss	FCC and Alky flare totalizer trip	SISO was requested pull samples off C-130,C-140 and Tar stripper. In order to get a representative sample the DAO startup loop was circulated VIA P-140 and P-130 (P-140 thru LC-140 to C-130 top and bottom pans back to C-140). There was enough residual heat in C-130 that when the process (LCO/ and unwanted solvent) entered back into C-140 it flashed overhead into V141(low pressure solvent accumulator) and over pressured it sending solvent to V-150 relief drum. This tripped the FCC and Alky totalizer but no visible flame that we could see.	NL-Environmental - Release	(1) This was a unique situation and required a non-routine process to get this sample for startup LPSA discussion did not consider residual heat would cause overpressure when circulation established
26249	Richmond, CA - Refinery	11/20/2011 6:45:00 AM	Closed	Near Loss	Tripped RLOP flare totalizer after shutting down feed pump due to valve leak.	At approx 6:45am a leak was detected on an Edwards valve on 14 Pit feed system and the diesel sulfiding was stopped and HNC feed pump was shutdown. At this time H2 M/U was introduced to sweep oil off the Catalyst in R-1410 and R-1411 to the high pressure V-1410. V-1410 level came up sharply. At aprox 6:50am OPS vented the Low Pressure separator V-1420 to relief to increase the pressure difference between the high pressure system and the low pressure systems to help evacuate V-1410's high high level.	NL-Environmental - Release	(1) 5 WHY INVESTIGATION 1. Why did the problem occur? The off-gas from V-1420 was routed to relief. 2. Why? The pressure differential between V-1410 and V-1420 was increased to drop the level in V-1410 and avoid shutting down the recycle compressor. 3. Why? The letdown valve between V-1410 and V-1420 was fully closed when feed was pulled. This did not provide sufficient time to catch and control the level increase in V-1410.
26369	Richmond, CA - Refinery	11/15/2011 10:30:00 AM	Closed	Near Loss	Green Card--Bottle Not Secured	Green Card---Noticed inside bottle cage safety chain was not hooked up to the bottles. The chain is prevents the bottles from falling.	NL-Fire/Explosion	
26378	Richmond, CA - Refinery	2/15/2011 12:00:00 AM	Closed	Loss	Process Improvement for HR manpower transactions	Process Improvement for HR manpower transactions	Business Process	(1) Process Data Maintainers did not follow all required steps
26415	Richmond, CA - Refinery	11/21/2011 8:45:00 PM	Closed	Loss	Cavitation of P-1635 caused process upset in HNF casing product to be routed off test for 4 hrs.	In an attempt to warm up and switch to P-1635A in order to pull suction screen on P-1635 pump started to cavitate causing a process upset. HNF had to be routed off test for 4 hours. F-1650 went to min fires.	Operational Process/Procedures	(1) Pump cavitation
26439	Richmond, CA - Refinery	11/22/2011 6:00:00 AM	Closed	Near Loss	Green Card--Loose Grating	Green Card--Grating in front of 36" valve on T-3106 is loose and needs to be anchored to the I-beam.	NL-Equipment/Property Damage - General Liability	
26445	Richmond, CA - Refinery	11/10/2011 2:15:00 PM	Closed	Near Loss	Green card--Need new Stop Sign	green card--The stop sign across Standard Oil switching station off Xylene St is extremely faded and needs to be replaced	NL-Business Process - Business Process	
26450	Richmond, CA - Refinery	11/14/2011 11:00:00 PM	Closed	Near Loss	green card--Bad Grating	Green Card--Bridge #145 off Xylene and Channel St, grating is bad and in need of repair.	NL-Equipment/Property Damage - General Liability	
26454	Richmond, CA - Refinery	11/15/2011 1:15:00 PM	Closed	Near Loss	Green Card--No face shield or goggles	Green Card--Co-workers working at Alky unit in the yellow line zones without face shields and goggles on. They only wore safety glasses	NL-Injury/Illness - Contractor Injury	
26461	Richmond, CA - Refinery	11/16/2011 6:05:00 AM	Closed	Near Loss	Green Card-Truck left running	Green Card--Unattended running truck at Timec Tool Room. It was located more than 20' away from the tool room trailer and no one was around.	NL-Transportation - Contractor	
26462	Richmond, CA - Refinery	11/16/2011 2:00:00 PM	Closed	Near Loss	Green Card--Acid Spilled to Ground	Green Card--Noticed some acid had spilled out of a hose. Make sure to cover or flush your hoses to make sure there is no residual product	NL-Environmental - Spill	
26465	Richmond, CA - Refinery	11/9/2011 7:00:00 AM	Closed	Near Loss	Green Card--Panel missing on Bridge	Green Card--At bridge next to the barrel storage area there is a section of the panel missing. Possibly causing severe damage to vehicles tires in which control of the vehicle could be loss resulting in an accident. The bridge panel needs to either be replaced or a flat plate welded over the section that is damaged.	NL-Equipment/Property Damage - Equipment Damage	
26466	Richmond, CA - Refinery	11/14/2011 12:00:00 PM	Closed	Near Loss	Green Card--Missing Grating	Green Card--The grating on the south side of T-3106 next to 30" 150# valve needs to be clamped down. It is currently unsafe to walk in that area.	NL-Injury/Illness - Employee Injury	

26466	Richmond, CA - Refinery	11/14/2011 12:00:00 PM	Closed	Near Loss	Green Card--Missing Grating	Green Card--The grating on the south side of T-3105 next to 30" 150# valve needs to be clamped down. It is currently unsafe to walk in that area.	NL-Injury/Illness - Contractor Injury	
26473	Richmond, CA - Refinery	11/16/2011 1:00:00 PM	Closed	Near Loss	Green Card--Equipment Damage	Green Card--When I pick up the carry deck and do the check list and I found a cable clamp was loose. The cover in the back is stuck and I could not open it to check the water level.	NL-Equipment/Property Damage - Equipment Damage	
26613	Richmond, CA - Refinery	11/23/2011 10:26:00 AM	Closed	Loss	K-1400 tripped on High Pressure separator(V-1410) High High Level	During HNC startup activities,at 10:00 am 11/23, RLOP ops personnel and S/D maintenance went out to work on 84LV466 to do a stroke check prior to putting it in operation. At the time 84LV466 was in service. These valves control the level on High pressure separator V-1410.Control Air was manually switched to LV-466 to perform a stroke check prior to placing it in service, this took the air off of LV-466 effectively setting the valve were it was, leaving the OWS-5 with no level control. At approximately 10:10 OWS# 5 reports that the level in V-1410 was rising. The OWS-5 stated he initially thought the level was erroneous. Looking at additional information on the board (V-1420 low pressure separator level Dropping), it was determined that the level was real and OWS# 5 called out on the radio that the level in V-1410 was rising rapidly. Before mitigating action could be accomplished, K-1400 shut down on LAHH.This also caused flaring. Air was switched back to LV466 and V-1410 Level was brought under control. Subsequently the outside operators took steps to restart K-1400.	Operational Process/Procedures	(1) Miscommunication on control air setup
26617	Richmond, CA - Refinery	11/23/2011 12:00:00 AM	Closed	Near Loss	While installing a blind in a 14" fire water line mechanic got a partial in the eye.	Mechanics were on a staging 25ft in the air removing old bolts to install a 14" blind when one of the mechanic felt something in there eye. They flush there eye at the job site but as a precaution they had the clinic verify that the particle was removed before they left for the weekend. No particle was found in the eye and mechanic was released back to work.	NL-Injury/Illness - Employee Injury	
26632	Richmond, CA - Refinery	11/23/2011 6:19:00 PM	Closed	Loss	Fire reported between the Redwood Painting trailer & the LSM Contractor trailer off Xylene St.	TOP INVESTIGATION: INITIAL DESCRIPTION:FOR FULL DESCRIPTION SEE LINK IN INVESTIGATION. A fire was reported at approx. 18:19 hrs. in the area of the Redwood Painting compound off Xylene St. (SW corner of SOSS) Upon arrival, the fire was located between a Redwood Painting trailer and the LSM Contractor trailer. Initial inspection of the area is leaning towards a haz. waste bin as the point of ignition. The LSM trailer has sustained significant damage. Investigation is ongoing.	Fire/Explosion	(1) Waste bin and trailer were in close proximity to each other, (2) Varied material was placed in and around the hazardous waste bin, (3) Sidebar: Current Industrial Debris Hazardous Waste bins in use in the refinery are made of plastic and will catch fire when exposed to high heat from burning materials. , (4) Sidebar: No forensic analysis performed by Chevron Fire Department
26665	Richmond, CA - Refinery	11/24/2011 12:00:00 AM	Closed	Near Loss	misplaced Loto Box key #2043	Misplaced Loto Box key #2043 equipment needed to start Unit.	NL-Business Process - Business Interruption	
26674	Richmond, CA - Refinery	11/24/2011 2:00:00 PM	Closed	Near Loss	a personal H2S monitor went off	Bigge - EE was on the deck at V1177 with 3 other EEs when his H2S monitor went off. No one elses went off. No one smelled any H2S. When tested his had a reading of 26ppm	NL-Injury/Illness - Contractor Injury	
26677	Richmond, CA - Refinery	11/24/2011 12:00:00 AM	Closed	Near Loss	lost LOTO key box 2043	LOTO box key lost 2043	NL-Operational Process/Procedures - Safety Systems	
26754	Richmond, CA - Refinery	11/25/2011 10:13:00 PM	Closed	Near Loss	F-3901 totalizer trip, no visible flame	F-3901 totalizer tripped, no visible flame while starting up crude unit. C-1190 pressure controller opened up to control pressure and overwhelmed relief system. K-3950 running at the time.	NL-Environmental - Release	
26755	Richmond, CA - Refinery	11/26/2011 12:49:00 AM	Closed	Near Loss	F-3901 totalizer trip, flaring visible flame	F-3901 totalizer tripped and flared with visible flame due to K-242/52 shutdown on high liquid level at knockout pot.	NL-Environmental - Release	
26773	Richmond, CA - Refinery	11/27/2011 7:30:00 AM	Closed	Near Loss	While starting K-1900, 89PC694 opened to relief overwelming FGR and tripping the FCC totalyzer.	While starting up K-1900, 89PC694 opened to relief, overwelming FGR and tripping FCC totalyzer.	NL-Environmental - Release	
26784	Richmond, CA - Refinery	11/27/2011 12:00:00 AM	Closed	Near Loss	F-3901 totalizer trip visible flame while circulating H2 at DHT	F-3901 totalizer trip visible flame. While circulating H2 at DHT overpressured to relief.	NL-Environmental - Release	
26786	Richmond, CA - Refinery	11/27/2011 7:50:00 PM	Closed	Near Loss	K-1900 surging until normal feed gas is available.	RLOP plants are in the process of starting up after a Major turnaround. Until more process gases are available for feed, K-1900 is fed other gases as a substitute. Without proper gas feed to K-1900 the compressor will surge (unstable pressure swings) until a more favorable gas feed in available. The normal process gas which is fed to K-1900 will not be available until either LNC or HNC produce off gas. During this time, PCO is continuing to make several moves to optimize K-1900's operation including adding and removing N2, V-1920 vent gas,TKC overhead gas and plant fuel gas.	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) Our current K-1900 startup procedure (GRU-NP-4501) does not include the use of N2 as supplementary feed gas during start-up.
								(1) The C-1500 manway M-3 corrosion damage was reported late because the inspector did not see it, mark it, report it, or document it upon performing the initial inspection. The initial inspection was not adequate , (2) Although C-1500 vapor

26802	Richmond, CA - Refinery	10/26/2011 12:00:00 AM	Closed	Near Loss	Cracking around C-1500 Impingement plate not predicted	While performing an inspection of C-1500 in preparation for closure cracking was noted around the impingement plate that required considerable repairs.	NL-Business Process - Business Process	horn bottom attachment weld crack and clad to clad weld seam undercut corrosion were missed due to lack of staging during the initial inspection, the responsible inspector did not return to complete his full inspection., (3) Corrosion of the C-1500 vessel shell under the impingement plate was missed because it was very difficult to observe and also considered unlikely to occur in this service.
26855	Richmond, CA - Refinery	11/28/2011 9:02:00 AM	Closed	Near Loss	Cogen 1000 & 2000 BMSS (Burner Management Shutdown System) activated during test of evacuation alarm	This morning 11/28 @ 9:02 upon completing the Cogen Evacuation Test and turning the evac switch to the "Off" position, both T1000 & T2000 BMSS (Burner Management Shutdown System) tripped off line at the same time the switch was turned to the off position.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Why did both Duct Burners system tripped while testing the Evacuation horn? Both Duct Burners sets tripped because the PLCs received the Remote Emergency trip signals. Why did the PLCs received the Remote Emergency trip signals? The trip switches were not activated since the DCS inputs for these switches did not activate. However, it is possible to have the BMSS trip relays activate at the PLCs due to low/no voltage. Re-enacted event several times and were not able to replicate same outcome even while monitoring voltage. Same evacuation test has been conducted by Ops routinely several times since incident without a repeat event.
26858	Richmond, CA - Refinery	11/28/2011 3:15:00 PM	Closed	Near Loss	Visible flaring at the FCC flare during LNC startup.	During the LNC start up, V-1120 overhead bleed was routed to relief. As pressure was building in V-1120 and the overhead PC started to open, that flow overwhelmed Flare Gas Recovery and some relief gasses went to the FCC flare.	NL-Environmental - Release	
26874	Richmond, CA - Refinery	11/28/2011 7:00:00 PM	Closed	Loss	Employee reported sore knee	Employee reported sore knee to STL.	Injury/Illness	(1) off the job injury. no further investigation needed. , (2) off the job injury. no further investigation needed.
26880	Richmond, CA - Refinery	11/28/2011 8:50:00 PM	Closed	Loss	HNF Feed Pump P-1601 lost suction	The HNF was operating normally feeding 8.0 KBPD of waxy 220 from tanks T-3161/62. During this time, the Light Neutral Finisher was circulating recycle hydrogen and moving towards feed-in. Operators were preparing to warm up the feed pumps at the LNF using the same waxy 220 from T-3161/62. (Note: Waxy 220R from T-3161/62 is supplied to HNF & LNF through a pair of shared drop/fill lines that branch individually to HNF & LNF at the boundary). The LNF feed system was prepared (per procedure) to warm up the feed pumps by taking waxy 220 from the boundary through the pumps themselves and finally into low pressure separator V 1320. However, when the waxy 220 was cracked up at the boundary, Operations reported that HNF feed pump P-1601A cavitated. Feed was eventually lost to the HNF. Stable conditions were restored by going into a catalyst hot strip posture with input from Process Engineering. In addition, Operations opened a high point vent on the HNF feed line and found gas. Operations notified T&B that T-3161/62 might have been back-flowed with gas. T&B checked the tanks found 0 ppm LEL. However, the level in T-3152 increased by approximately 100 bbls. Furthermore, it was noted by Operations that the LNF reactor feed valve (83FC005) was unblocked (Note: The reactor feed valve is to be blocked-in per procedure during a plant shutdown. The reactor feed valve is only to be unblocked immediately before introducing feed. There was no mention in the LNF feed pump warm up procedure to verify that the reactor feed valve is blocked-in). The control valve itself was closed. The control valve is not designed or intended to provide positive isolation.	Operational Process/Procedures	(1) The HNF lost feed. Why? The HNF feed pump P-1601A cavitated. Why? The HNF feed pump suction gassed out. Why? Recycle gas from the LNF backed into the HNF through the common waxy 220 feed system. Root Cause #1 - LNF feed pump warm up procedure does not state to verify the reactor feed valve is blocked-in., (2) The HNF lost feed. Why? The HNF feed pump P-1601A cavitated. Why? The HNF feed pump suction gassed out. Why? Recycle gas from the LNF backed into the HNF through the common waxy 220 feed system. Root Cause #2 - LNF reactor feed check valve and reactor feed control valve did not hold.
26971	Richmond, CA - Refinery	11/28/2011 2:00:00 PM	Closed	Near Loss	Miss understanding of BPC control parameters	Board Op miss understood the parameters available to be changed when BPC in ON-CTLthis caused him to believe he did not have control of his blend. A previous incident resulted in having to perform the gasoline manually.	NL-Business Process - Business Process	
26971	Richmond, CA - Refinery	11/28/2011 2:00:00 PM	Closed	Near Loss	Miss understanding of BPC control parameters	Board Op miss understood the parameters available to be changed when BPC in ON-CTLthis caused him to believe he did not have control of his blend. A previous incident resulted in having to perform the gasoline manually.	NL-Lessons Learned	
27032	Richmond, CA - Refinery	11/30/2011 7:00:00 AM	Closed	Near Loss	Called Plant protection to open LOTO Box 0495 on P-1 at 24 PS	Called Plant protection to open LOTO Box 0495 on P-1 at 24 PS. Operator put green isolation lock on Loto Box instead of yellow operator's lock.	NL-Business Process - Business Interruption	
27087	Richmond, CA - Refinery	11/14/2011 12:00:00 AM	Closed	Near Loss	Contracting Company working for 2 weeks without SSE Program involvement	High-Risk Contractor had up to 8 personnel at elevated risk working without involvement in CVX SSE Program nor one of their own.	NL-Business Process - Business Process	(1) Contractor Rep misinterpreted SSE portion of training at IIFO class., (2) No process in place to prevent new personnel to enter the refinery without notifying SSE Coordinator.
27096	Richmond, CA - Refinery	11/30/2011 1:00:00 PM	Closed	Loss	Foreign Body in workers left eye.	Foreign body in workers left eye, no embedment.	NL-Injury/Illness - Contractor Injury	(1) Worker did not clear debris prior to removing PPE
27096	Richmond, CA - Refinery	11/30/2011 1:00:00 PM	Closed	Loss	Foreign Body in workers left eye.	Foreign body in workers left eye, no embedment.	Injury/Illness	(1) Worker did not clear debris prior to removing PPE
	Richmond,	11/29/2011			SDA 100 Module Startup Delay due to Plugged	Plugging was discoverd on E-103/4/5 feed fin-fan coolers on the SDA 100 module while attempting to introduce resid feed following the 4CU startup.		(1) SDA prestartup checklist SDAC2001was not used for the SDA startup to stroke and verify control valve lineups.

27142	CA - Refinery	12:00:00 AM	Closed	Loss	Feed Fin-Fan Exchangers E-103/4/5	Initial investigation noted that the solvent pre-dilution FCs (67FC1003/4/5) was manually blocked in, allowin the coolers to plug.	Operational Process/Procedures	Checklist is a prerequisite for SDA startup procedure SDAN2010 and not a signoff step.
27150	Richmond, CA - Refinery	10/31/2011 8:00:00 AM	Closed	Near Loss	Green Card. Possible sink starting. Location: Power Pole 4003/Xylene St	Green Card. Looks to be a possible sink starting Power Pole 4003 on Xylene Street. Voids around pole.	NL-Lessons Learned	
27151	Richmond, CA - Refinery	11/10/2011 9:00:00 AM	Closed	Near Loss	Green Card. Blind corner. Location: Quarry Rd, Bridge 173 at Tank 956	Green Card. Blind corner at Quarry Road, Bridge 173, at Tank 956. Tree should be cut back in order to see traffic on blind corner. A lot of truck traffic going on right now.	NL-Lessons Learned	
27152	Richmond, CA - Refinery	11/17/2011 2:00:00 PM	Closed	Near Loss	Green Card. Contractors walking on top of pallets. Location: 8 Warehouse	Green Card. Several contractors walking on top of pallets of blinds, located at 8 Warehouse. Blinds have dew sitting on top. Stop and talk with worker, walk around or have pallets moved.	NL-Injury/Illness - Contractor Injury	
27153	Richmond, CA - Refinery	11/18/2011 3:00:00 PM	Closed	Near Loss	Green Card. Forklift driver moving load without securing it. Location: 5 Cat parking lot	Green Card. Forklift driver moving load without securing it. Dropping small pieces of piping, bolts and gaskets while traveling on uneven surface.	NL-Injury/Illness - Contractor Injury	
27155	Richmond, CA - Refinery	11/20/2011 12:30:00 PM	Closed	Near Loss	Green Card. Unsafe conditions for workers to eat. Location: 4 Crude lunch tent	Green Card. Several pigeons sitting on lunch table. Footprints all over lunch tables. Two cats running over and across worker lunchbox. Unsafe conditions for workers to eat.	NL-Lessons Learned	
27156	Richmond, CA - Refinery	11/21/2011 2:00:00 PM	Closed	Near Loss	Green Card. Firehose box does not have blue caution tape. Location: RLO Weld Bay	Green Card. 2" pipe going to the firehose box is broken at the union and the firehose box does not have blue caution tape on it. Showing it does not work.	NL-Lessons Learned	
27157	Richmond, CA - Refinery	11/22/2011 2:00:00 PM	Closed	Near Loss	Green Card. Piece of pipe in walkway. Location: 4 Crude F-1100	Green Card. Piece of pipe in walkway. Ready for a head knocker.	NL-Injury/Illness - Employee Injury	
27159	Richmond, CA - Refinery	11/22/2011 2:30:00 PM	Closed	Near Loss	Green Card. Piece of conduit sticking out on walkway. Location: 4 Crude - Corners of F1160 N	Green Card. In between pole and furnace where people walk was a piece of conduit sticking out ready for someone to run into it.	NL-Injury/Illness - Employee Injury	
27160	Richmond, CA - Refinery	11/22/2011 2:00:00 PM	Closed	Near Loss	Green Card. Pipes on pipe rack are wet and slippery. Location: RLP	Green Card. Pipes on pipe rack are wet and slippery.	NL-Injury/Illness - Contractor Injury	
27161	Richmond, CA - Refinery	11/22/2011 1:15:00 PM	Closed	Near Loss	Green Card. Steam Leak. Location: FCC Unit	Green Card. 450 lb 6" inch steam leaking between flange and valve. In front of Tank EC5205A/T252, FCC unit.	NL-Lessons Learned	
27162	Richmond, CA - Refinery	11/22/2011 1:45:00 PM	Closed	Near Loss	Green Card. 4" flanch leaking water. Location: FCC unit	Green Card. 4" flanch leaking water in FCC unit next to Tank EC5205A/T252.	NL-Lessons Learned	
27164	Richmond, CA - Refinery	11/22/2011 3:30:00 PM	Closed	Near Loss	Green Card. No barricade tape or tags. Location: 4 Crude parking lot	Green Card. Heavy traffic in 4 Crude parking lot. Bigge worker doing a pick with the drop. No barricade tape or tags. Although the lift was quick, someone could have walked under the load.	NL-Injury/Illness - Contractor Injury	
27165	Richmond, CA - Refinery	11/22/2011 2:00:00 PM	Closed	Near Loss	Green Card. Welder working without a weld screen. Location: 5 Cat	Green Card. J.V. welder working inside weldbay without a weld screen. Several people complained of flash sparks hurting their eyes while sitting at the smoking post next to the lunch tent.	NL-Injury/Illness - Contractor Injury	
27166	Richmond, CA - Refinery	11/23/2011 8:45:00 AM	Closed	Near Loss	Green Card. Big pothole. Location: D&R Southside of Cooling Tower	Green Card. Big pothole on ground creates a big slip, trip and fall injuries. Between D&R electric box on cooling tower southside.	NL-Injury/Illness - Employee Injury	
27199	Richmond, CA - Refinery	12/2/2011 1:00:00 AM	Closed	Loss	Spent N2 cylinder fell on operator's foot when being moved	Operator was changing out a spent N2 cylinder. While "rolling" the empty cylinder (outside of the B&S lab) over to the cylinder storage area to exchange it for a full one, the operator lost control of the empty cylinder and it fell landing on the operators left foot.	Injury/Illness	(1) Risks recognition is less than adequate, (2) No training/ safety awareness on moving compressed gas cylinder., (3) Audit is less than adequate., (4) Side bar recommendations, (5) Tools or equipment set-up is less than adequate
27200	Richmond, CA - Refinery	12/2/2011 1:50:00 AM	Closed	Near Loss	Vapor from V-1920 cause K-1900 PC 89PC694 open to relief and overwhelm the Hydro relief header to FGR.	RLOP Operators were working to marry V-1920 (C3/C4 stream) and treating section. C-1920 overhead pressured up and sent gas to K-1900 suction through an unidentified bypass line left open during start up. Vapor from V-1920 cause K-1900 PC 89PC694 open to relief and overwhelm the Hydro relief header to FGR. The extra flow of Vapor/gases cause FCC 220 SCF and RLOP 90 SCF totalizes trip.	NL-Operational Process/Procedures - Safety Systems	(1) PC Bypass not identified when lining plant for start up, (2) Venting of none condensable is not included in startup procedures.
27202	Richmond, CA - Refinery	12/2/2011 12:00:00 AM	Closed	Loss	Operator vehicle struck side plate on T-3129	While doing rounds operator parked vehicle near T-3129. As they were leaving the area the operator struck the side plate on T-3129 with their vehicle causing moderate damage to the right side of the vehicle.	Transportation	(1) Drivers have been allowed to drive close to the tanks with no consequences, (2) Drivers have been allowed to drive close to the tanks with no consequences
27233	Richmond, CA - Refinery	12/2/2011 11:30:00 AM	Closed	Loss	4H2S process conditions caused high H@S in the fuel gas system	High feed rates to 4H2S caused high process temps in C-1010 overhead carrying high H2S into fuel gas system.	Regulatory Compliance	(1) Operator did not increase DEA circulation sufficiently for the situation., (2) Operator did not send enough process gas to 20plant or #5H2S.

27246	Richmond, CA - Refinery	12/2/2011 4:50:00 PM	Closed	Loss	Tripped Rlop Flare totalizer	RLOP GRU startup. System still unstable, Pressure excursion in K-1900 off gas compressor Vent 89PV694 opened for short time causing totalizer trip.	Operational Process/Procedures	(1) Unit start-up, K-1900
27247	Richmond, CA - Refinery	12/2/2011 8:10:00 PM	Closed	Loss	RLOP S/U flare Totalizer trip	Overpressure condition in C-1920 tripped RLOP/FCC SISO and ALKY totalizers. While trying to Stabilize C-1920 during startup, C-1920 bottoms temperature increased to point of firing up the column sending light ends overhead and causing the column pressure to increase. Overhead pressure peaked at 161 psi and quickly decreased as hot oil flow was decreased to the column reboiler	Operational Process/Procedures	(1) C-1920 column instability due to low feed Rate
27265	Richmond, CA - Refinery	12/4/2011 4:50:00 AM	Closed	Loss	C-1920 overpressure tripped flare totalizers	At 04:50 C-1920 overhead popped to relief due to a loss of reflux and increased light ends from C-1910. 1. As Crackers start making light ends in the overhead going to GRU, C-1910 is too cold. The light ends, hydrogen, methane and ethane, carry out the bottom to C-1920 instead of going overhead to 4H2S. 2. As these light ends come to C-1920, they ended up filling up V-1920 and overwhelming FGR.	Operational Process/Procedures	(1) i. CO6 did not understand the importance of heat in C-1920 because of lack of experience
27266	Richmond, CA - Refinery	12/4/2011 1:15:00 AM	Closed	Loss	Loss of ABCR	The four crude operator had a high level on 5 S/C and D/P on 4 S/C. DMC was on the Atmospheric column all shift except the 4 S/C draw. It had issues and was acting erratically during the dayshift and at turn over the orders were given to leave in Auto control and to leave it disabled from DMC. During the evening the PCO had been drawing more on 4 S/C during the shift to alleviate a high level in 5 S/C draw and a high DP on PD004. At 1:06 the 4 S/C draw tray was drawn down and suction pressure was minimal. At this time we lost the ABCR and its cooling for C-1100. The result was an upset of the Column and product streams. This Temperature profile swing lasted hour.	Operational Process/Procedures	(1) Training and experience
27336	Richmond, CA - Refinery	11/30/2011 9:00:00 AM	Closed	Near Loss	Admin. Emergency Generator was found to not be on a PM Maint. schedule	I t was discovered that the Admin. Bldg emergency generator was never put on a PM Maint schedule.	NL-Lessons Learned	
27345	Richmond, CA - Refinery	9/10/2011 11:00:00 AM	Closed	Near Loss	IsoDMC Cut IsoCATs when being Turned ON after Furnace Testing	Isomax DMC was controlling C730 Btms level with IsoRX. The DMCISO controller was turned off to do furnace testing on one of the R600 Iso Rx Furnaces. When Operators turned DMCISO back on only the reactor sub controllers were put back on and no adjustment was made to the 75CATAVG limits on DMC so it drove to the lower limit since it was no longer controlling C730 Btms level. This is a training issue opportunity.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Project team considered taking automatic action in this particular scenario, but decided against automatic action to minimize the amount of custom programming required to do this., (2) Why did the operator not know what would happen? Although the operator had received training, this event occurred early in the commissioning of the controller.
27361	Richmond, CA - Refinery	12/5/2011 9:30:00 PM	Closed	Near Loss	P-1601 tripped on low lube oil flow	At approximately 21:30 12/5. P-1601(HNF Feedpump) Developed a high outboard bearing temperature alarm temp that reached 341 degrees. While ops were prepping P-1601A for service, they were still troubleshooting P-1601. In the process of troubleshooting. Both P-1601 lube oil pumps were started. The lube oil system high pressure alarm initiated so operations shut down one of the lube oil pumps. At this point The lube oil PC went wide open so when One of the lube oil pumps shutdown we tripped the fed pump on low low lube oil pressure. P-1601A was started and feed was reintroduced into HNF. Plant is normal PED support has no issues with Reactors.	NL-Lessons Learned	(1) Operations Shuldow a lube oil pump with PC wide open
27418	Richmond, CA - Refinery	12/8/2011 12:00:00 AM	Closed	Near Loss	located a PRD that was listed as inactive but is actually in service	Located PRD PC-280 that was identified as inactive. But the 10 tail line is actually available for service if needed and the PRD should be reactivated	NL-Regulatory Compliance - Non Compliance	
27418	Richmond, CA - Refinery	12/8/2011 12:00:00 AM	Closed	Near Loss	located a PRD that was listed as inactive but is actually in service	Located PRD PC-280 that was identified as inactive. But the 10 tail line is actually available for service if needed and the PRD should be reactivated	NL-Operational Process/Procedures - Safety Systems	
27435	Richmond, CA - Refinery	12/8/2011 11:50:00 AM	Closed	Near Loss	During 20 Plant PSA start up, one of the valves failed to operate and tripped the FCC/Alky/RLOP and SISO flare totalizers	During the PSA start up on 12/06/11 at 11:45, valve 505B failed, causing overpressuring of FGR. Excess flow was sent to FCC/Alky/RLOP and SISO flares. These 4 totalizers tripped and a visible flame was observed at the FCC flare. All valves on the PSA skid were previously stroked a number of times to verify their proper operations prior to starting up the plant.	NL-Environmental - Release	(1) Why did we trip the 4 flare totalizers We tripped the totalizers because the valve 505B stuck closed during start up. Why di 505B stick during start up. 505B stuck due 20 plant being down for 7 weeks and the valves have a tendency to stick if they are not cycled on a continual bases.
27442	Richmond, CA - Refinery	12/8/2011 9:00:00 AM	Closed	Loss	T-634 tank shell weeping hydrocarbon product.	Weep observed on the shell of T- 634 that constrained working capacity.	Equipment/Property Damage	(1) A deficiency in the quality check/inspection of work process Caused a problem to be missed.
27471	Richmond, CA - Refinery	12/8/2011 11:00:00 PM	Closed	Near Loss	Air Products Nitrogen Delivery truck jack knifed on Channel St.	Air Products Truck with full load of nitrogen jack knifed while attempting a U-turn on Channel St. In front of Hydroprocessing.	NL-Lessons Learned	
27510	Richmond, CA - Refinery	11/20/2011 12:00:00 AM	Closed	Near Loss	Memory Error on CCC card for wet gas compressor	On Sunday Evening operators received and alarm on CCC control page and believed they had a card failure in the CCC system for the Wet Gas Compressor. Control Systems group investigated and determined the alarm to be a memory error (MVR Check Fault). As this is a system with triple redundancy, there was no immediate danger / risk to plant operations.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Why is K130 generating non-volatile RAM (NVR) check fault alarms? The fault is caused by a check sum discrepancy. The possible cause is: The inability of the routine to correctly calculate the checksum due to insufficient processing time. , (2) Why is K130 generating non-volatile RAM (NVR) check fault alarms? The fault is caused by a check sum discrepancy. The possible cause is: A possible memory error in one or maore of the IOM card group

27510	Richmond, CA - Refinery	11/20/2011 12:00:00 AM	Closed	Near Loss	Memory Error on CCC card for wet gas compressor	On Sunday Evening operators received and alarm on CCC control page and believed they had a card failure in the CCC system for the Wet Gas Compressor. Control Systems group investigated and determined the alarm to be a memory error (MVR Check Fault). As this is a system with triple redundancy, there was no immediate danger / risk to plant operations.	NL-Business Process - Business Process	(1) Why is K130 generating non-volatile RAM (NVR) check fault alarms? The fault is caused by a check sum discrepancy. The possible cause is: The inability of the routine to correctly calculate the checksum due to insufficient processing time. , (2) Why is K130 generating non-volatile RAM (NVR) check fault alarms? The fault is caused by a check sum discrepancy. The possible cause is: A possible memory error in one or more of the IOM card group
27512	Richmond, CA - Refinery	12/7/2011 10:00:00 AM	Closed	Loss	Mechanic hit finger knuckle on a piping elbow.	Mechanic was cutting a piece of 3/4" pipe with a hacksaw and on the last foreward motion of the cut the pipe separated and struck his left hand ring finger/knuckle on a 3/4" elbow.	Injury/Illness	(1) First Aid, Documentation purposes mechanic not paying attention.
27512	Richmond, CA - Refinery	12/7/2011 10:00:00 AM	Closed	Loss	Mechanic hit finger knuckle on a piping elbow.	Mechanic was cutting a piece of 3/4" pipe with a hacksaw and on the last foreward motion of the cut the pipe separated and struck his left hand ring finger/knuckle on a 3/4" elbow.	NL-Injury/Illness - Employee Injury	(1) First Aid, Documentation purposes mechanic not paying attention.
27580	Richmond, CA - Refinery	12/8/2011 10:25:00 AM	Closed	Loss	Particle in the eye	EE was laying down using a small wire brush to clean the threads on a 2" brass valve. He felt a particle enter his right eye, EE was wearing safety glasses	Injury/Illness	(1) EE was wearing normal safety glasses for a high risk activity
27582	Richmond, CA - Refinery	12/5/2011 7:00:00 AM	Closed	Loss	P-126A Cartridge Seals did not fit.	Field mechanic attempted to install cartridge seal and found the sleeve had an interference fit on the shaft. The seal was shipped back to shop to skim cut for clearance over shaft.	Quality	(1) No shop standard to ensure the measurements of the ID of sleeves were recorded prior to disassembly.
27582	Richmond, CA - Refinery	12/5/2011 7:00:00 AM	Closed	Loss	P-126A Cartridge Seals did not fit.	Field mechanic attempted to install cartridge seal and found the sleeve had an interference fit on the shaft. The seal was shipped back to shop to skim cut for clearance over shaft.	NL-Quality - Product Quality (Int)	(1) No shop standard to ensure the measurements of the ID of sleeves were recorded prior to disassembly.
27585	Richmond, CA - Refinery	11/27/2011 1:30:00 AM	Closed	Near Loss	Green Card. Ladder cage is a tripping hazard. Location: 4 Crude	Green Card. In front of the Furnace Burner 121 there is a ladder cage with concrete so old and breaking up that it is a tripping hazard especially at night. Poor lighting in area.	NL-Injury/Illness - Employee Injury	
27587	Richmond, CA - Refinery	11/29/2011 2:00:00 PM	Closed	Near Loss	Green Card. Broken junction box and cover. Location: Substation 3	Green Card. Broken junction box and cover at parking across from Substation 3 double gates. (Hazardous Storage Bin Parking)	NL-Lessons Learned	
27589	Richmond, CA - Refinery	11/29/2011 3:30:00 PM	Closed	Near Loss	Green Card. 8" fire line has a leak. Location: By Timec Weldbay	Green Card. 8" fire line by the Timec Weld Bay has a leak.	NL-Lessons Learned	
27590	Richmond, CA - Refinery	11/29/2011 6:30:00 AM	Closed	Near Loss	Green Card. Contractor had a load with no tag line. Location: FCC	Green Card. Contractor had a load and no tag line when moving the load with a cherry picker at FCC Evacuation Area	NL-Lessons Learned	
27594	Richmond, CA - Refinery	12/1/2011 4:00:00 PM	Closed	Near Loss	Green Card. No stop sign. Location: Behind water treatment plant	Green Card. I wrote a green card for no stop sign and they put one up but they didn't put one up for the other direction.	NL-Lessons Learned	
27595	Richmond, CA - Refinery	12/1/2011 8:00:00 AM	Closed	Near Loss	Green Card. Steam leak. Location: FCC sample box on E-102B	Green Card. Steam leak needs to be repaired because it leaks near the walkways.	NL-Lessons Learned	
27597	Richmond, CA - Refinery	12/1/2011 3:00:00 PM	Closed	Near Loss	Green Card. Left rope hanging on pipe rack. Location: FCC - top of V-33	Green Card. Someone who works on the pipe rack left a rope hanging down and did not tie onto anything and also laid on top of the hot pipe.	NL-Lessons Learned	
27598	Richmond, CA - Refinery	12/1/2011 10 00:00 AM	Closed	Near Loss	Green Card. Hot water leaking. Location: FCC E-102E	Green Card. As I tried to clean up our work area, found out hot water leaking out overhead down to walkway.	NL-Lessons Learned	
27599	Richmond, CA - Refinery	12/1/2011 6:20:00 AM	Closed	Near Loss	Green Card. Truck had no tail lights on trailer. Location: EOD - Channel St	Green Card. Truck pulling compressor in the dark morning hours had no tail lights on trailer. Trailer had lights mounted but was not hooked up or weren't working.	NL-Lessons Learned	
27600	Richmond, CA - Refinery	12/1/2011 9:00:00 AM	Closed	Near Loss	Stock Balance was underestimated, (and consequently Earnings Estimate) by 10,000 Barrels of "Jet A" for $1,290,000.	In the process of actualizing (entering the completed products movements into SAP) on the first work day, December 1st, ticket with batch CHVN-15-045A was inadvertently not actualized by the Pipeline Analyst. This omission led to the stock balance (and subsequently the monthly earnings estimate) understated by 10,000 Barrels, with a monetary value of $1,290,000 as at that date. Per analyst, possible reason for the error was due to the similarity of the batches and quantities which led him to believe that the batch in question was actualized when in fact another similar batch was actualized.	NL-Quality - Incorrect Volume	(1) Due to mis-match of batch numbers
27601	Richmond, CA - Refinery	12/5/2011 2:00:00 PM	Closed	Near Loss	Green Card. 4 passengers in a 3-passenger vehicle. Location: Petrolite St	Green Card. Witnessed railroad safety pickup with four passengers in a three passenger vehicle.	NL-Lessons Learned	
						Since it is a difficult road for caterers to get up to unload at the Rod & Gun Club House, I had asked Ray Aguilera, EQUIPMENT OPERATOR A AND TRAINER, to come guide the Edibles van driver, Mark, up w/hand signals, as		(1) Driver of the catering van was backing up steep driveway to deliver lunch. A spotter was used to direct him up the

27607	Richmond, CA - Refinery	12/8/2011 11:00:00 AM	Closed	Loss	Edibles Catering Van mishap on road to Rod&Gun clubhouse	Ray has generously volunteered as a bystander in the past, due to his focus on motor vehicle safety. Unfortunately, Mark, the Edibles driver, stepped on the van gas instead of the brake, and crashed into the fence. (Said he's used to driving a clutch). Vehicle was stuck on the concrete embackment.	Transportation	driveway. Driver was able to back the vehicle up the driveway and at the top of the driveway, instead of applying the brake, driver pressed the gas pedal instead which caused van to go over curb.
27607	Richmond, CA - Refinery	12/8/2011 11:00:00 AM	Closed	Loss	Edibles Catering Van mishap on road to Rod&Gun clubhouse	Since it is a difficult road for caterers to get up to unload at the Rod & Gun Club House, I had asked Ray Aguilera, EQUIPMENT OPERATOR A AND TRAINER, to come guide the Edibles van driver, Mark, up w/hand signals, as Ray has generously volunteered as a bystander in the past, due to his focus on motor vehicle safety. Unfortunately, Mark, the Edibles driver, stepped on the van gas instead of the brake, and crashed into the fence. (Said he's used to driving a clutch). Vehicle was stuck on the concrete embackment.	Equipment/Property Damage	(1) Driver of the catering van was backing up steep driveway to deliver lunch. A spotter was used to direct him up the driveway. Driver was able to back the vehicle up the driveway and at the top of the driveway, instead of applying the brake, driver pressed the gas pedal instead which caused van to go over curb.
27644	Richmond, CA - Refinery	12/7/2011 12:01:00 AM	Closed	Loss	HNF 600R tank T-3167 finaled off-test for viscosity at 40C	The RLOP Heavy Neutral Finisher (HNF) went on a 600R production run between 12/2 - 12/6. The tank finaled on 12/6 night-shift. The tank was sampled for viscosity at 40C with a result of 99.3 cSt. The spec is 100 cSt minimum. The sample was tested again with a result of 99.2 cSt. A fresh sample was then pulled from T-3167. The result was 99.2 cSt. At this point, the tank was determined to be off-test and unsuitable for sales. During the 600R run, approximately 75% of the samples were below 100 cSt. Moves were made to increase viscosity (hotter vacuum stripper C-1650 overhead temperature and hotter vacuum furnace F-1650 outlet temperature) but were unsuccessful in increasing the viscosity to on-test conditions. Compounding the problem, HNC feed (8 sidecut) and the waxy 600R produces at the HNC were lighter than normal due to startup activities at both plants. During the 600R run into T-3167, feed was introduced into the Light Neutral Finisher and the Gas Recovery unit was being lined out. The HNF, LNF, and GRU share a common operator work station (C06). A correction run was planned between 12/10 - 12/15 to increase the viscosity in T-3167. The run successfully restored on-test conditions at T-3167. No off-test material was released from T-3167. Viscosity at 40C is a new specification (100 cSt minimum) on 600R that was introduced immediately after the 2011 RLOP Major Turnaround. Refinery and Base Oil MOCs were completed before to the Turnaround for this change. Communication and Training was completed prior to the Turnaround. However, no follow-up training was completed after the Turnaround was over (approximately 3 months later). Prior to this, there was no specification for viscosity at 40C. The limits for viscosity @ 40C were inputted into Finisher Tools (Operations lab sample monitoring tool) but conditional formatting (red = off-test, yellow = near off-test) was not in place.	Quality	(1) T-3167 finaled off-test for viscosity. Why? Production from the HNF was less than the 100 cSt @ 40C minimum for approximately 75% of the run. Why? Timeliness of plant moves and start-up conditions did not allow enough time to correct the tank., (2) T-3167 finaled off-test for viscosity. Why? Production from the HNF was less than the 100 cSt @ 40C minimum for approximately 75% of the run. Why? T-3167 finaled off-test for viscosity. Why? Production from the HNF was less than the 100 cSt @ 40C minimum for approximately 75% of the run. Why? New viscosity specifications were implemented just prior to the RLOP Major Turnaround. Employees were trained concerning the change but no follow-up training was completed after the Turnaround., (3) T-3167 finaled off-test for viscosity. Why? Production from the HNF was less than the 100 cSt @ 40C minimum for approximately 75% of the run. Why? Finisher Tools did not have conditional formatting for off-test and near off-test conditions.
27650	Richmond, CA - Refinery	12/9/2011 9:30:00 PM	Closed	Near Loss	At approximately 21:30 hrs, K-242/252 tripped off line due high levels on V-242/243	At approximately 21:30 hrs, K-242/252 tripped off line due high levels on V-242/243 coming from V-1660 (DHT) V-1660 has a bad level transmitter awaiting repair (16LC063).	NL-Environmental - Release	
27683	Richmond, CA - Refinery	12/10/2011 12:00:00 AM	Closed	Near Loss	loaded approximately 30 MB of off spec diesel to the Stena Concert	The Stena Concert is scheduled to receive 310 MB of High Density (>0.83 spec) diesel. In an attempt to optimize operations set up T-3195 to load because it was the next tank scheduled for production and the it still had over 49 MB of "on test" diesel in it.	NL-Quality - Incorrect Product	(1) Operator did not involve subject matter expert(s) before deviating from orders.
27689	Richmond, CA - Refinery	12/11/2011 10:39:00 AM	Closed	Near Loss	LPG truck jack knifed while attempting to do a u-turn.	An LPG truck tried to gain entry to the Refinery using the wrong gate (91Gate) Security asked the drive to back up but driver stated that he could not. Driver instead tried to complete a u-turn in the small space before the guard post and jack knifed the rear trailer. Trailers had residual LPG from a previous load other than that it was mostly empty.	NL-Transportation - Contractor	
27734	Richmond, CA - Refinery	12/12/2011 8:30:00 AM	Closed	Loss	Gate 121 shut on RTD bobtail truck when entering Wharf	Bigge Driver badged into gate 121, the last gate before going onto the Wharf. Truck was started into the opening when the gate shut on the RTD bobtail truck. Driver did not notice rolling gate shutting until he heard the gate contacting the truck. Gate only needed to shut les than a foot before contacting the mirrorDamage occured to passenger side mirror and body of the RTD Bobtail truck.	Equipment/Property Damage	(1) Gate malfunction
27793	Richmond, CA - Refinery	12/12/2011 8:00:00 AM	Closed	Near Loss	5 Cat fed off test material from T-1459	12/12 dayshift switched 274 Line at 08:00 from T-634 to T-1459. Nighshift arrived and the RSL noticed rates not right in T-1459. Suspected that T-1459 was going backwards to 5 Cat at D&R. T&B and D&R began a search to find out why.	NL-Quality - Product Quality (Int)	(1) 274 Line was set to a tank that could back flow into 5 Cat. The potential for back flowing T-1459 to 5 Cat was not recognized when the routing was set up.
27793	Richmond, CA - Refinery	12/12/2011 8:00:00 AM	Closed	Near Loss	5 Cat fed off test material from T-1459	12/12 dayshift switched 274 Line at 08:00 from T-634 to T-1459. Nighshift arrived and the RSL noticed rates not right in T-1459. Suspected that T-1459 was going backwards to 5 Cat at D&R. T&B and D&R began a search to find out why.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) 274 Line was set to a tank that could back flow into 5 Cat. The potential for back flowing T-1459 to 5 Cat was not recognized when the routing was set up.
27815	Richmond, CA - Refinery	12/6/2011 12:00:00 AM	Closed	Near Loss	Short-term loss of ABB RVP analyzer signal from Mogas blend header	RVP measurement from ABB analyzer was not updating on the Honeywell displays when the Mogas blend started on 12/6/11 at 1:30pm, as indicated by a Bad PV status on the BPC Property graphic.	NL-Quality - Product Quality (Int)	(1) End-of-life RVP analyzer, (2) End-of-life RVP analyzer
27841	Richmond, CA - Refinery	11/9/2011 6:30:00 AM	Closed	Near Loss	Green Card. A lot of mosquitoes. Location: dirt lot by Timec Tool Trailer	Green Card. A lot of mosquitoes in work area.	NL-Lessons Learned	

27842	Richmond, CA - Refinery	11/28/2011 7:00:00 AM	Closed	Near Loss	Green Card. Steam leak. Location: Near the new H2A plant on Channel St	Green Card. Steam plume. While driving north on Channel St. near the new H2A plant, there's a steam leak that blows directly into driving lanes.	NL-Lessons Learned	
27845	Richmond, CA - Refinery	12/1/2011 8:45:00 AM	Closed	Near Loss	Green Card. Faded paint on stop sign. Location: Xylene St.	Green Card. Across Standard Oil switching station and Xylene St. a stop sign's red paint is faded away.	NL-Lessons Learned	
27846	Richmond, CA - Refinery	12/2/2011 9:00:00 AM	Closed	Near Loss	Green Card. Wind sock needs to be replaced. Location: Manifold Rd.	Green Card. Wind sock needs to be replaced. Location: TK-3074 on Manifold Road.	NL-Lessons Learned	
27847	Richmond, CA - Refinery	12/4/2011 7:00:00 AM	Closed	Near Loss	Green Card. Wind sock needs to be replaced. Location: Sour Water Mariff	Green Card. Wind sock needs to be replaced.	NL-Lessons Learned	
27852	Richmond, CA - Refinery	12/5/2011 10:30:00 AM	Closed	Near Loss	Green Card. The wind blows the stop sign down. Location: Zerolene and Mill St	Green Card. The wind blows the stop sign down at corner of Zerolene and Mill Street.	NL-Lessons Learned	
27854	Richmond, CA - Refinery	12/5/2011 2:10:00 PM	Closed	Near Loss	Green Card. Valve stem with no cap. Location: RLOP - Pump 1911A	Green Card. At Pump 1911A there is a valve stem with no cap at eye level.	NL-Lessons Learned	
27857	Richmond, CA - Refinery	12/5/2011 10:00:00 AM	Closed	Near Loss	Green Card. No street sign off Channel St Location: S. Isomax H2A Plant	Green Card. No street sign off Channel Street driving through H2B plant. Should an emergency occur in the plant new employee's would not know where to direct emergency crews.	NL-Lessons Learned	
27860	Richmond, CA - Refinery	12/6/2011 10:30:00 AM	Closed	Near Loss	Green Card. Permit blowing in the wind. Location: Dirt lot by Tool Room	Green Card Up to date permit blowing in the wind.	NL-Lessons Learned	
27863	Richmond, CA - Refinery	12/6/2011 11:45:00 AM	Closed	Near Loss	Green Card. Pipe rack does not have a guardrail/handrail. Location: T&B Control Rm	Green Card. Transfer & Blending control room alongside of building there is a pipe rack blow grade that does not have a guardrail or handrail. Someone walking can fall into the hole especially at night.	NL-Injury/Illness - Employee Injury	
27866	Richmond, CA - Refinery	12/7/2011 8:00:00 AM	Closed	Near Loss	Green Card. An 8" steam pipe is leaking. Location :B&S T-3106	Green Card. An 8" steam pipe is leaking out steam and it looks like a welding job because it leaks out from the pipe not a fitting.	NL-Lessons Learned	
27867	Richmond, CA - Refinery	12/7/2011 8:30:00 AM	Closed	Near Loss	Green Card. Water line with hole in it. Location: S. Isomax	Green Card. Water line with hole in it spraying all over road. Located at S. somax Pipe Southwest of 20 Plant	NL-Lessons Learned	
27869	Richmond, CA - Refinery	12/8/2011 6:40:00 AM	Closed	Near Loss	Green Card. Walkway needs rails. Location: Northside of B&S Control Rm	Green Card. Northside of Control Room walkway needs rails by drain/ditch. You have a good drop off.	NL-Injury/Illness - Contractor Injury	
27870	Richmond, CA - Refinery	12/8/2011 12:00:00 AM	Closed	Near Loss	Green Card. Wind sock needs replacing. Location: TK-3197 Pole Yard	Green Card. Wind sock needs replacing at TK-3197 Pole Yard.	NL-Lessons Learned	
27871	Richmond, CA - Refinery	12/8/2011 9:00:00 AM	Closed	Near Loss	Green Card. Electric cord plugged into generator with no GFIG. Location: Lubricants Pit	Green Card. Electrical cord plugged into portable generator with no GFIG. If electrical tool gets dropped in water without protection, workers can be shocked or electrocuted.	NL-Injury/Illness - Contractor Injury	
27873	Richmond, CA - Refinery	12/13/2011 10:07:00 AM	Closed	Loss	Loss of S S/C to RLOP HNC	On 12/13 at 10.07 AM board operator received low pressure alarm and noticed VBCR and 8 S/C to HNC/tankage drop off. Shortly before board operator received low pressure alarm the field operator heard a loud knock and VBCR line shake. After checking P-1188/A and P-1189/A were operating properly operator checked 11FV020A and found the valve open 10% compared to normally operating 100% open. Instrumentation technician found FV020A positioner conduit was frayed due to resting on a hot flange. This caused a partial short sending a signal to partially close valve.	Quality	(1) Improperly secured conduit was exposed to high heat which caused the wire to short and partially close FV020A.
27874	Richmond, CA - Refinery	12/13/2011 12:00:00 AM	Closed	Near Loss	HNF feed pump P-1601A tripped off line twice, P-1601 was placed in service	P-1601A tripped off line. Pump was restarted with trip-multi on. Once pump was up trip-multi was taken to normal and P-1601A tripped off line again.	NL-Equipment/Property Damage - General Liability	(1) Inadequate procedure for Operator Interface with the vibration monitor and trip multiply/ danger defeat buttons
27881	Richmond, CA - Refinery	12/12/2011 5:00:00 PM	Closed	Near Loss	IX-3615 PRD pop date discrepancy discovered	Yesterday while field-walking some equipment, the FER inspector discovered a discrepancy in the pop date for the SISO PRD IX-3615 on the H2B Train fuel gas filter coalescer K-355 (shown on the linked P&ID as PSV-355). The histories show this PRD was last popped in 6/1/2008 (hence why it doesn't show in CERI), but the stamped field tag on the PRD shows it was last popped in 2002 (when the coalescer was installed).	NL-Environmental - Release	(1) The 705a Data Sheet for PRD# IX-3616 was incorrectly labeled as IX-3615,, (2) There was less quality control in the PRD process prior to 2008.

27941	Richmond, CA - Refinery	11/22/2011 7:00:00 AM	Closed	Loss	Ergonomic sit to stand desk was damaged beyond repair during shutdown.	During the recent turnaround, the Ergo RSIP group was requested by Operations to supply a selection of desks, chairs and storage to D&R. These items were placed in Blast Proof Mini mobiles at Ergo RSIP expense for the use of those processing TA work permits. Along with several items, a 72x72x30 sit to stand desk, valued at $2000, was requested and supplied. When the turnaround was complete, all items were returned to Ergo with the exception of the sit to stand desk. It was found by our installers on the gravel in parking lot, damaged beyond repair.	Equipment/Property Damage	(1) RSIP ERGO sit to stand desk was broken during removal from the S/S trailer. No one informed the ergo department that the equipment needed to be removed. lack of communication between shut down coordinator and ergo rsip
27974	Richmond CA - Refinery	12/15/2011 1:10:00 AM	Closed	Near Loss	Gas surge from V-1420 to relief overwhelm the relief system and FCC totalizer tripped.	2011-12-15 tripping of FCC totalizer Time 01:10 OWS-5 and AO-2 were in the process of heating up P-1401(HNC feed pump) in preparation for maintenance to perform a hot alignment Thursday morning. In order to heat up P-1401, a side cut is batched via pressure from HNC feed surge drum V-1400 to low pressure separator V-1420. V-1420 was at 475 psig and V-1400 was at 40 psig. V-1420 pressure was lowered to 320 psig to 20 plant. AO-2 blocked in V-1420 line to 20 plant (4 inch line) at the boundary, then route this line to relief (3/4 inch line). By routing this line to relief at the boundary OWS-5 could control depressureing V-1420 with 84PC517. OWS-5 open 84PC717 to relief while in constant communication with OWS-2 (owner of FGR 1050 &1060). OWS-2 had both 1050 and 1060 loaded at 57% and increase load as flow increased. OWS-2 states flow started off at a control rate before a surge. OWS-2 and OWS-5 believe surge was due to liquid in the line. Gas surge from V-1420 to relief overwhelm the relief system and FCC totalizer tripped.	NL-Operational Process/Procedures - Safety Systems	(1) OWS too aggressive when depressurig system through line with a smaller ID.
28017	Richmond CA - Refinery	11/27/2011 12:00:00 AM	Closed	Near Loss	V-1103 blocked in to C-1100 on start up of Crude Unit	V-1103 was left blocked in to C-1100 during start up of the crude unit.	NL-Operational Process/Procedures - Safety Systems	
28026	Richmond, CA - Refinery	12/15/2011 7:30:00 AM	Closed	Loss	Walked into scaffold tube that was sticking out from rack in scaffold yard	EE turned to walk through racks of tubes in scaffold yard and immediately came in contact with tube at eye level. EE was wearing his safety glasses and hard hat. The EE came in contact with his right eye and tube. The impact caused small cut below his right eyebrow. EE was taken to the chevron clinic and then to off site provider. EE received stirr- strips and is capable of returning to work full duty.	NL-Injury/Illness - Contractor Injury	(1) walking through yard not aware of surroundings
28026	Richmond, CA - Refinery	12/15/2011 7:30:00 AM	Closed	Loss	Walked into scaffold tube that was sticking out from rack in scaffold yard	EE turned to walk through racks of tubes in scaffold yard and immediately came in contact with tube at eye level. EE was wearing his safety glasses and hard hat. The EE came in contact with his right eye and tube. The impact caused small cut below his right eyebrow. EE was taken to the chevron clinic and then to off site provider. EE received stirr- strips and is capable of returning to work full duty.	Injury/Illness	(1) walking through yard not aware of surroundings
28045	Richmond, CA - Refinery	12/15/2011 12:00:00 AM	Closed	Loss	Flare totalizer trip while responding to the s/d of K-1400	Flare totalizer trip when responding to loss of K-1400. When operators responded to the loss of K-1400 they opened the compressor low point to remove and liquid, this flow to relief was more than FGR machines could handle thus tripping the flare totalizer. No visible flame was seen. Operators quickly closed the valve to relief and the FGR system returned back to normal.	Regulatory Compliance	(1) HP seperator level was not lowred to clear alarms due to the down stream low pressure seperator was at to low of pressure, to high of DP. This was due to warming up the feed pumps required operations to lower the low pressure seperator pressure. This is done per normal unit start up procedures. This procedure does not cover the scenerio of having half the unit up and needing the low pressure seperator to be set up with the high pressure seperator
28054	Richmond, CA - Refinery	12/15/2011 1:30:00 PM	Closed	Loss	mechanic pinch his finger while moving an air operated hacksaw	A Contract mechanic pinch his finger while repositioning an air operated hacksaw on the 280 line replacement work at B&S. The injury caused a minor laceration on his left index finger near the palm.	Injury/Illness	(1) Employee became complacent and placed his hands in the most comfortable/ easiest position in order to lift the saw to reposition it.
28064	Richmond, CA - Refinery	12/15/2011 11:00:00 PM	Closed	Near Loss	Lost LOTO lock key	Unable to locate key for a LOTO lock on R1410K. Lock must be revoed inorder to commiss on plant equipment	NL-Operational Process/Procedures - Safety Systems	
28095	Richmond, CA - Refinery	11/27/2011 12:00:00 AM	Closed	Loss	during the start up of the #4 Crude Unit the Nh3 line was opened to 1 side cut stripper this caused the stripped to have trouble maintaining a level	Since starting up, operation of 1 S/C has been sporadic and we've had no ability to maintain level in the stripper. An NH3 injection line that is supposed to be out of service was identified as being open into C-1110 overhead. Once identified and closed, the column returned to normal operation.	Operational Process/Procedures	(1) inadequate procedures
28099	Richmond, CA - Refinery	11/27/2011 12:00:00 AM	Closed	Near Loss	V-1198 had high levels during start up of the plant on multiple occasions	On both startup of 4 Crude unit we experienced high levels in our relief drum V-1198	NL-Lessons Learned	
28099	Richmond, CA - Refinery	11/27/2011 12:00:00 AM	Closed	Near Loss	V-1198 had high levels during start up of the plant on multiple occasions	On both startup of 4 Crude unit we experienced high levels in our relief drum V-1198	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	
	Richmond,	11/27/2011						(1) Field turnover process for start up and shutdown needs to be clearly defined and built into the Operations work process, (2) procedure needs improvement - lack of procedure OVHD temps control, (3) V-1198 extra relief pump was not inplace to assist with start up, (4) procedures need improvement F-

28100	CA - Refinery	12:00:00 AM	Closed	Near Loss	Crude unit start up issues / lessons learned	crude unit start up lessons learned from NLI	NL-Lessons Learned	1100 / F-1100 CEMS legal requirement, (5) Vlave left closed from V-1103 to C-1100 causing PRD bellows to leak
28116	Richmond, CA - Refinery	12/15/2011 11:00:00 AM	Closed	Loss	T-1287 received backflow from JHT production via T-679 manifolding	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. On 12/15 at 11:00 am T-1287 in the Main Tank Field was set up to go direct to the JHT Plant (bypassing T-679 but using it's feed manifold). T-1287 then fed direct to the JHT until 12/16 at 18:00 when D&R's 2 side cut was switched from DHT to the JHT. This switch was too much flow for the JHT to feed and it took the path of least resistance to T-1287. On 12/16 at 18:00, T-1287 changed direction and began to back fill until it was questioned on 12/17 at 04:30 and actions taken to correct the backwards flow.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) Oils planning group requested alternate, atypical route for T-1287 contents, (2) No communication that B&S temporary procedure called for blocking in of T-679, (3) Stop Work Authority was not used when lack of MOC process/ procedure was noticed and questioned
28118	Richmond, CA - Refinery	12/17/2011 9:30:00 AM	Closed	Loss	During start up R1410 bed #2 quench valve positioner stopped working	At approx 09:30 R1410 #2 bed quench valve stopped operating by auto control.	Operational Process/Procedures	(1) 12/17/11 at 09:30 R1410 #2 bed quench valve stopped operating by auto control. Why – Valve would not respond to input Why – Positioner was not working Why – mechanical failure Why - ???
28123	Richmond, CA - Refinery	12/17/2011 6:05:00 PM	Closed	Near Loss	K-1400 Shutdown on V-1410 high level	V-1410 experienced a high level due to erratic LI's and K-1400 shutdown	NL-Operational Process/Procedures - Safety Systems	(1) High level in V-1410
28137	Richmond, CA - Refinery	12/17/2011 10:55:00 AM	Closed	Near Loss	Drop in pressure on the #1 & #2 Casto Lines (Fresh H20 / EBMUD)	At approx 10:55 hrs. on Sat. 12/17, Cogen received an alarm that the backup cooling water pump for TG-800 had started. At the same time, Cogen received a call from the north yard about the fresh water pressure being low. Utilities operators immediately started troublashooting in the field. A call was made to the EBMUD emergency number. The dispatcher for EBMUD said that they were filling a reserve tank and pulling to hard on the #1 Castro line. They immediately decreased the amount they were pulling off the line which in turn caused our pressure to come back into the normal range. Total elapsed time ~ 14 minutes. No abnormal effects occurred inside the refinery except for the startup of the backup pump for TG-800.	NL-Business Process - Abnormal Supply Occurrence	
28168	Richmond, CA - Refinery	12/16/2011 1:35:00 PM	Closed	Near Loss	Green Card. Sulfur fumes blowing into weld bay area. Location: Hydro Weld Bay	Green Card. During sulfur loading, wind is blowing sulfur fumes into the Weld bay area. Mechanics are being exposed to levels of SO2 at or above the odor threshold.	NL-Injury/Illness - Employee Injury	
28170	Richmond, CA - Refinery	12/16/2011 11:20:00 AM	Closed	Near Loss	Green Card. A fellow trainee tripped and almost fell. Location: Hensley St, Bldg 317	Green Card. At approx. 10:15am, a fellow trainee reported to the rest of us in class that he had tripped and almost fell over a cracked and raised part of the pavement directly outside of the front entrance to the classroom. At approx. 11:20am during lunch, I personally witnessed one of our instructors trip and almost fall over a raised metal tubing (something that had been sawed off close to and flush with the pavement) that was sticking out of the pavement and was part of the exact same raised and cracked pavement that was previously reported by my fellow trainee.	NL-Injury/Illness - Employee Injury	
28171	Richmond, CA - Refinery	12/19/2011 6:30:00 AM	Closed	Near Loss	Green Card. Sulfur smell extremely bad. Location: Hydro Weld Bay/SRU Loading Racks	Green Card. Sulfur smell extremely bad in Hydro weld bay causing nausea and upset stomach.	NL-Injury/Illness - Employee Injury	
28178	Richmond, CA - Refinery	12/18/2011 10:30:00 AM	Closed	Loss	QCO suffered a cut to head when lid of lab instrument fell on him.	QCD QCO suffered cut on forehead while QCO was performing a low temperature Brookfield Viscosity measurement. Lid of lab freezer did not lock in open position and fell on QCO.	Injury/Illness	(1) Operator did not use existing safety equipment to secure lid.
28188	Richmond, CA - Refinery	12/17/2011 4:00:00 PM	Closed	Loss	Mechanics spent all day trying to install P-1165 Bearing bracket with a Drott.	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. Mechanics spent all day trying to install P-1165 Bearing bracket with a Drott. According to one of the mechanics "We always use staging with a mono-rail to remove and install this pump." The bearing bracket gasket was the wrong size. The Drott had to be positioned in a tight area and door had to be removed with the boom at fully extended to reach the pump. With the boom at full extension there was too much bounce to control the lift of the bearing bracket.	Business Process	(1) Only 1 of the 3 gaskets were measured for install (if this had happened, would have used the incorrect size one for pump cover), (2) Outside Machine Shop did not have specific clearance dimension needed. Outside shop balanced the impeller improperly, (3) Tight clearances around equipment create more than usual pinch points
28199	Richmond, CA - Refinery	12/19/2011 9:00:00 AM	Closed	Near Loss	Green Card. Broken 12' diameter cover. Location: Rear of #2 & #4 substation	Green Card. Possible slip, trip, fall hazard. Broken 12' diameter cover, is observation well cover. Appears to have been run over by heavy equipment. Near pole marked SS 25 in black paint background with SS 25 white letters and numbers. Location: Rear of #2 and #4 substation, 15' feet from base of Standard O1 No. 4 tap 115kv ckt 2 pole.	NL-Lessons Learned	
28203	Richmond, CA - Refinery	12/12/2011 2:35:00 PM	Closed	Near Loss	Green Card. Handrail and walkway is loose. Location: Long Wharf	Green Card. Walkway from road to walkway has handrail loose and the walkway is loose and wiggly. Handrail with life safety device is leaning out pretty good. Location: Long Wharf Causeway #5 Marker	NL-Injury/Illness - Contractor Injury	
28204	Richmond, CA - Refinery	12/12/2011 6:30:00 AM	Closed	Near Loss	Green Card. Crosswalk needs to be repainted. Location: Xylene St	Green Card. Crosswalk on Xylene St. going across to Newtron fence area needs to be repainted.	NL-Lessons Learned	
28205	Richmond, CA - Refinery	12/13/2011 2:15:00 PM	Closed	Near Loss	Green Card. Three 2" pipe need to be supported. Location: Pipeway NW of Dresser-Rand office	Green Card. Three 2" pipe need to be supported. Pipeway is located NW of Dresser-Rand office.	NL-Lessons Learned	

28208	Richmond, CA - Refinery	12/14/2011 10:00:00 AM	Closed	Near Loss	Green Card. Lots of oil on floor. Location: FCC Unit - E102E	Green Card. E102E in FCC unit has lots of oil on floor. Creates big slip, trip and fall hazards.	NL-Injury/Illness - Contractor Injury	
28209	Richmond, CA - Refinery	12/15/2011 10:00:00 AM	Closed	Near Loss	Green Card. Lots of catalyst on floor. Location: FCC by V-13.	Green Card. Lots of catalyst on floor by V-13.	NL-Lessons Learned	
28300	Richmond, CA - Refinery	12/20/2011 9:30:00 AM	Closed	Near Loss	Hard hat contacted a valve stem	EE was walking by C-1100 and his hard hat contacted a valve stem that was just above eye level. EE was not injured.	NL-Injury/Illness - Employee Injury	(1) EE did not have eye's on path, (2) EE did not have eye's on path
28321	Richmond, CA - Refinery	12/20/2011 1:00:00 PM	Closed	Loss	A delivery carrier hauling HDPE pipe rubbed a 6" fire line with his rear tire causing the line to leak.	While negotiating the turns on Main tank Field Road a delivery carrier loaded with 18" HDPE pipe rubbed against a 6" fire line that was at grade level. This resulted in a leak on the bottom of the pipe.	Equipment/Property Damage	(1) Planning for the delivery of the pipe to the site was inadequate. The escort team was unclear of their responsibilities.
28321	Richmond, CA - Refinery	12/20/2011 1:00:00 PM	Closed	Loss	A delivery carrier hauling HDPE pipe rubbed a 6" fire line with his rear tire causing the line to leak.	While negotiating the turns on Main tank Field Road a delivery carrier loaded with 18" HDPE pipe rubbed against a 6" fire line that was at grade level. This resulted in a leak on the bottom of the pipe.	Transportation	(1) Planning for the delivery of the pipe to the site was inadequate. The escort team was unclear of their responsibilities.
28336	Richmond, CA - Refinery	12/20/2011 11:40:00 PM	Closed	Near Loss	Mismanifold setting up the blend.	Main tank field operator set the 14 drop line from T-1206 on a common header with T-2201 suction. Tanks started running together and was spotted by the board operator who called the operator to stop the transfer. After movement was stopped it was determined that 930 barrels of FCCH had been move to the Whole Alky tank.	NL-Quality - Product Quality (int)	(1) Operator was taught but can't retain knowledge to work is job.
28373	Richmond, CA - Refinery	12/21/2011 7:10:00 AM	Closed	Near Loss	Green Card. Loading ramp in back of building is falling apart. Location: Admin Bldg	Green Card. Loading ramp is falling apart. Needs repair or replacnd. Railing is wobbly and falling apart.	NL-Injury/Illness - Employee Injury	
28395	Richmond, CA - Refinery	12/19/2011 3:00:00 PM	Closed	Near Loss	F-1551 run Up to Title V limits	For a 2 hr period F-1551 Nox reached a 43PPM per 8 hr period Title V limit but did not exceed it. Earlier in the day While doing daily calibration on F-1551 analyzer on 12/19, Laura mismanifolded the calibration gas to the probe in such a way as to let some furnace exhaust gas reach the probe. This essentially knocked off the calibration which would have lead to higher readings as seen on the NOx. This could have also caused the auto calibration to fail	NL-Regulatory Compliance - Permit Exceedance	(1) Cal gas mismanifolded causing Furnace exhaust gassed to nox resulting in a bad calibration
28612	Richmond, CA - Refinery	8/22/2011 12:00:00 AM	Closed	Loss	EE tripped and fell injuring foot	EE tripped and fell injuring foot while walking back to job after lunch.	Injury/Illness	(1) It is the team's opinion that the Enyon crew does not have a safety culture where they feel comfortable to report injuries without fear of any kind, since their work is seasonal. Five Whys: What: Enyon employee failed to communicate foot injury to Chevron Rep. Why 1: Why did injury go unreported? Contract Company believed this to be an existing injury and did not feel the need to share with Chevron. Why 2: Did Enyon site rep (James Jameson) know of a pre-existing condition related to injured employee? No - was made aware once injury was shared with Maintenance (hy). Why 3: Are injuries or incidents reported to CVX contact. No - have not had any injuries to report. Why 4. Do seasonal employees understand the importance of reporting all injuries? Site management understands the importance of reporting. Why 5: Do crew members feel empowered to report injuries? Work in progress
28667	Richmond, CA - Refinery	12/13/2011 11:30:00 AM	Closed	Near Loss	Green Card. Tripping hazard. Location: Cafeteria	Green Card. Near where they put the dirty trays, a tripping hazard where the carpet meets the tile. The carpet is peeling up.	NL-Injury/Illness - Contractor Injury	
28668	Richmond, CA - Refinery	12/14/2011 9:00:00 AM	Closed	Near Loss	Green Card. Manway open with no red tape. Location: FCC by V-475	Green Card. When we walk by V-475, we saw a manway open with no red tape on it.	NL-Lessons Learned	
28669	Richmond, CA - Refinery	12/15/2011 9:35:00 AM	Closed	Near Loss	Green Card. Need a light on crosswalk bridge. Location: Xylene St	Green Card. A crosswalk on Xylene Street by the Storehouse needs a light on the bridge because it is very hard to see when an employee is trying to cross to the other side.	NL-Lessons Learned	
28961	Richmond, CA - Refinery	12/15/2011 9:30:00 AM	Closed	Near Loss	Green Card. Light pole conduit is loose and missing a nut. Location: FCC E-142	Green Card. A light pole conduit is loose and u-bolt is missing a nut.	NL-Lessons Learned	
28962	Richmond, CA - Refinery	12/15/2011 8:50:00 AM	Closed	Near Loss	Green Card. Need a crosswalk to be painted. Location: Xylene St	Green Card. We need a crosswalk to be painted on Xylene St. about 100' NE of Ammonia St. to help slow down traffic, because a lot of us cross here in the morning	NL-Lessons Learned	
	Richmond, CA -	12/15/2011 5:15:00		Near	Green Card. Reflective stripping on road worn off,	Green Card. Driving in from Castro St. into Gate 91, the stripping on the road is	NL-Injury/Illness -	

28664	Refinery	AM	Closed	Loss	Location: Gate 91	hard to see due to the fading paint on stripping and very poor lighting.	Contractor Injury	
28666	Richmond, CA - Refinery	12/19/2011 9:00:00 AM	Closed	Near Loss	Green Card. Motor for sample box leaking diesel. Location: SP Hill T-3215	Green Card. Motor for sample box is leaking diesel at T-3215.	NL-Lessons Learned	
28917	Richmond, CA - Refinery	12/30/2011 2:30:00 PM	Closed	Loss	H2A Inadvertant trip due to F-305 min fire and full chop FSC trip	On December 30th CO2 operator was making adjustments to PC-318 and went to enter an output of 88% and entered 8.0 instead. When PC-318 closed off to 8% the furnace tripped and went to min fire (per procedure) while attempting to reset the furnace high fuel gas / low steam flow completely chopped the furnace.	Environmental	(1) Operator entered an incorrect setpoint for the ID fan on the DCS which caused high furnace box pressure, resulting in the plant tripping to minimum fire. In the past he did not enter the correct setpoint and no loss occurred., (2) The system is designed in such a way that errors in entering a 60PV314 setpoint are unable to be detected before an incident occurs., (3) The plant shut down due to low fuel gas pressure because the Operators did not block in all of the min fire burners before re-setting the min fire trip.Crew teamwork during work does not effectively reinforce expectation of procedural usage.
28917	Richmond, CA - Refinery	12/30/2011 2:30:00 PM	Closed	Loss	H2A Inadvertant trip due to F-305 min fire and full chop FSC trip	On December 30th CO2 operator was making adjustments to PC-318 and went to enter an output of 88% and entered 8.0 instead. When PC-318 closed off to 8% the furnace tripped and went to min fire (per procedure) while attempting to reset the furnace high fuel gas / low steam flow completely chopped the furnace.	Equipment/Property Damage	(1) Operator entered an incorrect setpoint for the ID fan on the DCS which caused high furnace box pressure, resulting in the plant tripping to minimum fire. In the past he did not enter the correct setpoint and no loss occurred., (2) The system is designed in such a way that errors in entering a 60PV314 setpoint are unable to be detected before an incident occurs.. (3) The plant shut down due to low fuel gas pressure because the Operators did not block in all of the min fire burners before re-setting the min fire trip.Crew teamwork during work does not effectively reinforce expectation of procedural usage.
28917	Richmond, CA - Refinery	12/30/2011 2:30:00 PM	Closed	Loss	H2A Inadvertant trip due to F-305 min fire and full chop FSC trip	On December 30th CO2 operator was making adjustments to PC-318 and went to enter an output of 88% and entered 8.0 instead. When PC-318 closed off to 8% the furnace tripped and went to min fire (per procedure) while attempting to reset the furnace high fuel gas / low steam flow completely chopped the furnace.	Operational Process/Procedures	(1) Operator entered an incorrect setpoint for the ID fan on the DCS which caused high furnace box pressure, resulting in the plant tripping to minimum fire. In the past he did not enter the correct setpoint and no loss occurred., (2) The system is designed in such a way that errors in entering a 60PV314 setpoint are unable to be detected before an incident occurs., (3) The plant shut down due to low fuel gas pressure because the Operators did not block in all of the min fire burners before re-setting the min fire trip.Crew teamwork during work does not effectively reinforce expectation of procedural usage.
28935	Richmond, CA - Refinery	1/1/2012 4:15:00 AM	Closed	Near Loss	DHT furnace briefly went to min fires due to operation of 16PC725..	At ~ 04:15 the GHT furnace briefly went to min fires. Operation of PC 725 is suspected as being the contributing cause. (Control valve was inoperative and by-passed at the time. This leaves machine vulnerable to changes in refinery steam pressure,) normal firing was quickly re=established and it was not necessary to route diesel product off test.	NL-Operational Process/Procedures - Safety Systems	
28961	Richmond, CA - Refinery	1/2/2012 10:00:00 AM	Closed	Loss	Pigtail leak F-305 B cell	Ops reported what appears to be pig tail leak on F-305 B cell. Upon inspection tubes 22 and 23 will have to be pinched. Ops reported pigtail leak on C cell A train..	Equipment/Property Damage	(1) do not need an investigation for this because leaking pigtails on our H2 reformer furnaces are an accepted occurrence that we manage reactively.
20016	Richmond, CA - Refinery	12/7/2011 12:00:00 AM	Closed	Near Loss	Potential non-compliance of GHG reporting requirements	On December 7, 2011 it came to the attention of the GHG Air Specialist that the refinery had not completed the annual calibrations of the flare pilot and purge Natural Gas meters. This is a requirement of the newly implemented EPA and CARB GHG regulations.	NL-Regulatory Compliance - Non Compliance - Air	(1) The Air Team did not identify and communicate the need for the pilot and purge meters to be calibrated annually. Full 5 Why document is available the Investigation Journal box.
29020	Richmond, CA - Refinery	11/27/2011 6:00:00 AM	Closed	Near Loss	Green Card. "Suggestion": Improve lighting conditions. Location: Tech Center	Green Card "SAFETY SUGGESTION" - Improve lighting conditions in front of the Tech Center.	NL-Lessons Learned	
29022	Richmond, CA - Refinery	12/12/2011 12:00:00 AM	Closed	Loss	H2A E-305A WHB - Leak on Upstream Flange of PSV-316A (IX-3472)	While doing their first rounds on 12/12 dayshift, the AO3 area operator discovered the upstream flange of PSV-316A (IX-3472) leaking (H2 tube side of E-305A H2A Train A-cell WHB outlet).	Equipment/Property Damage	(1) Root cause can only be identified when the flange, bolts, and gaskets are openned up an inspected. This will require a plant shutdown. The next opportunity to do so is 1Q2013 H2A Major. **Since the root cause is not known at this time, factors cannot be positively identified. Therefore, the Investigation Team has selected a possible factor, which may or may not be applicable, but seems likely at this time.
29053	Richmond, CA - Refinery	12/19/2011 5:40:00 AM	Closed	Near Loss	Green Card. Crosswalk needs to be painted. Location: Xylene St	Green Card. A crosswalk on Xylene St. by Newtron needs to be painted. A lot of us are using the old crosswalk that has a lot of paint missing. We need someone to come out to see what needs to be done.	NL-Lessons Learned	
29056	Richmond, CA - Refinery	12/21/2011 5:00:00 AM	Closed	Near Loss	Green Card. Re-stripe road entering Gate 91.	Green Card. The stripping on the road entering Gate 91 is so faded that it's hard to stay on the right side of road.	NL-Lessons Learned	
	Richmond, CA -	12/22/2011 5:40:00		Near	Green Card. Parking spaces with faded stripe	Green Card. At 91 Gate parking lot there is some parking spaces with faded		

29058	Refinery	AM	Closed	Loss	lines. Location: 91 Gate	out stripe lines. Hard to see when it is dark in the morning.	NL-Lessons Learned	
29059	Richmond, CA - Refinery	12/27/2011 8:15:00 AM	Closed	Near Loss	Green Card. 17 Pump Station handrail on stairs needs repair.	Green Card. 17 Pump Station handrail on stairs needs repair.	NL-Injury/Illness - Contractor Injury	
29061	Richmond, CA - Refinery	12/27/2011 5:40:00 AM	Closed	Near Loss	Green Card. Crosswalk on Xylene St needs to be repainted.	Green Card. A crosswalk on Xylene St. needs to be repainted because old paint on crosswalk is fading away.	NL-Lessons Learned	
29069	Richmond, CA - Refinery	12/13/2011 11:30:00 AM	Closed	Loss	HNC down due to leak on feed check valve	1. Incident Summary: The Heavy Neutral Cracker at RLOP was without feed for approximately 3.5 days while a leak on the high pressure feed check valve was clamped. 2. Background: As part of RLOP's 4Q2011 Major Turnaround the high pressure feed valve on the HNC was opened, inspected, cleaned, and reassembled. The Hydroprocessing Backflow Prevention Best Practice (attachment #1) recommends critical check valves are inspected and serviced during every Major Turnaround. As a result, all critical check valves (feed checks and wash water injection check valves) were inspected during the 2011 RLOP Major Turnaround. An issue and concern was raised during the 2010 LNC Process Hazards Analysis as to whether the HNC feed check valve had been inspected and serviced in the past. The HNC feed check feed valve is a wafer style valve manufactured by Hy-Grade with critical and unique characteristics (attachment #2). It was contracted out to Bay Valve to open, inspect and repair and then bench tested at 4075 PSI (Passed). It was then put back into service at the HNC. No issues were reported with the check valve during the Recycle Compressor start up or during first exposure to hydrocarbons (diesel- mid-Nov.) 3. Incident Description: A leak was found on the HNC Feed Check valve dripping 8 sidecut at a rate of 1-2 drips per minute on 12/12 with Maintenance notified (attachment #3). The HNC then pulled feed due to loss of 8 sidecut from the Crude unit on 12/13. Stop Work Authority (SWA) was used to keep feed out of the HNC after 8 sidecut was restored due to the uncertainly over how the leak would behave when feed was reintroduced to the HNC. Contingency plan called for a clamp to be designed, fabricated and reviewed by Designs engineering and installed using a sealant. There was a need to inject sealant several times for clamp to hold. The original injection leaked after approximately six hours after feed went in. The timeline for when the clamp was created, reviewed and installed to first fed in was from 12/14 to 12/16.	Business Process	(1) Lack Of Skill or Knowledge
29076	Richmond, CA - Refinery	1/4/2012 1:00:00 PM	Closed	Loss	Front tire made contact with gaurd rail while parking the truck.	While parking at T-3106 driver moved truck so vac. truck would have access to the work area. Driver pulled truck forward and made contact with the gaurd rail and tire popping the tire. No other damage to the vehicle was noticed.	Transportation	(1) "FIVE WHY" One Page Report Incident Number Ivest. ID 17638 Business Unit B&S/U&E Maint. Location T-3106 Facility Name Incident date 1/4/2012 Type of Process: N/A Type of Equipment: ½ ton truck Team Members: Greg Lowe Curtis Reynolds Ray Crane Incident Description: What: While parking at T-3106 driver moved truck so vac. truck would have access to the work area. Driver pulled truck forward and made contact with the guard rail and tire popping the tire. No other damage to the vehicle was noticed. Where (location or where in the process): B&S T-3106 When: 1/4/2012 How: Problem Statement (What is the key issue that needs to be addressed?): Tire lost air. FIVE WHY'S 1. Why did "above" happen? Verification Vehicle tire made contact with guard rail. 2. Why did "1" happen? The mechanic didn't ask for help when moving the vehicle in a congested area. 3. Why did "2" happen? Mechanic moved the truck to make room for equipment access. 4. Why did "3" happen? 5. Why did "4" happen? ROOT CAUSE: The mechanic didn't ask for help when moving the vehicle in a congested area. LPS Factor: B. In past, did not follow procedures or acceptable practices and no incident occurred: 1-Person chooses to not follow procedure or accepted practice because history of not following has not resulted in bad consequence "FIVE WHY" One Page Report Incident Number Ivest. ID 17638 Business Unit B&S/U&E Maint. Location T-3106 Facility Name Incident date 1/4/2012 Type of Process: N/A Type of Equipment ½ ton truck Team Members: Greg Lowe Curtis Reynolds Ray Crane Incident Description: What: While parking at T-3106 driver moved truck so vac. truck would have access to the work area. Driver pulled truck forward and made contact with the guard rail and tire popping the tire. No other damage to the vehicle was noticed. Where (location or
29095	Richmond, CA - Refinery	1/5/2012 1:45:00 AM	Closed	Loss	Operator reported pain in elbows when turning valves	Operator reported feeling intermittent pain in their elbows.	Injury/Illness	(1) The Elbow Pain reported by the operators was determined to be a Non-Industrial injury. This did not happen at work.
								(1) Lack knowledge - Lack of understanding of overall refinery operation. RLOP does not understand how the RLOP GRUB

29105	Richmond, CA - Refinery	11/29/2011 8:30:00 AM	Closed	Near Loss	High H2S naphtha in T-1287 following RLOP GRU Startup	T-1287 (RLOP GRUB tank) had high H2S following the RLOP GRU startup. The high H2S has prevented us from blending T-1287 material into gasoline blends. Since RLOP GRUB has a low McCloud index/high end point (typical), we are unable to feed this material to the NHT to remove H2S and ultimately the Reformers (causes fouling). Typically, we would route off test T-1287 material back to crude, which has an economic penalty associated with it. However, we came up with a new solution last week to feed T-1287 to the JHT, which only has additional opex associated with it. The JHT removes the high H2S and the high end point material. So far this option seems to be working. However, I still believe we need to solve the issue of sending high H2S material into a gasoline blending tank.	NL-Quality - Product Quality (int)	is used and the limitations. 5 Why 1. Why did T-1287 have high H2S? - RLOP GRU distillation temperatures were low and unstable from 11/28 -12/4 while GRUB was routed to T-1287 (Please note, routing timing is based on tank rise and B&S turnovers. RLOP turnovers are not clear on timing). H2S should normally go through C-1910 overhead to 4H2S or through C1920 overhead to GRU treating section. With low temperatures, H2S carried under to GRUB. 2.Why was GRUB routed on test with low/unstable GRU temperatures? - RLOP is under the impression that T-1287 is an "off test" routing. This is not true. 3. Why does RLOP treat T-1287 as on "off test routing? - Lack of understanding of overall refinery operation. RLOP does not understand how the RLOP GRUB is used and the limitations. , (2) Inadequate procedures - Step #16.8 states that 4CAT Board operator should be called and naphtha should be routed into GRUB line when levels are stable. There are two issues with this. a) RLOP naphtha is never routed to 4CAT. It is routed to T-1287 in B&S. b) Temperatures, rather than levels should be used to help determine when on test. C-1910 and C-1920 (places where H2S is removed) are not heated up until Step #17. If this procedure is followed in chronological order, the GRUB will likely always have high H2S since the material from C-1910 and C-1920 will carry under to C-1950 at low temps. 5Why 1. Why did T-1287 have high H2S? - RLOP GRU distillation temperatures were low and unstable from 11/28 -12/4 while GRUB was routed to T-1287 (Please note, routing timing is based on tank rise and B&S turnovers. RLOP turnovers are not clear on timing). H2S should normally go through C-1910 overhead to 4H2S or through C1920 overhead to GRU treating section. With low temperatures, H2S carried under to GRUB. 2. Why was GRUB routed on test with low/unstable G
29119	Richmond, CA - Refinery	1/4/2012 9:00:00 AM	Closed	Near Loss	Used wrong vehicle to push a disable vehicle.	Technician notice that his vehicle wouldn't start so tech called another tech to help push start the vehicle. Hand pushing it didn't do the job. Tech thought there wasn't enough speed so he used another vehicle to push the vehicle that had the dead battery. This caused a mark on the fronts of both vehicles.	NL-Equipment/Property Damage - Equipment Damage	
29122	Richmond, CA - Refinery	1/4/2012 3:00:00 PM	Closed	Near Loss	Green Card. Step is 12" drop. Location: Long Wharf, Eastside of Berth 4	Green Card. Eastside of Berth No. 4 there is a step that is about a 12" drop; blends in with grading.	NL-Injury/Illness - Contractor Injury	
29140	Richmond, CA - Refinery	1/5/2012 2:00:00 PM	Closed	Near Loss	soot found in the bay around Moonlight Venture	Soot found in the water of berth #1 around the Moonlight Venture which is believed to have been discharged from the ship"scooling water discharge port. The Ship's Captain and Engineer both denie soot was released from this vessel.	NL-Environmental - Spill - 3rd Party	(1) Lack of accountability from the Masters / Expectations were not clearly defined
29203	Richmond, CA - Refinery	12/28/2011 6:00:00 AM	Closed	Near Loss	RLOP B-Crew worked without a qualified Head Operator	RLOP B-Crew worked without a qualified Head Operator on Day-Shift 12-28-2011. Luckily there were no incidents or emergencies.	NL-Business Process - Business Process	(1) Why did B-crew go without an HO? On- crew HO was on vacation and backup HO scheduled for that day called in AB-109 just before the beginning of the set. No other qualified HO's were available for coverage. Why were no other qualified HOs available for coverage? Standby person was not HO-qualified. D-crew had both HOs on vacation on either side of this B-crew set. A-crew has only one qualified HO;he was on nights and had worked 16 hours the previous day to help cover an HO shortage. C-crew's only qualified HO was on vacation. E-crew has two qualified HOs and both were on vacation. Only qualified HO on vacation that could be reached was forced in on his vacation day the previous day to cover the console job when crew was short a CO and HO. Why did personnel policies (vacation, stand-by, ACP, etc.) not provide coverage for this scenario, where an HO is on vacation and the designated HO (back-up) calls in AB-109 after coverage plans have been put in place? Applicable policies and enforcement of these policies are inadequate.
292'3	Richmond, CA - Refinery	1/8/2012 3:02:00 PM	Closed	Near Loss	FCC flare totalizer tripped due to shutdown of K-130 wet gas compressor	While shutting down the FCC unit, K-130 (wet gas compressor) suction pressure controller, 52PC100A, opened and briefly vented excessive pressure to relief causing a trip of the FCC totalizer.	NL-Business Process - Business Process	
29226	Richmond, CA - Refinery	1/9/2012 12:15:00 AM	Closed	Loss	rail car derailement on Tract #64	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. The unit operator switched the tract derailer from open to close, he did it because he was prepairing the #64 tract for the rail car switch. He thought it was closed but it was open to start with. So he accidently put the tract derailer into the wrong position.Then the operator faxed the switch paper work signed to the scale house. Then the rail serve operator moved the rail car onto the tract which derailed the rail car.	Equipment/Property Damage	(1) Lighting to the indicating equipment was not functioning, no power (for years)., (2) Operator did not double check the derailer position, (3) •Light bulbs for warning devices at railcars are not available (we are not saying working as that was addressed as a key factor). A side issue is that operations has no light bulbs for the working units if they were to fail. This is a 24/7 operation and they need these supplies on hand., (4) •Dim lighting in the railcar switch area.

29272	Richmond, CA - Refinery	1/9/2012 4:31:00 AM	Closed	Near Loss	LOTO Key 2037 missing	Loto Key 2037 missing. Need CFD to open.	NL-Business Process - Business Process	
29273	Richmond, CA - Refinery	1/5/2012 5:00:00 PM	Closed	Loss	Operator sore shoulder and foot	D&R Operator reported sore shoulder and foot to clinic- late reporting from shutdown.	Injury/Illness	(1) Operator reported first aid late because management did not communicate the need to report first aids immediately to STL.
29326	Richmond, CA - Refinery	1/10/2012 10:30:00 AM	Closed	Loss	Cut to index finger	A company electrician was inspecting and testing 115 volt extension cords in the Electric shop. As part of the inspection the electrician was rolling the cords and tying the cords with twine. The electrician was rolling the cords using the cord rolling machine; once the cords were rolled he cut the twine with a multi tool with a knife. The electrician rolled a cord and reached into the machine to cut the twine with the knife in the open position. When he reached into the machine the blade hit the side rail which caused the knife to close on his index finger.	Injury/Illness	(1) the multi tool with a non locking blade is not a company issue tool, company issue knifes have locking blades to prevent this issue
29330	Richmond, CA - Refinery	1/2/2012 12:00:00 AM	Closed	Near Loss	Year-end compliance requirements not completed by Dec. 31, 2011.	Several HES requirements, including audit action items, training, and Refinery instructions, were not completed by December 31, 2011, as certified in the Richmond Refinery's year-end HES compliance certification process. This process compiles all un-completed HES requirements, such as training, CAP tasks, PSSRs, audit action items, etc. including those certified to be completed before year-end.	NL-Regulatory Compliance - Non Compliance	(1) 1 Why were items that were certified in the rep letter as going to be complete, not complete? In the past, this had occurred without consequence. 2. Why had it occurred with no consequence? HES had responsibility for the rep letter development, but could not control folks who were responsible. 3. Why is the responsiblity for the Rep Letter with HES? The current system has HES providing oversite for the development of the letter, pulling together the outstanding issues and tracking them to completion. 4. Why is ths system set up the way it is? Did not realize that by setting it up this way, there would not be the level of commitment necessary to assure completion of action items in the time frame commitment. 5. Why was this not anticipated as a possible gap in the process or corrected once it was identified? There has not previously been the level of scrutiny for the accuracy of the report as there was in 2011. It was acceptable to have some commitements not meet the target. This is no longer the case, requiring the process to be revised to better manage the completion of all commitments in the Rep letter by the end of the year.
29380	Richmond, CA - Refinery	1/10/2012 8:00:00 AM	Closed	Loss	Employee was exposed to poison oak	Employee noticed signs of poison oak exposure on Tuesday evening. 1/10/12.	Injury/Illness	(1) Employee did not doff his gloves in a safe manner nor did he take extra precaution to protect himself from the possibility of poison oak in the area.
29385	Richmond, CA - Refinery	1/11/2012 8:50:00 AM	Closed	Loss	Finger laceration	Pipefitter was attempting to tape a weld blanket onto the end of a section of pipe to prepare the line for welding. The section of pipe was had one end supported atop a pipe support with a Teflon bumper beneath it to allow for shifting of the lines on the support. According to reports, the end of the pipe that was to be taped was being supported with one hand by the fitter, while the other hand was to be used for taping. The line slipped on the Teflon bumper, causing the end of the pipe held in the pipefitter's hand to rotate, thus pinching his finger between the pipe and a rock.	Injury/Illness	(1) pinch point
29393	Richmond, CA - Refinery	1/11/2012 1:30:00 PM	Closed	Loss	EE was picking up a jack stand and the head slid down and pinched LH index finger.	EE was picking up a jack stand and the head slid down and pinched LH index finger.	Injury/Illness	(1) Why did the finger get pinched. the finger got pinched because the jjack stand fell off the fork lift. It feel off the fork lift because load was not tied down. It was not tied down because EE was in a hurry.
29396	Richmond, CA - Refinery	1/11/2012 3:30:00 PM	Closed	Near Loss	GHT E-1679 reboiler steam leak	GHT E-1679 reboiler steam leak on bottom flange of pot due to startup/shutdown heat cycle.	NL-Business Process - Business Process	
29398	Richmond, CA - Refinery	1/11/2012 3:50:00 PM	Closed	Loss	EE tripped and fell and injured his shoulder	EE injured his shoulder when he was walking out of 5 Cat. He was walking over a platform when he tripped and fell. He stop his fall with his hand injuring his shoulder.	Injury/Illness	(1) Coverall legs were to long and cause a tripping hazard, which were not addressed by EE
29443	Richmond, CA - Refinery	1/12/2012 8:45:00 AM	Closed	Near Loss	Green Card - Timec vehicle leaving B&S Ctrl RM parking lot did not secure tools	Green Card - Contractor vehicle leaving B&S Ctrl RM parking lot did not secure tools (saw, tape measures etc.) that could fall out when vehicle is in motion.	NL-Injury/Illness - Contractor Injury	
29443	Richmond, CA - Refinery	1/12/2012 8:45:00 AM	Closed	Near Loss	Green Card - Timec vehicle leaving B&S Ctrl RM parking lot did not secure tools	Green Card - Contractor vehicle leaving B&S Ctrl RM parking lot did not secure tools (saw, tape measures etc.) that could fall out when vehicle is in motion.	NL-Transportation - Contractor	
29443	Richmond, CA - Refinery	1/12/2012 8:45:00 AM	Closed	Near Loss	Green Card - Timec vehicle leaving B&S Ctrl RM parking lot did not secure tools	Green Card - Contractor vehicle leaving B&S Ctrl RM parking lot did not secure tools (saw, tape measures etc.) that could fall out when vehicle is in motion.	NL-Injury/Illness - Employee Injury	
	Richmond,	1/12/2012			Short on a solenoid			

29482	CA - Refinery	3:00:00 PM	Closed	Loss	caused small fire in cabinet on fire engine	A short circuit on a solenoid caused small fire in cabinet on a fire engine. The ensuing fire damaged a turnout coat and a rescue Hurst ram	Equipment/Property Damage	(1) a solenoid was left in place after a vehihicle retrofit had taken place that removed the hosereel the solenoid supplied
29490	Richmond, CA - Refinery	1/11/2012 4:27:00 AM	Closed	Near Loss	Start up of K-130 wet gas compressor resulted in a trip of the FCC flare totalizer	When K-130 wet gas compressor was started a temporary decrease in system pressure caused the natural gas makeup controller, 52PC-100B, to open in an attempt to stabilize the system pressure. The valve over-compensated and the pressure rose above setpoint causing 52PC-100A to open and vent to relief as designed.	NL-Environmental - Release	
29542	Richmond, CA - Refinery	1/12/2012 10:40:00 AM	Closed	Loss	Sulfur excursion, routed product off test for 5 – 8 hrs.	DHT product sulfur went high and the product was routed off test. The feed sulfur was going up due to moves at the crude unit to pull more naphtha, which makes the diesel heavier. Heavier diesel means more sulfur that is harder to treat. This requires temperature to be raised in the DHT reactor.	Business Process	(1) The 4CU PCO was pulling more naphtha in order to minimize 90% point spec giveaway on the diesel. It is known that this action will increase the amount of sulfur sent to the DHT. The 4CU PCO should therefore notify the DHT PCO so that they can proactively raise reactor CAT temperatures to treat the extra sulfur.
29547	Richmond, CA - Refinery	1/13/2012 4:00:00 PM	Closed	Near Loss	3" edwards valve failure	After completing a water wash of E550 the operator was closing a 3" Edwards valve. The valve was almost completely closed when the threads stripped out allowing the valve to push out under system pressure (2600psi) to full open position. The failure was sudden "the valve snapped open."	NL-Equipment/Property Damage - Equipment Damage	(1) Edwards valve bushing stripped out.
29610	Richmond, CA - Refinery	1/12/2012 12:00:00 AM	Closed	Loss	Contractor employee exposed to poison oak.	Contractor employee was exposed to poison oak.	Injury/Illness	(1) aware of there sourcundings
29610	Richmond, CA - Refinery	1/12/2012 12:00:00 AM	Closed	Loss	Contractor employee exposed to poison oak.	Contractor employee was exposed to poison oak.	NL-Injury/Illness - Contractor Injury	(1) aware of there sourcundings
29656	Richmond, CA - Refinery	1/16/2012 4:55:00 AM	Closed	Loss	HNF 220 routed of test	At 4:55 AM the RLOP HO informed the STL that HNF C-1650 bottoms was routed off test due to a Vis of 19.9 with a spec of 40.0. Furthermore he also informed the STL that the 220 block switch, which was performed earlier in the morning was mismanifolded. HNF was actually feeding from T3157(4R tank) vs. T3161/62(waxy 220 intermediate tank). This was also manifolded correctly about 4:50 AM.	Operational Process/Procedures	(1) Contributing Factor: Procedure does not prompt console operator to verify tank drop until a few hours after change in feed routing. Doing this earlier could have reduced time that it took to discover the mis-alignment., (2) EE failed to recognize risk that he could be opening up wrong line or that he was doing this differently from how he had done it in the past. As a result, he didn't pause to get others involved to help. , (3) Contributing Factor: Additional labeling of lines would have helped clear up EE confusion., (4) EE failed to recognize risk that he could be opening up wrong line or that he was doing this differently from how he had done it in the past. As a result, he didn't pause to get others involved to help.
29734	Richmond, CA - Refinery	1/17/2012 9:35:00 AM	Closed	Loss	Worker sustained contusion to finger while moving large tool box	Two Laborers, were moving a Weather-Guard tool box which was on the bed of full-sized pickup truck. They were sliding it across the bed with each of them on opposite ends of the tool box, one was pushing and the other pulling. Employee had his hand between the end of the tool box and the end of the bed of the pickup closest to the cab. The tool box moved towards the cab and caught the employee's finger in the pinch point created by the bed and the box.	Injury/Illness	(1) Inattention to task at hand by worker
29807	Richmond, CA - Refinery	1/18/2012 10:25:00 AM	Closed	Loss	While replacing a valve the mechanic got a few drops of diesel on his cheek & eye.	While replacing a valve the Operator and Mechanic had completed the JJSV/JHA and LOTO. The mechanic was wearing the proper PPE including safety glasses. They had removed the bolts from one side of the valve and were removing the bolts from the other side. The line shifted while opening the flange and product that was laying in the line splashed up under his safety glasses.	Injury/Illness	(1) Mechanic was not wearing a face sheild while opening a flange., (2) Mechanic was not wearing a face sheild while opening a flange.
29832	Richmond, CA - Refinery	1/18/2012 5:40:00 AM	Closed	Loss	Loss of electrical power to D&R/NHT plant	Loss of power NHT due to 12-517 breaker opening on relay action "GROUND-OVERCURRENT". This electrical outage @ NHT caused a loss of 5 CAT, PENHEX & a feed cut at TKN.	Business Process	(1) The mechanic that installed new space heater wiring was not properly trained to understand the potential hazard he/she was creating by not routing the new space heater wiring where the old wiring was routed.
29837	Richmond, CA - Refinery	1/18/2012 8:30:00 AM	Closed	Near Loss	Fcc flare totalizer trip	At 8:30 am 1/18 while water washing E-1052 due to bisulfide plugging, RLOP V-1900 automatic level controller opened and drained the level. The combination of these 2 events triggered a short totalizer trip at the FCC flare.	NL-Lessons Learned	(1) No Communication of Water wash On E-1050's and automatic level control of a high level in vessel V-1900 in RLOPcombined to trip fcc totalizer
29837	Richmond, CA - Refinery	1/18/2012 8:30:00 AM	Closed	Near Loss	Fcc flare totalizer trip	At 8:30 am 1/18 while water washing E-1052 due to bisulfide plugging, RLOP V-1900 automatic level controller opened and drained the level. The combination of these 2 events triggered a short totalizer trip at the FCC flare.	NL-Regulatory Compliance - Permit Exceedance	(1) No Communication of Water wash On E-1050's and automatic level control of a high level in vessel V-1900 in RLOPcombined to trip fcc totalizer
29878	Richmond, CA - Refinery	10/17/2011 12:00:00 AM	Closed	Loss	Stack Gas source testing was performed outside required parameters for Consent Decree compliance	When testing the FCC stack gas emission, the sample gas rate must be < 0.75 scfm for the quarterly testing per the Air District Manual of Procedures and > 0.53 scfm for the Consent Decree required annual test to demonstrate compliance with NSPS J 40 CFR 60.106(b)(2). During the test performed on ~Oct 17, 2011 by a 3rd party contractor, the rate was <0.53 scfm which is a violation of Consent Decree requirement which results in an economic penalty. We are able to complete the annual test at any time during the calendar year of our choosing, but the QA/QC of the test results was completed in late Dec which didn't allow for enough time to re-test.	Regulatory Compliance	(1) See Journal Tab for full 5 Why documentation. The contractor did not follow the instructions for the sampling requirements for this source test provided by Chevron., (2) The QA/QC occurred too late in the year to discover the problem and set up another source test
								(1) 5-Why: Why did the company incur a late charge for the X-Ray Equipment Radiation. Why: 1: Because the payment

29916	Richmond, CA - Refinery	1/17/2012 12:00:00 AM	Closed	Loss	Registration payment for two X-Ray units was missed and late charges incurred.	QCD had received paperwork for the payment of registration fees for two X-Ray Generating pieces of equipment purchased through them. QCD had believed that the refinery Radiation Safety Officer was responsible for paying the fees, while the Radiation Safety Officer had thought payment would be completed by QCD. A note regarding delinquency payments from the California Department of Public Health was received. Total additional fee is on the order of $200.	Regulatory Compliance	was never sent out on time. Why: 2: Payment invoice was sent to QCD who had believed the Radiation Safety Officer was responsible. Why: 3: There was a miscommunication where two separate parties with ownership in the payment believed the other was making the payment, & California Department of Public Health assigns the ownership for renewal payments to the purchasing party. Why: 4: No set agreement was in place for payment of the equipment
29981	Richmond, CA - Refinery	1/16/2012 12:00:00 AM	Closed	Near Loss	Tank 3157 taken below low pump out.	RLOP made a production feed switch within their unit from T-3159 to T-3161/3162 and did not realize that and error was made during their switch. They started feeding T-3157 which was near low pump out. Tank movement alarms were recieved and acknowledge without investigating by the T & B Control Board Operator and T-3157 was taken below low pump out.	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) Person chose not to follow procedure of accepted practice and does not hold themselves accountable for following
30012	Richmond, CA - Refinery	1/21/2012 7:00:00 AM	Closed	Near Loss	Oil in Impound Basin drained from T-3102 roof drain	Operator making his rounds found oil in T-3102 roof drain seperator and impound basin.	NL-Environmental - Spill	(1) No thorough MOC review process when the tank was converted to fuel oil/gas oil service.
30020	Richmond, CA - Refinery	1/22/2012 8:45:00 PM	Closed	Near Loss	Shutdown of K-1060/1070 on a V-1051 high level. Tripped the FCC totalizer.	During a water wash of the E-1051/1052, the plugging broke free and filled up V-1051. The flare gas compressors shut down on a V-1051 high level.	NL-Environmental - Release	(1) Why did FCC trip their flare totalizer Because K-1060/1070 shutdown Why did K-1060/1070 shutdown. Because V-1051 filled up with water Why did V-1051 fill up with water Because operations was water washing the E-1051/1052 due to plugging Why was the E-1051/1052 plugging. Because C-820 in 8 plant has been unstable and excess flow from V-820 has been going back to V-801 causing NH3 to flash off into the relief system. NH3 will cause plugging in the overhead fin fans at Flare Gas Recovery. Additional finding - Operator was standing by FGR during the water wash per our procedure. Due to the severity of the plugging, a wash of 1 hours resulted in no relief in the high DP. A short time later, a 2 hour wash was needed before the plugging finally broke free. At that point, V-1051 filled up so quickly, the high level shutdown as activated before the water could be shut off.
30028	Richmond, CA - Refinery	1/23/2012 12:01:00 AM	Closed	Near Loss	6-2 feeder (480 vt) circuit breaker trip.	6-2 Feeder (480 volt power circuit) discovered tripped affecting pentamer (old wax) loading racks.	NL-Equipment/Property Damage - Equipment Damage	(1) Management has made a business decision not to spend capital dollars to replace old power lines
30087	Richmond, CA - Refinery	12/31/2011 12:00:00 AM	Closed	Loss	Monthly routine duties incomplete for real vs auto checklist	The Monthly Real vs Auto Checklist for the CFO job routine duties on B Crew for Dec 2011 was incomplete at end of Dec 31st.	Business Process	(1) Incomplete (electronic) monthly duty expired without HO or STL review and action taken to get the missing duties entered.
30092	Richmond, CA - Refinery	1/23/2012 3:00:00 PM	Closed	Loss	loss of UPS power to 17 pump station	During the last Uninterruptable Power Supply (UPS) inspection performed by Liebert Services, the UPS at 17 pump station was identified as needing the air filters on the unit replaced. Two Electric shop electricians were given a work order to replace the filters, the electricians put the UPS in Maintenance bypass to open the doors and replace the filters. Once the filters were in place they began placing the UPS to normal using the selector handle on the front panel, during that process the UPS start up the UPS failed to start up causing a loss of the RIE.	Operational Process/Procedures	(1) Incident description Two Electric shop electricians were given a work order to replace the filters, the electricians put the UPS in Maintenance bypass to open the doors and replace the filters. Once the filters were in place they began placing the UPS to normal using the selector handle on the front panel, during that process the UPS start up the UPS failed to start up causing a loss of the RIE. FIVE WHY'S 1.The UPS failed to start following the air filter change, 2. Why did 1 happen? The UPS has internal DC Capacitors that failed during the restart procedure 3. Why did 2 happen? In discussions with Emerson Liebert, the equipment vendor, older capacitors will fail during start up of the unit due to age. 4. Why did 3 happen? The capacitors fail during startup because the unit will discharge them for safety and the old capacitors will fail during the charging sequence. Why did 4 happen? The capacitors were past their expected life span, and where not replaced. Root Cause The vendor informed me that the expected life span for the capacitors in the UPS unit is ~7 years; they recommend for reliable service that the capacitors are replaced on a 5 year PM cycle.
					A 2011 PHA of the HNF Facility found the following issue in the High Pressure to Low Pressure Separator level valves: The potential for vapor blow through from V-1610 to V-1620, exceeding the PRD relief	During the 2011 HNF PHA Revalidation, an action item was assigned to perform a Safety Objective Analysis (SOA) on the vapor blow through case		(1) 1- Why were the risks associated with upsizing the level control valves on the downstream equipment not recognized? - Because, there was no discussion about the potential impacts of upsizing the level control valves on the downstream equipment during the project PHA. 2- Why wasn't there a discussion about the potential impacts of upsizing the level control valves on the downstream equipment during the project PHA? - Because, upsizing the level control valves was not in the scope of the project PHA. It was the assumption of the PHA team that if any additional changes were made to the scope of project, the risks of those changes would have been assessed through the MOC

30120	Richmond, CA - Refinery	12/5/2010 12:00:00 AM	Closed	Near Loss	capacity on V-1620. In this scenario LCV-16321 goes wide open when there is no liquid in V-1610. This leaves the entire capacity of the valve available for flowing vapor only. In this case the capacity of PSV-371 on V-1620 is not large enough to pass the calculated load.	from the high pressure separator V-1610 to the low pressure separator V-1620 as recommended by the Hydro Processing Vulnerabilities list. In this scenario, the liquid level control valve,,LV-321/LV-322 (primary/spare), on high pressure separator V-1610 is fully open, resulting in loss of liquid level in the high pressure separator, followed by high pressure vapor (H2) blow through to the low pressure separator. This scenario may result in an overpressure of the low pressure separator and downstream equipment. The primary safeguard in this vapor blow through scenario is pressure relief device PSV-371 on the low pressure separator. When validating that the PSV was appropriately sized to protect the equipment in the event of vapor blow through, it was determined that PSV-371 was undersized for this case.	NL-Operational Process/Procedures - Pressure Relief Devices (PRD)	process. 3- Why weren't the risk of changes not assessed through the MOC process? - Because, relief system reviews did not take place for the MOC. 4- Why relief system reviews didn't take place? - Because it's at the discretion of the MOC Stage Two Reviewer to require a relief system review for a given MOC. In this case, no one was assigned to perform the relief system review. 5- Why didn't MOC Stage Two Reviewer require anyone to perform relief system and process engineering reviews? a. Don't know- was not able to reach this individual. o Assumptions: □ Did not recognize risks □ Lack of skill or knowledge regarding relief concerns
30120	Richmond, CA - Refinery	12/5/2010 12:00:00 AM	Closed	Near Loss	A 2011 PHA of the HNF Facility found the following issue in the High Pressure to Low Pressure Separator level valves: The potential for vapor blow through from V-1610 to V-1620, exceeding the PRD relief capacity on V-1620. In this scenario LCV-16321 goes wide open when there is no liquid in V-1610. This leaves the entire capacity of the valve available for flowing vapor only. In this case the capacity of PSV-371 on V-1620 is not large enough to pass the calculated load.	During the 2011 HNF PHA Revalidation, an action item was assigned to perform a Safety Objective Analysis (SOA) on the vapor blow through case from the high pressure separator V-1610 to the low pressure separator V-1620 as recommended by the Hydro Processing Vulnerabilities list. In this scenario, the liquid level control valve, LV-321/LV-322 (primary/spare), on high pressure separator V-1610 is fully open, resulting in loss of liquid level in the high pressure separator, followed by high pressure vapor (H2) blow through to the low pressure separator. This scenario may result in an overpressure of the low pressure separator and downstream equipment. The primary safeguard in this vapor blow through scenario is pressure relief device PSV-371 on the low pressure separator. When validating that the PSV was appropriately sized to protect the equipment in the event of vapor blow through, it was determined that PSV-371 was undersized for this case.	NL-Operational Process/Procedures - Safety Systems	(1) 1- Why were the risks associated with upsizing the level control valves on the downstream equipment not recognized? - Because, there was no discussion about the potential impacts of upsizing the level control valves on the downstream equipment during the project PHA. 2- Why wasn't there a discussion about the potential impacts of upsizing the level control valves on the downstream equipment during the project PHA? - Because, upsizing the level control valves was not in the scope of the project PHA. It was the assumption of the PHA team that if any additional changes were made to the scope of project, the risks of those changes would have been assessed through the MOC process. 3- Why weren't the risk of changes not assessed through the MOC process? - Because, relief system reviews did not take place for the MOC. 4- Why relief system reviews didn't take place? - Because it's at the discretion of the MOC Stage Two Reviewer to require a relief system review for a given MOC. In this case, no one was assigned to perform the relief system review. 5- Why didn't MOC Stage Two Reviewer require anyone to perform relief system and process engineering reviews? a. Don't know- was not able to reach this individual. o Assumptions: □ Did not recognize risks □ Lack of skill or knowledge regarding relief concerns
30131	Richmond, CA - Refinery	1/19/2012 6:00:00 AM	Closed	Near Loss	Green Card. Heater in classroom doesn't work. Location: Hensley, Bldg 317	Green Card. The heater in classroom doesn't work. When overloading with floor heaters, we trip the breaker. Location: Hensley St., Bldg 317	NL-Lessons Learned	
30131	Richmond, CA - Refinery	1/19/2012 6:00:00 AM	Closed	Near Loss	Green Card. Heater in classroom doesn't work. Location: Hensley, Bldg 317	Green Card. The heater in classroom doesn't work. When overloading with floor heaters, we trip the breaker. Location: Hensley St., Bldg 317	NL-Equipment/Property Damage - Equipment Damage	
30133	Richmond, CA - Refinery	1/19/2012 6:00:00 AM	Closed	Near Loss	Green Card. Poor lighting. Location: GMG Insulation Pad, Fabrication Room	Green Card. You need to feel your way in the dark and travel around obstacles in order to turn the lights on in room. The light switch is on the inside of another room. Location: GMG Insulation Pad, Fabrication Room	NL-Injury/Illness - Contractor Injury	
30133	Richmond, CA - Refinery	1/19/2012 6:00:00 AM	Closed	Near Loss	Green Card. Poor lighting. Location: GMG Insulation Pad, Fabrication Room	Green Card. You need to feel your way in the dark and travel around obstacles in order to turn the lights on in room. The light switch is on the inside of another room. Location: GMG Insulation Pad, Fabrication Room	NL-Lessons Learned	
30133	Richmond, CA - Refinery	1/19/2012 6:00:00 AM	Closed	Near Loss	Green Card. Poor lighting. Location: GMG Insulation Pad, Fabrication Room	Green Card. You need to feel your way in the dark and travel around obstacles in order to turn the lights on in room. The light switch is on the inside of another room. Location: GMG Insulation Pad, Fabrication Room	NL-Injury/Illness - Employee Injury	
30168	Richmond, CA - Refinery	1/24/2012 6:53:00 AM	Closed	Near Loss	Refinery Main Gate:Entry	At the above time, date and location a CVX EE was approaching the Main gate on foot to get a Temp Badge after informing the MG Security Officer that he has forgotten his badge. As the EE walked towards the Gate house from the pedestrian sidewalk on the in-bound side, he did not notice that the in-bound gate arm was in the "up" position. He mistakenly thought that the yellow and black painted lines on the ground were a crosswalk and proceeded to walk towards the MG Guard shack in the yellow-striped zone. As he was walking in the yellow striped zone, the Gate arm came down and struck his backpack that he was carrying on his shoulder. The EE stated that he was not hurt, and proceeded to work. A follow-up call to the EE from the MG Officer confirmed from the EE that he was not hurt.	NL-Injury/Illness - Employee Injury	
30228	Richmond, CA - Refinery	1/24/2012 8:00:00 AM	Closed	Near Loss	Green Card. Broken/corroded welds on deck plating. Location: N. Iso Fin Fan Decks	Green Card. Several broken and corroded welds on deck plating of E-130 fin fan walkways and stairway landings. Getting to the point of questionable attachment to the structure. Location: South Isomax Fin Fan Decks	NL-Lessons Learned	
								(1) Outside repair facility repaired pump with a new (manufactured) shaft with (critical dimensions taken from the original shaft) however the impeller was not correctly located / positioned on the shaft while using a vertical stacking method

30301	Richmond, CA - Refinery	12/17/2011 1:00:00 PM	Closed	Loss	P-1165 pump could not be installed after repairs were completed by outside repair shop.	The pump was repaired at a outside repair shop. During the repair a new shaft was manufactured with (critical dimensions taken from the original shaft) however the impeller was not correctly located / positioned on the shaft while using a vertical stacking method and (the excessive interference fit was not recognized by UNICO during assembly). The clearance should have been .030 and was assembled at approximately .5625. Subsequently during field installation the impeller hit the case	Quality	and (the excessive interference fit was not recognized by UNICO during assembly). The clearance should have been .030 and was assembled at approximately .5625. Subsequently during field installation the impeller hit the case... Why did "above" happen? A deficiency in quality / inspection / assembly technique allowed the clearance of impeller to be incorrectly set and was not recognized until the pump was installed in the field.
30343	Richmond, CA - Refinery	1/25/2012 12:01:00 AM	Closed	Near Loss	F1551 nearly exceeded the NOx emissions limit on 1/25/12	We had a near miss with our 8-hr 40 ppm NOx emissions limit at F-1551 yesterday, 1/25. Our permit condition states not to exceed 40 ppm and we barely avoided an excess, Title V deviation, and environmental scorecard event	NL-Environmental - Release	(1) Alarm point was set too far below the actual limit to allow operators to optimize unit. Because the NOx alarm point was set so far below the actual limit, operators became accustomed to ignoring the alarm and it became meaningless since we were still below the real limit.
30354	Richmond, CA - Refinery	1/26/2012 3:15:00 PM	Closed	Near Loss	Veolia driver failed to deploy the ground cable while vacuuming product from a line. Vaccum truck parked on Standard Avenue and the vacuum hose was draped over the side of the wall.	Vacuum truck driver had been used at multiple locations as needed to deinventory T-3198 line. Line was filled with wash water and residual hydrocarbon. Truck was positioned next to a concrete wall on Standard Avenue and asked to be on stand by pending the result of a line break on the other side of the concrete wall. Initially, the Chevron Safety Operator did not think he need to vacuum at this location. After achieving a line break, the operator realized that he did need the vacuum and asked the crew to deploy the hose over the wall. At this point,the vacuum truck driver failed to deploy the ground cable over the wall. There were no ground sources available on the street side.	NL-Operational Process/Procedures - Safety Systems	(1) Why did vacuum truck operator fail to deploy his ground cable? He said he simply forgot. What caused him to forget? He stated that recent job events had irritated him, and that he was taken out of his normal routine by it. Why did the driver allow job events to irritate him to the point where he was taken out of his normal routine? Driver failed to recognize / refused to admit that he was be affected in this manner. Why didn't the driver use pause work authority to get over his irritation so that he could focus on the work with a clear head? He chose to proceed with the work instead. Taking the time and putting forth the effort to clear his mind did not occur., (2) Why did the vacuum truck operator fail to deploy his ground cable? A ground source was not readily available in the area where the truck was parked. Why wasn't a ground source readily available where the truck was spotted? Not all spots where vacuum trucks are needed have readily available ground sources. Why didn't the driver seek assistance at that point to secure a good ground source? He was asked to standby "just in case," and was told vacuum may not even be needed. Why didn't he set up as if the job was going to happen anyway? Taking the time and putting forth the effort to do so was deemed unnecessary by the driver in hopes that the vacuum would not be needed.
30355	Richmond, CA - Refinery	1/17/2012 6:00:00 AM	Closed	Loss	Firewater leak erosion of NH3 Loading racks railroad tracks	Underground firewater leak at NH3 Racks caused erosion of soil supporting track number 63.	NL-Business Process - Business Interruption	(1) Soil settlement overtime created significant strain on the barried pipe resulting in a cracked weld.
30355	Richmond, CA - Refinery	1/17/2012 6:00:00 AM	Closed	Loss	Firewater leak erosion of NH3 Loading racks railroad tracks	Underground firewater leak at NH3 Racks caused erosion of soil supporting track number 63.	Equipment/Property Damage	(1) Soil settlement overtime created significant strain on the barried pipe resulting in a cracked weld.
30357	Richmond, CA - Refinery	1/21/2012 12:00:00 AM	Closed	Near Loss	Radio Dispatch Console intermittently failing. Emergency alarms & tone downs hindered	Dispatch Radio Console not dispatching nor could it received vital alarms.	NL-Business Process - Business Interruption	
30400	Richmond, CA - Refinery	1/27/2012 12:00:00 PM	Closed	Near Loss	4" of wash water found on T-3196 roof	Chevron Tank Cleaning Supervisor discovered approximately 2" of standing water on T-3196 roof. Although roof is landed and cribbed, work has been shutdown and personnel removed from inside of tank until roof is drained.	NL-Business Process - Business Interruption	(1) Failure to visually verify roof condition daily as a part of entry process, (2) Risk not identified, change of condition
30422	Richmond, CA - Refinery	1/27/2012 11:30:00 AM	Closed	Loss	contract EE injuried foot closing RR gate	Contract Security EE working 31 gate, stated she injuried her left ankle closing RR gate	Injury/Illness	(1) The officer had stated that they had been given instructions on opening and closing a swinging gate, but had not received a demonstration of how to open and close a gate. The officer closed the swinging gate in a manner that they believed to be the safest. The manner in which the officer had been closing the gate had led to no incidents on prior occasions.
30429	Richmond, CA - Refinery	1/28/2012 9:00:00 AM	Closed	Loss	H2 A-Train Fuel Gas Chopper was inadvertently closed while doing EBV checks causing the loss of H2 production from H2 A-Train.	While attempting to perform an EBV stroke check on MOV-380 (C-380, B-Train CO2 absorber) the OWS Operator turned the wrong CMC switch HS-305C (H2 A-Train Fuel Gas Shutdown) causing the loss of fuel gas to H2 A-Train thus losing 94MSCFD of H2 production.	Operational Process/Procedures	(1) CBO switches incorrect Hand switch (HS305C-A TRN FG manual SD) Please see link to complete TapRooT Report.
30448	Richmond, CA - Refinery	1/28/2012 2:45:00 PM	Closed	Near Loss	Cygnus Voyager crew disconnected DCMA's without permission	The Cygnus Voyager completed it's crude discharge at approximately 1410Hrs. The Berth #4 Operator drained the DCMA's (#2 & #4) and went to the DCMA controllers for the disconnect from the vessel. Once there, the Berth #4 Operator noticed that both arms had already been disconnected by the ship's crew and boiler makered and plastic wrapped. This is a deviation from our practice of having the Operator being present at the controller in control of the arms and giving the verbal ok to disconnect from the vessel. This could have resulted in a spill, equipment damage or personnel injury.	NL-Business Process - Business Process	(1) 2nd Mate didn't know there was a procedure.

30448	Richmond, CA - Refinery	1/28/2012 2:45:00 PM	Closed	Near Loss	Cygnus Voyager crew disconnected DCMA's without permission	The Cygnus Voyager completed it's crude discharge at approximately 1410Hrs. The Berth #4 Operator drained the DCMA's (#2 & #4) and went to the DCMA controllers for the disconnect from the vessel. Once there, the Berth #4 Operator noticed that both arms had already been disconnected by the ship's crew and boiler makered and plastic wrapped. This is a deviation from our practice of having the Operator being present at the controler in control of the arms and giving the verbal ok to disconnect from the vessel. This could have resulted in a spill, equipment damage or personnel injury.	NL-Quality - Quality MS-Correction Action Request Log (CAR)	(1) 2nd Mate didn't know there was a procedure.
30449	Richmond, CA - Refinery	11/2/2011 2:00:00 AM	Closed	Loss	Tube failure of E-142A (DeEthanizer Steam Reboiler)	Tube Failure of E-142A (DeEthanizer Stripper Steam Reboiler)	Equipment/Property Damage	(1) (See "Links" for TAPROOT documents) E-142A design is poor and allows low flow conditions to exist in exchanger. , (2) (See"Links" for TAPROOT documents) High chloride feed to the FCC, (3) (See "Links" for TAPROOT documents) Increase in water volume in the desthanizer system, (4) (See "Links" for TAPROOT documents) Plugging on the tubeside of bundle
30530	Richmond, CA - Refinery	1/4/2012 10:30:00 AM	Closed	Near Loss	Green Card. Eyewash station needs to pickup service. Location: B&S TK3182	Green Card. Eyewash station (portable) needs to pickup service. Location: B&S TK3182	NL-Lessons Learned	
30535	Richmond, CA - Refinery	1/12/2012 6:20:00 AM	Closed	Near Loss	Green Card. Broken handrails on walkway. Location: B&S Standard/Rack	Green Card. Broken handrails on walkway. Location: B&S - Rack St./Standard Ave.	NL-Injury/Illness - Employee Injury	
30537	Richmond, CA - Refinery	1/12/2012 4:00:00 PM	Closed	Near Loss	Green Card. A steam leak needs to be fixed. Location: FCC E-102B	Green Card. A steam leak at sample station on E-102B needs to be fixed, because a co-worker almost slipped and fell lastnite while working on E-102A. Steam leak has been leaking for awhile so needs to be fixed before someone gets burned.	NL-Injury/Illness - Employee Injury	
30538	Richmond, CA - Refinery	1/16/2012 10:00:00 AM	Closed	Near Loss	Green Card. A toe board needs to be fixed. Location: NHT V-430	Green Card. A toe board at top deck of V-430 needs to be fixed before someone slips and falls. Location: NHT V-430	NL-Injury/Illness - Contractor Injury	
30539	Richmond, CA - Refinery	1/16/2012 9:00:00 AM	Closed	Near Loss	Green Card. Overhead condensate leak. Location: NHT V-595	Green Card. Overhead condensate leak inside the box needs to be fixed. Cannot find where it's leaking from. Location: NHT V-595	NL-Lessons Learned	
30540	Richmond, CA - Refinery	1/16/2012 7:30:00 AM	Closed	Near Loss	Green Card. A ladder needs to be fixed. Location: D&R - R410	Green Card. The ladder on R-410 on the bottom support are loose and needs to be fixed because when you walk up the ladder it shakes.	NL-Injury/Illness - Contractor Injury	
30542	Richmond, CA - Refinery	1/23/2012 9:00:00 AM	Closed	Near Loss	Green Card. A contractor on forklift with harness on lanyard hanging by tire. Location: RLOP	Green Card. Noticed a contractor on forklift with harness on lanyard hanging by tire. Location: RLOP	NL-Injury/Illness - Contractor Injury	
30551	Richmond, CA - Refinery	1/30/2012 10:00:00 AM	Closed	Near Loss	Rags were found stuffed in the alarm system to silence the alarm	It was found out today, January 30 that the alarm horn on the Honeywell DCS system for the Crude Board in Blending and Shipping was tampered with. Four (4) pieces of rags were found stuffed inside the panel board to silence the low, high and emergency audible alarms.	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) Took the risk not authorized by the company
30630	Richmond, CA - Refinery	1/17/2012 9:20:00 AM	Closed	Near Loss	Green Card. Grating clips are missing. Location: Utilities #2 Substation	Green Card. Grating has tipped up several times while working in #2 Substation. Clips are missing (have been for many years) throughout #2 Substation.	NL-Injury/Illness - Employee Injury	
30671	Richmond, CA - Refinery	1/26/2012 2:00:00 PM	Closed	Near Loss	Green Card. 3/4" water line is not secure. Location: 91Gate,PSM Trailer	Green Card. The 3/4" water line on Xylene St. side of the building is not secured to unistrut anymore. Needs to be repaired before it ruptures. Location: 91Gate, Side of PSM trailer, Xylene St.	NL-Lessons Learned	
30672	Richmond, CA - Refinery	12/12/2011 8:00:00 AM	Closed	Near Loss	Asbestos Containing Material (ACM) discarded into trash dumpster	Contractor removed ACM from floor of RLOP Lab and discarded into trash dumpster.	NL-Lessons Learned	
30674	Richmond, CA - Refinery	1/31/2012 2:30:00 PM	Closed	Loss	Loss of K-1420 LCI Building Cooling System	K-1420 tripped off line when the thyristor cooling system fan shroud protection screen came loose and fell into the rotating fan blades. This resulted in portion of screen material penetrating one of the finned cooling tubes which caused a loss of cooling system pressure to the VSD resulting in a compressor trip senario.	Equipment/Property Damage	(1) SWA (stop work authority) used when working the motor replacement however, no SWA used when installing different design screen
30674	Richmond, CA - Refinery	1/31/2012 2:30:00 PM	Closed	Loss	Loss of K-1420 LCI Building Cooling System	K-1420 tripped off line when the thyristor cooling system fan shroud protection screen came loose and fell into the rotating fan blades. This resulted in portion of screen material penetrating one of the finned cooling tubes which caused a loss of cooling system pressure to the VSD resulting in a compressor trip senario.	Business Process	(1) SWA (stop work authority) used when working the motor replacement however, no SWA used when installing different design screen
								(1) Process leak caused contractor personal monitor to alarm., (2) Additional FIVE WHY with focus on contractor EE not leaving immediately once H2S alarm sounded. (1). Why did contractor fail to immediately leave the area when alarm

30759	Richmond, CA - Refinery	2/1/2012 11:05:00 AM	Closed	Near Loss	Contractor personnel H2S monitor alarmed.	A contract EE and city of Richmond inspector were completing an inspection of C-1910 in the RLOP. The purpose of the inspection was to close out an open city of Richmond permit which had been procured to authorize the replacement of C-1910. While ascending the column the contract EE's personal H2S monitor sounded, but the contractor failed to immediately leave the area. Additionally, the city inspector was not carrying his personal H2S monitor.	NL-Injury/Illness - Contractor Injury	sounded? The alarm only sounded briefly and the odor initially sensed was no longer detectable via smell therefore the danger was thought to have diminished (2). Why didn't contractor leave even though the alarm only sounded briefly? Felt obligated to complete task as many were waiting for his task to be completed. (3). Why in light of training didn't the contractor evacuate? Past experiences and prior to the use of personal alarms, i.e. working in oil fields in Bakersfield H2S was commonly smelled at low levels and this situation seemed to be the same. Based on past experience with H2S believed there was no danger.
30771	Richmond, CA - Refinery	2/1/2012 12:00:00 AM	Closed	Near Loss	Wrong oil put in P-737 pump bearings.	Ops noticed oil in P-737 pump end bearing may be wrong.	NL-Lessons Learned	(1) wrong oil in trico oiler
30774	Richmond, CA - Refinery	2/1/2012 12:00:00 AM	Closed	Loss	PH Probe ordered on PO#0010113271 was signed for but could not be located	The PH Probe was delivered on 1/19/12 via FEDEX and signed by the storehouse, however, the package was not received in the SAP system. When the field called about it, it could not be located. Based on information on the shipping label, the storehouse checked the wharf area and the I&E shop, but the package could not be located.	Business Process	
30817	Richmond, CA - Refinery	2/1/2012 12:00:00 PM	Closed	Near Loss	Green Card. Crumbling stanlion over flowmeter. Location: FCC NW of C150A & E E162B	Green Card. Crumbling stanlion over flowmeter 54FT150 in FCC Northwest of C-150A, also 54FT160 Eastside of E-162B.	NL-Lessons Learned	
30833	Richmond, CA - Refinery	2/2/2012 12:00:00 AM	Closed	Near Loss	Employee experiencing severe side and back pain...Called CFD and the EMT's arrived in a timely manner and subsequently tranported the employee to clinic for further evaluation. EE was released by the clinic for non-occupational illness to be seen by personal physician. All notifications made as required.	Employee experiencing severe side and back pain...Called CFD and the EMT's arrived in a timely manner and subsequently tranported the employee to clinic for further evaluation. EE was released by the clinic for non-occupational illness to be seen by personal physician. All notifications made as required.	NL-Injury/Illness - Employee Injury	
30859	Richmond, CA - Refinery	2/2/2012 1:30:00 PM	Closed	Near Loss	V-735 Steam safety lifted.	V-735 steam safety IX-7311 lifted.	NL-Operational Process/Procedures - Safety Systems	(1) V-735 pressure exceeded IX-7311 setpoint.
30871	Richmond, CA - Refinery	1/26/2012 12:00:00 AM	Closed	Near Loss	heat damage of microwave surge protector	In Cracking Division Office, found microwave surge protector that had been overheated. Probably overheated from being near toaster. Cannot determine when incident happened. Area has recently been remodeled	NL-Equipment/Property Damage - Equipment Damage	
30991	Richmond, CA - Refinery	2/2/2012 8:00:00 AM	Closed	Loss	Observed Oil on the roof of T-1504	Oil observed on T-1504 roof	Environmental	(1) There was no clear guideline with regards to the maximum flow rates of slops to T1504
31002	Richmond, CA - Refinery	1/23/2012 12:00:00 AM	Closed	Loss	Weather delays on ANS ships lead to crude cuts.	The weather in the Alaska region, caused the ANS crude ship deliveries to the Richmond Refinery to be delayed ~7 days. The plan had contingency room to accomodate some weather delays. However, at this same time, issues with T-3100 took 110MB of ANS inventory out of use. The combined effect of these two events led to the need to cut crude.	Business Process	(1) Weather > Uncontrollable.
	Richmond,	2/6/2012			At approximately 0825, 6 Feb 2012, PPS Officer was attempting to exit Gate 121 with the Wharf Bus, as she badged out the gate,it opened, but o the other refinery side of the gate, a large pice of constuction equipment accidently drove over the "Loop Detector" on the outbound side of the gate, causing the gate to begin to close. The officer did not see the gate closing until it was too late and the right front fender struck the gate and bent the bottom portion of the gate and put a slight	At approximately 0825, 6 Feb 2012, PPS Officer was exit ing Gate 121 from the RLW to the refinery with the Wharf Bus, as she badged out the gate, it opened, but on the refinery side of the gate, a large piece of construction equipment accidently drove over the "Loop Detector" on the outbound side of the gate, causing the gate to prematurely begin to close. The officer did not see the gate closing until it was too late. The right front fender struck the gate and bent the bottom portion of the gate and put a slight dent in the fender of		(1) Construction Crane on the Refinery Side of Gate 121 leading from RLW backed over the closing "Loop Detector" just as the Wharf Bus was "badging out" to leave the RLW. This unexpected action caused the 121 Gate to prematurely

31013	CA - Refinery	8:25:00 AM	Closed	Loss	dent in the fender of the Wharf bus.	the Wharf bus. Both the Gate and the Wharf bus are still operational, the damage to both was cosmetic.	Equipment/Property Damage	close and the Wharf Bus to strike the closing gate.Wharf Bus did not stop in time to avoid an MVC.
31013	Richmond, CA - Refinery	2/6/2012 8:25:00 AM	Closed	Loss	At approximately 0825, 6 Feb 2012, PPS Officer was attempting to exit Gate 121 with the Wharf Bus, as she badged out the gate,it opened, but o the other refinery side of the gate, a large pice of constuction equipment accidently drove over the "Loop Detector" on the outbound side of the gate, causing the gate to begin to close. The officer did not see the gate closing until it was too late and the right front fender struck the gate and bent the bottom portion of the gate and put a slight dent in the fender of the Wharf bus.	At approximately 0825, 6 Feb 2012, PPS Officer was exit ing Gate 121 from the RLW to the refinery with the Wharf Bus, as she badged out the gate, it opened, but on the refinery side of the gate, a large piece of construction equipment accidently drove over the "Loop Detector" on the outbound side of the gate, causing the gate to prematurely begin to close. The officer did not see the gate closing until it was too late. The right front fender struck the gate and bent the bottom portion of the gate and put a slight dent in the fender of the Wharf bus. Both the Gate and the Wharf bus are still operational, the damage to both was cosmetic.	NL-Equipment/Property Damage - Equipment Damage	(1) Construction Crane on the Refinery Side of Gate 121 leading from RLW backed over the closing "Loop Detector" just as the Wharf Bus was "badging out" to leave the RLW. This unexpected action caused the 121 Gate to prematurely close and the Wharf Bus to strike the closing gate.Wharf Bus did not stop in time to avoid an MVC.
31015	Richmond, CA - Refinery	2/6/2012 12:45:00 PM	Closed	Near Loss	T-679- lifting barrels to top of tank. Barrel clamp lost barrel, barrel fell to ground.	Crane and crew working at T-679- lifting barrels to top of tank. After lifting 10 plus empty barrels with the approved barrel clamp, the barrel clamp lost a barrel. The barrel fell to the ground. No one was in the area under the lift. No one was injured.	NL-Lessons Learned	
31022	Richmond, CA - Refinery	2/6/2012 12:30:00 PM	Closed	Near Loss	Unsecured Hudson sprayer fell off back of truck.	A 2 gallon Hudson sprayer containing potassium permangenate solution fell off the back of a truck as it was going up Petrolite Hill Rd. 1/2 gallon of solution was spilled and cleaned up immediatly.	NL-Environmental - Spill - 3rd Party	
31025	Richmond, CA - Refinery	12/16/2011 12:00:00 AM	Closed	Loss	3100tk Toxicity and Refinery Effluent Water	While feeding 3100tk (crude unit used as effluent for thier 4th Q Major stop / clean up tank from the unit) to the Crude unit it was noticed that there were instances when the FBI (Fish Behavioural Index) numbers would creep up over time. This required EOD to stop ops. coord from feeding 3100tk on multiple occasions as to not create issues for the effluent water system. Stopping and reducing the flows created a loss profit.	Operational Process/Procedures	(1) The root cause is still unknown and the invesstigation contiues with multiple solitions being worked
31100	Richmond, CA - Refinery	1/26/2012 3:57:00 PM	Closed	Near Loss	Green Card. Many blind intersections. Location: Heading Plant North on Petrolite St.	Green Card. "Safety Suggestion Only" There are many BLIND INTERSECTIONS and also many intersections that become "blind intersections" daily due to cargo tank trains being stationed on both sides of driveway/road blocking a clear visible view for both drivers while driving plant north on Petrolite Rd. The intersection will be on your westside/same side as railroad tracks. Location: Heading plant north on Petrolite St.	NL-Lessons Learned	
31104	Richmond, CA - Refinery	2/7/2012 1:00:00 PM	Closed	Loss	EE 1st. Aid . Splinter to ring finger on left hand.	EE received wooden splinter up under nail of ring finger on left hand while filling out operator tags on a built in work table.	Injury/Illness	(1) Work bench wood surface aging and need of upgrade, (2) EE failed to consider LPSA before using work surface as a desk and scooping up paper work.
31104	Richmond, CA - Refinery	2/7/2012 1:00:00 PM	Closed	Loss	EE 1st. Aid . Splinter to ring finger on left hand.	EE received wooden splinter up under nail of ring finger on left hand while filling out operator tags on a built in work table.	NL-Injury/Illness - Employee Injury	(1) Work bench wood surface aging and need of upgrade, (2) EE failed to consider LPSA before using work surface as a desk and scooping up paper work.
31108	Richmond, CA - Refinery	1/4/2012 12:00:00 AM	Closed	Loss	Significant under accrual of 4Q11 Shutdowns	After reviewing January 2012 costs, it was evident that around $3MM worth of expense costs were applied to the 4Q11 shutdowns that were not accrued for during 2011. Upon further analysis, it was found that there were several different factors that contributed to these funds not being accrued appropriately in December 2011 business. Due to this impact, the 2012 shutdown operating expense target will be over plan by $3MM, assuming all other planned spend occurs within budgeted amounts.	Business Process	(1) Spend associated with vendors who did not have a specific service order (SO) applied against a shutdown project were not accrued. Vendors associated with this category bill under a refinery wide SO that is assigned to a general management cost center. Because no SO was assigned to the project, it would be difficult to identify a need for an accrual as there is no remaining commitment amount to indicate a potential liability., (2) Spend associated with service orders that were considered during the accrual process, but the final spend exceeded the 2011 accrual amount. At the time of accrual preparation, it was unknown whether or not a vendor needed to increase existing service order values. For example, if an accrual captured the total remaining value on an order, but that vendor did not communicate a need to increase their service order value, it is reasonable to assume the accrual captures our anticipated future liability. , (3) Spend associated with SO's that were assigned to a shutdown project, but not considered during the accrual process. At the time of accrual preparation, it was unknown whether or not a vendor needed to increase existing service order values. Therefore, if a vendor's remaining commitment value at year end 2011 was zero, it would be hard to identify a potentially liability to accrue.

31299	Richmond, CA - Refinery	2/10/2012 6:48:00 AM	Closed	Loss	K-3 Air Compressors main breaker 12-200 tripped due to a phase differential	At 06:48 hrs., on 2/10/12 K-3 Air Compressor's main breaker tripped due to a phase differential causing K-3 to shut down. Initial inspection show's damage in the breaker area. The breaker was isolated and is being inspected at this time.	Equipment/Property Damage	(1) Incident description At 06:48 hrs on 2/10/12 K-3 Air Compressor's main breaker tripped due to a phase differential causing K-3 to shut down. Initial inspection showed damage to switchgear above the breaker. The covers were removed and the bus was inspected. The inspection showed that the 12k volt bus suffered a Phase to Phase fault damaging the glastic insulation material spreading the buses and shut down the air compressor. FIVE WHY'S 1. 12k volt bus suffered a Phase to Phase 2. Why did 1 happen? The insulating material separating the 12kv bus broke down electrically, causing the voltage to track between the phases. 3. Why did 2 happen? The space heaters were lost, allowing moisture to build up on the insulation materia. which caused the material to lose it abilities dielectrically over time 4. Why did 3 happen? The space heaters were not checked to assure that they were working on a routine basis. 5. Why did 4 happen? The space heaters were not on routine duties to verify operation Root Cause There is not a routine duty to verify the space heaters are working on the 12kv switchgear
31389	Richmond, CA - Refinery	12/13/2011 12:00:00 AM	Closed	Near Loss	T-1821 Fresh Acid to Alky Level not calibrated, reading incorrectly. Potential loss of drawing down tank below low limit unknowingly, cavitating pumps and losing fresh acid feed to the Alky; This led to discovery of potential loss of being over-charged for sulfuric acid; the validation Chevron does on General Chemical's invoices was based on incorrect flow meters.	The T-1821 level indicator was replaced right before startup following the 4Q10 Major Shutdown. The dP indicator was not calibrated and used a specific gravity of 1. Sulfuric acid has a specific gravity of 1.84, so we had about half the acid in the tank as the level indicator showed. If we had ever needed more than our average daily use of acid, we could have either drawn down the tank below the low limit and caused pump damage or we could have run out of acid if there were a process upset and needed more. The mass balance done by PED to discover the incorrectly calibrated LI in the tank led to the discovery that the calculations that were used to validate General Chemical's bills for acid used flow meters that did not reflect what we were actually billed on. Our calculations used fresh acid flow, but we are mostly billed on spent acid flow. These errors could have hid a discrepancy between our meters and their meters, causing Chevron to over-pay for sulfuric acid.	NL-Business Process - Business Process	
31389	Richmond, CA - Refinery	12/13/2011 12:00:00 AM	Closed	Near Loss	T-1821 Fresh Acid to Alky Level not calibrated, reading incorrectly. Potential loss of drawing down tank below low limit unknowingly, cavitating pumps and losing fresh acid feed to the Alky; This led to discovery of potential loss of being over-charged for sulfuric acid; the validation Chevron does on General Chemical's invoices was based on incorrect flow meters.	The T-1821 level indicator was replaced right before startup following the 4Q10 Major Shutdown. The dP indicator was not calibrated and used a specific gravity of 1. Sulfuric acid has a specific gravity of 1.84, so we had about half the acid in the tank as the level indicator showed. If we had ever needed more than our average daily use of acid, we could have either drawn down the tank below the low limit and caused pump damage or we could have run out of acid if there were a process upset and needed more. The mass balance done by PED to discover the incorrectly calibrated LI in the tank led to the discovery that the calculations that were used to validate General Chemical's bills for acid used flow meters that did not reflect what we were actually billed on. Our calculations used fresh acid flow, but we are mostly billed on spent acid flow. These errors could have hid a discrepancy between our meters and their meters, causing Chevron to over-pay for sulfuric acid.	NL-Quality - Incorrect Volume	
31389	Richmond, CA - Refinery	12/13/2011 12:00:00 AM	Closed	Near Loss	T-1821 Fresh Acid to Alky Level not calibrated, reading incorrectly. Potential loss of drawing down tank below low limit unknowingly, cavitating pumps and losing fresh acid feed to the Alky; This led to discovery of potential loss of being over-charged for sulfuric acid; the validation Chevron does on General Chemical's invoices was based on incorrect flow meters.	The T-1821 level indicator was replaced right before startup following the 4Q10 Major Shutdown. The dP indicator was not calibrated and used a specific gravity of 1. Sulfuric acid has a specific gravity of 1.84, so we had about half the acid in the tank as the level indicator showed. If we had ever needed more than our average daily use of acid, we could have either drawn down the tank below the low limit and caused pump damage or we could have run out of acid if there were a process upset and needed more. The mass balance done by PED to discover the incorrectly calibrated LI in the tank led to the discovery that the calculations that were used to validate General Chemical's bills for acid used flow meters that did not reflect what we were actually billed on. Our calculations used fresh acid flow, but we are mostly billed on spent acid flow. These errors could have hid a discrepancy between our meters and their meters, causing Chevron to over-pay for sulfuric acid.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
								(1) Training & Procedures (Communications and Lessons Learned): P-1651A Minor Shipping Delay. Outside vendor refused shipment of pump due to missing documents.Common practice to send only one set of documents with shipment., (2) SOS: Training & Procedures: - Equipment arriving at Tally Room to be shipped out is not

31392	Richmond, CA - Refinery	2/11/2012 12:00:00 AM	Closed	Near Loss	Missing MSDS and RMA	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. Hot shipment of pump and gear box sent to vendor. All information about material not sent to internal shop preparing the material for shipment. Return to Vendor Authorization number and MSDS attached to crate at refinery. Vendor refused shipment because aforementioned paperwork was missing when delivered.	NL-Transportation - Contractor	always ready for shipment, as per RI-304 requirements. Shipping Order is missing or not completed. Tags are missing making verification of cleaned and sniffed equipment impossible. Equipment in crates are sealed and Tally Room personnel has to open the crate to be able to verify proper equipment prior to shipping and that it is clean, sniffed, tagged, etc and proper documentation
31392	Richmond, CA - Refinery	2/11/2012 12:00:00 AM	Closed	Near Loss	Missing MSDS and RMA	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. Hot shipment of pump and gear box sent to vendor. All information about material not sent to internal shop preparing the material for shipment. Return to Vendor Authorization number and MSDS attached to crate at refinery. Vendor refused shipment because aforementioned paperwork was missing when delivered.	NL-Business Process - Business Process	(1) Training & Procedures (Communications and Lessons Learned): P-1651A Minor Shipping Delay. Outside vendor refused shipment of pump due to missing documents.Common practice to send only one set of documents with shipment., (2) SOS: Training & Procedures: • Equipment arriving at Tally Room to be shipped out is not always ready for shipment, as per RI-304 requirements. Shipping Order is missing or not completed. Tags are missing making verification of cleaned and sniffed equipment impossible. Equipment in crates are sealed and Tally Room personnel has to open the crate to be able to verify proper equipment prior to shipping and that it is clean, sniffed, tagged, etc and proper documentation
31438	Richmond, CA - Refinery	2/14/2012 8:00:00 AM	Closed	Loss	H2 flow was started on the 167 line, displaced liquid to compressors at Isomax causing a S/D	H2 excess valve was found closed on 5Rhen, moves were made on 4 Rhen to establish flow down the 167 line from 5 Rhen. Liquid in line filled up knockout pots at Isomax causing a High level S/D of the 6 compressors. Feed rates were cut at TKN, TKC, LNC, 4 Rhen, 5Rhen.	Operational Process/Procedures	(1) Employee did not recognize risk of re-establishing flow on the H2 line.. , (2) Procedure didn't cover this scenario. , (3) No alarm to trigger ops of increased risk of liquid slugs to SISO.
31507	Richmond, CA - Refinery	2/14/2012 8:00:00 AM	Closed	Near Loss	Flare totalizer tripped due to D&R and South Isomax plant upsets	Flare totalizer tripped due to D&R and South Isomax plant upsets (reference L1 31436)	NL-Business Process - Business Process	
31527	Richmond, CA - Refinery	2/14/2012 3:00:00 PM	Closed	Near Loss	Error in cell template affected May 2012 H2 Production Values in SOLCHEV	The Hydrogen Plant Numbers for May 2012 in SOLCHEV were significantly lower than the other months, and there was no major shutdown planned for May 2012. Why was the May 2012 H2 value lower? Because the SOLCHEV Planloader had a lower H2 value. Why did the SOLCHEV Planloader have a lower H2 value? Because the stock balance transfer template had a lower value. Why did the stock balance transfer template have a lower value? Because the cell on the Utilization tab of the stock balance transfer template had an error in it. Why did the cell in the stock balance transfer template have an error in it? Because the previous year's template that was copied over for 2012 had the cell changed for a specific purpose, and there was no documentation that the cell formula was modified. Why was the error not caught during review? There was no process for reconciling the stock balance in SOLCHEV vs. the actual stock balance, which the actual stock balance was correct. Why were the stock balances not reconciled vs. each other? Because of inadequate communication of expectations regarding procedures or acceptable practices..	NL-Business Process - Business Process	
31528	Richmond, CA - Refinery	2/14/2012 10:00:00 AM	Closed	Near Loss	Green Card. Slip on the algae growth. Location: S. Isomax	Green Card. Slip on the algae growth on the northside of the road from Hydrogen St. to the S. Isomax Control House. Location: S. Isomax - Hydrogen St/Entrance to Control House	NL-Injury/Illness - Contractor Injury	
31552	Richmond, CA - Refinery	2/15/2012 7:30:00 AM	Closed	Near Loss	Observed gap gauge pole sleeve could have caused an NOV if not corrected in 8 hours	Gauge pole sleeve of T-3220 was obseseved to have a gap exposing the product (Sour Water) to the atmoshere. T-3220 is a regulated tank and fall under the BAAQMD Reg 8 Rule 5., we have 8 hours to minimize emmisions and 48h hours to repair.	NL-Regulatory Compliance - Non Compliance - Air	(1) The design of the gauge pole sleeve assembly has very close tolerance and would hang up on the gauge pole.The design of the gauge pole sleeve assembly has very close tolerance and would hang up on the gauge pole., (2) Gauge pole sleeve design does not takes into account the uneven section of the gauge pole.
31558	Richmond, CA - Refinery	2/14/2012 10:00:00 AM	Closed	Near Loss	Leaking sample container of hydrocarbon discovered in trunk of vehicle	A leaking 8-oz glass sample jar containing unidentifiable hydrocarbon was discovered in the trunk of a vehicle when Chevron EE was investigating strong odor in passenger compartment. The vehicle was parked in the parking lot outside the 214 Main offices. The glass container was discovered in a small plastic bucket located the trunk of the car, and not in the sample carrier provided specifically for transporting (not storing) sample containers. The near loss is defined as: 1. Personnel exposure to unknown hydrocarbon either by spill or inhalation if container became further compromised. 2. Refinery Instruction Hazard Communication (RI-313) violation and possible fine associated with mishandling chemical substance with no identifiable labelling.	NL-Lessons Learned	(1) Richmond PED team does not have a Procedure/JLA for propper handling and transportation of sample material, (2) Though it's unwritten, it is standard for PE to deliver lab samples directly to the lab upon receipt from the field. The engineer choose to delay the delivery due to other obligation, this resulted in the sample being left in the car.
								(1) 5 Why for P-891 Gearbox O-ring Issue: Shop Supervisor used SWA / PWA to take the pump out of service for suspicion of incorrect O' ring installed in the gearbox. Why did the above happen? 1. The shop mechanic talked to the supervisor after observing the assembly of another similar gearbox in the shop and he noticed the O' ring installed was incorrect and believed that he had installed the same size O-ring in the P-891 gearbox. Why did the above happen? 2. The OEM drawing does not provide the actual size of O' ring that

31609	Richmond, CA - Refinery	1/31/2012 9:00:00 AM	Closed	Loss	Suspected incorrect O'ring was used in the P-891 gear box during assembly as the shop.	Suspected incorrect O'ring was used in the P-891 gear box during assembly as the shop.	Quality	was installed at this location and the mechanic assumed the O-ring in the kit he received and subsequently used was the correct one. Why did the above happen? 3. Because the O' ring fit in the groove so the mechanic assumed that it would provide the correct amount of O-ring compression and gasket crush expected for the gearbox lubrication port and case flange.
31628	Richmond, CA - Refinery	2/6/2011 12:00:00 AM	Closed	Near Loss	Extra work submitted by CUI via email and accepted not executed	Maximo Inspection recommendation 320106 was submitted to IMPACT via an email with an offer to complete the extra work form. IMPACT stated that they would add directly to the Turnaround data base and no need to complete the extra work form. The CUI group went out to remove the insulation from this system and install the aluminum mesh to prevent future CUI and found that the piping replacement had not been performed.	NL-Operational Process/Procecures - Plant Run Out/Slow Down	(1) Incident Number LI# 31628 Business Unit Hydro Location SISO/H2B-Train Facility Name Richmond Incident date 2/6/2011 Type of Process: CUI Piping Replacement Type of Equipment: Boiler System Blow down Team Members: Incident Description: What: Missed CUI piping replacement Where (location or where in the process): Hydro/SISO/H2B-Train Boiler System When: 1Q11 H2B-Train T/A How: Did not request Scope inputter to verify final scope that was entered into the TAW system. Problem Statement (What is the key issue that needs to be addressed?): Missed CUI p ping replacement during the 1Q11 H2B-Train T/A FIVE WHY'S 1. Why did "above" happen? Verification TAW entered by Operations did not include correct CUI Recommendations. 2. Why did "1" happen? CUI inspection was performed after Scope Freeze. Additional identified scope requested to be verified by Operations as S/D required work before submitting CUI as a TAW. Three total recommendations with two in question as OTR. The third recommendation was always listed as S/D work. Communication was performed by e-mail 3. Why did "2" happen? Operations entered TAW into TA Database with two of three CUI Recommendations. The e-mail's covering the potential CUI repairs was unclear. E-mail spoke to the two questionable OTR CUI piping jobs and not the third CUI recommendation that was always listed as SD required. 4. Why did "3" happen? Operations were instructed to enter a TAW despite not being the Original Scope inputter. Additionally CUI group was not requested to review Recommendations entered in TAW. 5. Why did "4" happen? ITL did not adequately communicate that the Scope Originator should input the final Scope. 6. Why did "5" happen? 7. Why did "6" happen? 8. Why did "7" happen? ROOT CAUSE: What was the Root Cause of your
31647	Richmond CA - Refinery	2/15/2012 1:00:00 PM	Closed	Near Loss	Green Card. Evacuation method not done correctly. Location: Alky	Green Card. Plant was evacuated due to an upset of some sort. Crew evacuated to safety zone outside of unit and the Contract Supervisor did a head count to assure his crew was all accounted for. Another contractor was in a noisy area and never heard the evacuation alarm. No one from ops ever came out to confirm against sign-in sheet that everyone was accounted for. Also, there were no updates given, so the crew had no idea what was going on. All clear signal was given about 2.5 hrs later. Ops did not make any effort to contact the contractor who was in the noisy area to get him to safety. There is supposed to be a special method to contact people in very noisy areas in the event of an evacuation. Location: RLOP	NL-Lessons Learned	(1) Why was contractor not notified of the plant evacuation? Loss of cooling water in RLOP caused evac. Outside operators swept the plant quickly while responding to the incident
31655	Richmond CA - Refinery	2/16/2012 12:20:00 PM	Closed	Loss	Direct burial phone line damaged	While excaveting a trench for the Homeland security project. A direct burial phone line was damaged. The crew was aware of the proximity of the cable. Digging was downgraded from a backhoe to a shovel and pick. A pick was used due to the rocky nature of the soil. As the laborer cleared the loose rock with a shovel he noticed he severed the line. Work stopped, the immediate supervisor was notified. Digging continued around the line to ensure the trench was ready for the electricians to conduct their part. In the mean time The supervisor notified the proper personnel.	Equipment/Property Damage	(1) The method of use for the hand tool chosen was inadequate.
								(1) "FIVE WHY" One Page Report Incident Number;31667 Business Unit;Downstream Location;RTD Facility Name: Rich Ref Incident date;2/16/2012 Type of Process:lifting Type of Equipment:Sea van Team Members: Mike Klein Shawn Golden Dennis Lacy Incident Description: What : Loading Sea-Van containers for transport Where (location or where in the process): Cafeteria parking lot When: 2/16/2012 How: Using crane and riggers Problem Statement (What is the key issue that needs to be addressed?): Workers were above 6' off ground working not tied off. FIVE WHY'S 1. Why did "above" happen? Verification Job was a fill in scheduled later in month. Nothing to tie off to at time of job. 2. Why did "1" happen? Planned job for that afternoon fell through. Trying to stay busy. 3. Why did "2" happen? Past practice was to do job from top without tying off. Not thinking of the risk. 4. Why did "3" happen? Ironworkers have gotten used to working without

31667	Richmond, CA - Refinery	2/16/2012 12:00:00 AM	Closed	Near Loss	Parking Lot across from the Fire house	Bigge crane and crew under the supervision of Chevron employees were using a crane to lift trailer boxes off the trailers using a crane and rigging. The riggers were up on the boxes connecting and disconnecting the rigging without fall protection.	NL-Operational Process/Procedures - Safety Systems	tying off in their trade. Fairly common practice outside of our facility. 5. Why did "4" happen? Should have taken the time to acquire a man lift. 6. Why did "5" happen? Workers did not think it was a high risk job and did not take the time to get needed safety equipment. 7. Why did "6" happen? 8. Why did "7" happen? ROOT CAUSE: What was the Root Cause of your incident? Workers did not think it was a high risk job and did not take the time to get needed safety equipment. LPS Factor: "FIVE WHY" One Page Report Incident Number;31667 Business Unit;Downstream Location;RTD Facility Name; Rich Ref Incident date;2/16/2012 Type of Process:lifting Type of Equipment:Sea van Team Members: Mike Klein Shawn Golden Dennis Lacy Incident Description: What : Loading Sea-Van containers for transport Where (location or where in the process): Cafeteria parking lot When:
31675	Richmond, CA - Refinery	2/16/2012 4:00:00 PM	Closed	Loss	18 plant Startup vented to FLare gas recovery	DUring 18 plant startup ups was venting V1810 to relief while depressuring column prior to feed in and opened manual vent valve quickly overwhelming FGR and tripping FCC flare totalizer. no visiable flaring occured	Operational Process/Procedures	(1) WHy did FCC flare flow totalizer trip during 18 plant startup? During startup operations needed to depressure C-1820 OH Per 18P-NP-2001 which has this caution: As steam is increased to E-1827, C-1820 pressure will increase. High pressure in C-1820 will reduce or stop flow from C-1810 due to loss of differential pressure. A high level in C-1810 will occur. Excessive venting of V-1820 can cause a plume and an environmental impact.. OPening the manual vent caused excess venting and a flare totalizer trip
31705	Richmond, CA - Refinery	2/15/2012 9:00:00 AM	Closed	Near Loss	HW Portable Tank Material Transfer - Incorrect Tank Number	While transferring from portable tanks, material was transferred from an incorrect tank. An ongoing transfer was being performed from portable tanks in the HW Annex using vacuum bucks and contract laborers to assist with hose handling and tank level measurements. The 3131 form for the job clearly stated that all transfers (except one identified tank number) were to be from the top half only of the tanks. To do this, transfers were accomplished with hose dropped through an open top hatch manway (rather than connecting hose to the tank's bottom draw connection). For the near loss in question, transfer was intended from the one tank where bottom draw could be used since the contents of the entire tank were to be taken, but was erroneously begun on a tank where only the top half was meant to be taken.	NL-Lessons Learned	(1) Root cause identified as inadequate communication during job preparation and performance by the contract laborer. The main problem is that material was pulled from the wrong tank. Why did this happen? Because the contract laborer supporting the job rigged bottom filling connection to a tank other than the one intended for transfer and proceeded to direct the vacuum truck driver to empty the incorrect tank. Why did that happen? Because there were two tanks left to be transferred on the job – one half emptied from the top and one completely emptied from the bottom. The laborer had not worked the job recently and was not intimately familiar with progress to date on material transfer activities which had been ongoing for several days. The tank intended for complete transfer had been filled with bottom draw connection on the preceding evening in readiness for the next work shift, but he did not know this. He had received instruction in his morning meeting to proceed with a bottom draw material transfer but without reference to a specific tank number. Why did he proceed that way? Because communication from field to office on the radio later confirmed it was okay to proceed with a bottom draw transfer, but again the tank number was not specifically referenced during the communication. Why did that happen? Because the assumption was made on both sides that the tank being asked about was the (correct) tank with bottom draw rigged up the preceding evening, not the (incorrect) tank that the laborer had just rigged up. , (2) A contributing root cause was identified for the vacuum truck driver, as doing the job according to procedures takes more time/effort. The problem is that the vacuum truck driver pulled from a tank without following the directions specified on his 3131 form for the job. Why did he do this? Because the vacuum truck driver was following directions given by the supporting contractor. Why did he do that? Because he was following his supervisor's ve
						Late Approval of Refinery Instructions RI 802 (Casualty Loss) and 806 (Credit		(1) Why #1 – Why were the RI's not signed and approved prior to the compliance date? A notification system exists for RIs that need to be updated. Expectations were unclear around the deadline – the 'RI had to be updated and available on the web' to establish completeness. There was insufficient understanding of lead time to complete. January is a very busy month for Finance (closing books, accruals – this is a higher priority). Multiple and competing priorities – although these were predictable. There was communication in early December regarding the need to complete in January. Email updates were sent in mid January and Jan 25th, Jan 27th and 30th further communication finally got to action. Why # 2 - Insufficient appreciation of other priorities or not high enough priority or lack of commitment to get them done on time? The

31708	Richmond, CA - Refinery	2/1/2012 12:00:00 AM	Closed	Near Loss	Late Approval of Refinery Instructions RI 802 (Casualty Loss) and 806 (Credit for Returning Items to Storehouse)	for Returning Items to Storehouse). The RIs were not completed for revision on time and were out of date. The Refinery Instructions were circulated for review in November and December and did not get completed in a timely manner ahead of the expiration date of January 31st. A notification system exists for RIs that need to be updated. Expectations were unclear around the deadline – the 'RI had to be updated and available on the web' to establish completeness. There was insufficient understanding of lead time to complete. January is a very busy month for Finance (closing books, accrauls – this is a higher priority). Multiple and competing priorities – although these were predictable and there was an opportunity to start the revision earlier. There was communication in early December regarding the need to complete in January. Email updates were sent in mid January and Jan 25th. Jan 27th and 30th. Further communication finally got to closure in early February..	NL-Regulatory Compliance - Non Compliance - Company Policy	RI's were seldom used and had not been updated in a long time. In the past RI's not updated on time had been tolerated. Why # 3 – has this been tolerated? No consequences or loss occurred in the past. Why # 4 – no consequences or been tolerated? Culture – it has been reinforced and become the norm. Lack of expectations from RLT/GM combined with lack of understanding around the Roles and Responsibilities for RI updates. Why # 5 – RLT/GM lack of importance? RLT – did not provide sufficient lead time (understanding of other priorities) and put sufficient importance on the completion of the RI per the deadline. RLT member responsible for the RI needs to commit enough time and importance on the timely review and approval of the RI.
31708	Richmond, CA - Refinery	2/1/2012 12:00:00 AM	Closed	Near Loss	Late Approval of Refinery Instructions RI 802 (Casualty Loss) and 806 (Credit for Returning Items to Storehouse)	Late Approval of Refinery Instructions RI 802 (Casualty Loss) and 806 (Credit for Returning Items to Storehouse). The RIs were not completed for revision on time and were out of date. The Refinery Instructions were circulated for review in November and December and did not get completed in a timely manner ahead of the expiration date of January 31st. A notification system exists for RIs that need to be updated. Expectations were unclear around the deadline – the 'RI had to be updated and available on the web' to establish completeness. There was insufficient understanding of lead time to complete. January is a very busy month for Finance (closing books, accrauls – this is a higher priority). Multiple and competing priorities – although these were predictable and there was an opportunity to start the revision earlier. There was communication in early December regarding the need to complete in January. Email updates were sent in mid January and Jan 25th. Jan 27th and 30th. Further communication finally got to closure in early February..	NL-Business Process - Business Process	(1) Why #1 – Why were the RI's not signed and approved prior to the compliance date? A notification system exists for RIs that need to be updated. Expectations were unclear around the deadline – the 'RI had to be updated and available on the web' to establish completeness. There was insufficient understanding of lead time to complete. January is a very busy month for Finance (closing books, accrauls – this is a higher priority). Multiple and competing priorities – although these were predictable. There was communication in early December regarding the need to complete in January. Email updates were sent in mid January and Jan 25th. Jan 27th and 30th further communication finally got to action. Why # 2 - Insufficient appreciation of other priorities or not high enough priority or lack of commitment to get them done on time? The RI's were seldom used and had not been updated in a long time. In the past RI's not updated on time had been tolerated. Why # 3 – has this been tolerated? No consequences or loss occurred in the past. Why # 4 – no consequences or been tolerated? Culture – it has been reinforced and become the norm. Lack of expectations from RLT/GM combined with lack of understanding around the Roles and Responsibilities for RI updates. Why # 5 – RLT/GM lack of importance? RLT – did not provide sufficient lead time (understanding of other priorities) and put sufficient importance on the completion of the RI per the deadline. RLT member responsible for the RI needs to commit enough time and importance on the timely review and approval of the RI.
31748	Richmond, CA - Refinery	2/18/2012 6:32:00 AM	Closed	Near Loss	K-1400 sour oil trap stuck open and gassed out to relief, tripping FCC/ALKY totalyzers.	K-1400 sour oil trap LC-668 stuck open and gassed out to relief. This caused a trip of the FCC and ALKY totalyzers.	NL-Regulatory Compliance - Permit Exceedance	(1) K-1400 sour oil trap LCV stuck open. "FIVE WHY" One Page Report Incident Number 31748 Business Unit Hydro Location RLOP Facility Name HNC Incident date 2-18-2012 Type of Process: H2 Type of Equipment: Seal oil trap Team Members: Incident Description: What:K-1400 sour seis oil LCV valve hung open. Causing H2 to gas out to relief. This tripped the FCC and Alky totalizers. Where (location or where in the process):K-1400 When: 2-18-2012 06:30 How:Sour oil trap LC stuck open. Problem Statement (What is the key issue that needs to be addressed?): Why did we go to flare? FIVE WHY'S 1. Why did "above" happen? Verification Excessive H2 from K-1400 seal oil trap. 2. Why did "1" happen? Control valve stuck open 3. Why did "2" happen? Field controlled LCV's have a history of sticking open. 4. Why did "3" happen? LIILCV needs calibration to ensure valve closes faster and catches level. ROOT CAUSE. What was the Root Cause of your Incident? LCV stuck open. . LPS Factor:
31749	Richmond, CA - Refinery	2/18/2012 7:45:00 AM	Closed	Near Loss	P-1453 shutdown on V-1453 low level.	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT.P-1453(RLOP wash water pump) shut down on V-1453 low level.	NL-Operational Process/Procedures - Safety Systems	(1) SOS: Maintenance & Inspections: Faulty Indication on Stripped Wash Water 84FI393., (2) SOS:Training & Procedures. Interviewees did not recall and info not on turnovers. Unable to determine exact time when valve was blocked in., (3) • Sidebar Issue. Maintenance & Inspections (Mechanical Integrity): Stripped Water Block Valve in remote, hard to reach location. Possible crack on pump P-1453. Faulty PRD's on pump.
31816	Richmond, CA - Refinery	2/17/2012 3:35:00 PM	Closed	Near Loss	Drilling Equipment fitting failure leaked hydraulic fluid to the ground.	At approximately 3:35 pm Contractor Drill Rig had a hydraulic hose fitting give way while drilling onsite. No one was injured or exposed. A small amount hydraulic fluid leaked through the equipment on to the ground.	NL-Environmental - Spill - 3rd Party	
						I was initially asked to assist in setting up expedited freight for the V-430 Vessel from Sand Springs, OK to the Richmond Refinery. I contacted CEVA (preferred carrier) to coordinate the delivery, and they quoted a range of prices to cover the permits & delivery. This was a High Visibility Project being		

31833	Richmond, CA - Refinery	10/20/2011 12:00:00 AM	Closed	Near Loss	V-430 Transportation for D&R Shutdown	followed by members of the Refinery Leadership Team. After some Initial Emails & phone calls with CEVA, Craig Dillon sent me an email stating that he had a lack of confidence in CEVA to acquire the required permits and do the job timely. I had not had any history with CEVA on a job of this nature, so I contacted Capp Logistics to see if they could assist us in getting the V-430 shipped here by the 10/17/11, firm delivery date. I had a good history working with Capp on other large, expedited shipments. Capp responded quickly & confidently that they handle this job. After sevearl Conference Calls, Craig & Mike Fitzgerald preferred to go with Capp Logistics, due to their quick response, better history of these large jobs, & a better quoted price. I notified CEVA (Mike Hamilton) that we were no longer requiring their services as of 9/7/11, due to the fact that it was taking them too long to obtain the permits from local State officials. Capp performed this process with confidence & the accuracy we required. We continued to receive daily updates from Capp on permitting & truck availability. Their Rep was on top of this situation, and gave the Business Partners confidence in their ability to perform. If delivery date was missed, Maintenace would not have been able to install the vessel during the Shutdown window. They would have had to wait to install the unit during another work stoppage, possibly costing $500K in LPO, each day. The V-430 was picked up on schedule on 10/4/11, and we recieved daily email reports on the delivery status of the vessel as it traveled to Richmond in 14 days. There were exceptions as to when the vessel could travel in certain states due to the size & wieght of the load. CApp was in contact with the driver, and kept is in the loop the entire route. We feel that had we not switched from CEVA to Capp Logistics, we the unit would not have arrived on time to make the installation window, and the invoiced Cost was over $9K less than the oroginal CEVA base price. They also quoted us a higher price to ship the unit in two pieces.	NL-Business Process - Abnormal Freight	
31833	Richmond, CA - Refinery	10/20/2011 12:00:00 AM	Closed	Near Loss	V-430 Transportation for D&R Shutdown	I was initially asked to assist in setting up expedited freight for the V-430 Vessel from Sand Springs, OK to the Richmond Refinery. I contacted CEVA (preferred carrier) to coordinate the delivery, and they quoted a range of prices to cover the permiots & delivery. This was a High Visibility Project being followed by members of the Refinery Leadership Team. After some Initial Emails & phone calls with CEVA, Craig Dillon sent me an email stating that he had a lack of confidence in CEVA to acquire the required permits and do the job timely. I had not had any history with CEVA on a job of this nature, so I contacted Capp Logistics to see if they could assist us in getting the V-430 shipped here by the 10/17/11, firm delivery date I had a good history working with Capp on other large, expedited shipments. Capp responded quickly & confidently that they handle this job. After sevearl Conference Calls, Craig & Mike Fitzgerald preferred to go with Capp Logistics, due to their quick response, better history of these large jobs, & a better quoted price. I notified CEVA (Mike Hamilton) that we were no longer requiring their services as of 9/7/11, due to the fact that it was taking them too long to obtain the permits from local State officials. Capp performed this process with confidence & the accuracy we required. We continued to receive daily updates from Capp on permitting & truck availability. Their Rep was on top of this situation, and gave the Business Partners confidence in their ability to perform. If delivery date was missed, Maintenace would not have been able to install the vessel during the Shutdown window. They would have had to wait to install the unit during another work stoppage, possibly costing $500K in LPO, each day. The V-430 was picked up on schedule on 10/4/11, and we recieved daily email reports on the delivery status of the vessel as it traveled to Richmond in 14 days. There were exceptions as to when the vessel could travel in certain states due to the size & wieght of the load. CApp was in contact with the driver, and kept is in the loop the entire route. We feel that had we not switched from CEVA to Capp Logistics, we the unit would not have arrived on time to make the installation window, and the invoiced Cost was over $9K less than the oroginal CEVA base price. They also quoted us a higher price to ship the unit in two pieces.	NL-Transportation - Contractor	
31837	Richmond, CA - Refinery	2/20/2012 12:30:00 PM	Closed	Near Loss	Utilities K-3 Air Compressor trip on High lube oil temperature	Utilities loss of K-3 air compressor due to a High-High lube oil temperatue on 95TI306 of >145F. on K-3's VANTAGE controller trip protection system. On 2/20/12 @ 12:16 PM the Distribution Operator(DO) was notified of a K-3" Common alarm " via Cogen CBD (Board Operator) Once at K-3 the DO noticed the "Primary Drain failure" alarm & reset the drain alarm. After further inspection the Lube oil temp alarm was noticed at the VANTAGE panel. The low priority alarm setting is >130F. on 95TI306. The local field TI indicated a lower reading of 6-7F LOWER. After calling the Distribution Head Operator (DHO) out for assistance,after a lube oil system inspection was made, a cooling water supply flow move was made to attempt to decrease the lube oil temperature. The lube oil temperature kept increasing to the point of the Shutdown protection setting of >145F. on the VANTAGE controller @ 12:30 PM. The Cogen Head Operator(CHO) immediately called South ISO for K-2600 to be put I/S & FCC to start their portable A/C. K-2600 was Online in minutes to provide yard & Instrument air for the yard with no major loss of Yard or Instrument Air.	NL-Business Process - Business Interruption	(1) K-3 High Lube Oil temperature S/D protection on 95TI306 >145F via VANTAGE controller

31883	Richmond, CA - Refinery	2/6/2012 12:00:00 AM	Investigation In Progress	Near Loss	Supplier Fail to Receive Order	An order was placed for Lubricity Additive R671 on Feb. 2 through Ariba and on Feb. 10th the order had to be expedited because it was discovered that the order had not been received by the supplier. The order leadtime is 10 business days from the date of order receipt by the supplier, which would place the delivery on or near Feb.18th.	NL-Business Process - Business Process	
31888	Richmond, CA - Refinery	1/31/2012 9:30:00 AM	Closed	Near Loss	Green Card. Low visibility caused by steam leak. Location: FCC E-102B	Green Card. When I got a radio call to come to the job and install a vortex meter, our walkway area looked very unsafe because a steam leak makes it hard to see the walkway. Location: FCC E-102B	NL-Injury/Illness - Contractor Injury	
31889	Richmond, CA - Refinery	1/31/2012 10:00:00 AM	Closed	Near Loss	Green Card. Overhead hot oil leak. Location: FCC E-102A	Green Card. Overhead hot oil leak needs to be fixed, because it leaks on the walkways and if someone walks under it, they can get a hot oil burn. Location: FCC E-102A	NL-Injury/Illness - Employee Injury	
31893	Richmond, CA - Refinery	2/6/2012 9:00:00 AM	Closed	Near Loss	Green Card. A 2" support pipe needs to be painted. Location: SISO - K920	Green Card. A 2" support pipe needs to be painted under the stairs in front of K-920 so people don't walk on it or slip, trip and fall and hit the pipe.	NL-Injury/Illness - Contractor Injury	
31894	Richmond, CA - Refinery	2/6/2012 12:00:00 PM	Closed	Near Loss	Green Card. A worker needs a life vest near water. Location: EOD ponds	Green Card. A worker daylighting on lines across from EOD complex, near the water ponds, with no life vest. Location: EOD Water Ponds	NL-Lessons Learned	
31897	Richmond, CA - Refinery	2/7/2012 10:00:00 AM	Closed	Near Loss	Green Card. Electric pole hanging on hillside. Location: B&S T-3106	Green Card. On back of Tank T-3106, there is an electric pole hanging on hillside. Location: B&S T-3106	NL-Injury/Illness - Contractor Injury	
31901	Richmond, CA - Refinery	2/21/2012 8:00:00 AM	Closed	Near Loss	Light diesel mist from a nipple was discovered on the 16 DB line to a relief system	A contractor walking out work for another line discovered a light mist spraying from a nipple on the 16 DB line to the relief system. The 16 DB is the diesel sales line the Loading Racks.	NL-Environmental - Operational Leak	(1) Design is less than adequate, stress build up due to line movement
31916	Richmond, CA - Refinery	2/15/2012 6:00:00 AM	Closed	Near Loss	Green Card. Hard to unlock door to get out of PSM bldg. Location: Gate 91	Green Card. Hard to unlock door to get out of PSM Building (Gate 91)	NL-Lessons Learned	
31969	Richmond, CA - Refinery	2/22/2012 7:15:00 AM	Closed	Near Loss	Tote Tanks shipped without Valve cover caps	Citri-clean tote tanks where shipped to #8 whse. with adaptor fittings on bottom release valve. Did not have safety caps in place, which is a safety concern and not proper handling according to DOT regs.	NL-Business Process - Business Process	
31986	Richmond, CA - Refinery	2/22/2012 10:10:00 AM	Closed	Near Loss	K-1405B 84LV658 failed in the open position to relief.	K-1405B Seal Oil Trap failed in the open position to relief. K-1400 was running normally. OWS2 SISO – started troubleshooting relief sources after V-1050 and V-1000 registered high levels. RLOP's relief flow indicator 66FI099 surged upward for 2 seconds(0.365 to 2.8 MMSCFD).K-1400 scur seal oil trap LC-658 stuck open and gassed out, causing a trip of the FCC and Alky totalizers. Operator immediately responded and blocked in 64LC658. Why did the FCC/ALKY totalizer trip? Excessive H2 from K-1400 seal oil trap overwhelm common relief header to FGR. Why was there excessive H2 flowing from K-1400 seal oil trap? K-1400 seal oil trap 84LI658 fail to close when cycling to dump liquid level. Why did K-1400 seal oil trap 84LI658 fail? Failure Unknown however, investigation underway 'similar incident 2012-02-18' with NLI-31748.	NL-Environmental - Release	
31993	Richmond, CA - Refinery	2/14/2012 6:15:00 AM	Closed	Loss	Hensley Street exit gate was truck by an exiting vehicle and broken off.	At approximately 0615 a vehicle struck the Hensley Street exit gate and broke off the arm.	Equipment/Property Damage	(1) Unable to determine specific root cause because investigator was unable to determine exactly who was driving the vehicle that struck the gate. Since the driver did not stop, no one appears to have actually witnessed the incident. Investigator can not determine if it was a Gate malfuction that caused the gate to come down early and strike the outgoing vehicle or if it was an MVC with the Gate.
32011	Richmond, CA - Refinery	2/13/2012 12:00:00 AM	Closed	Near Loss	Chloride level of FCC feed spiked during the week of Feb. 13th	Chloride level of FCC feed spiked during the week of Feb.13th constraints were put on FCC which forced them to reduce the total feed.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) The water draw system is not heat traced and does not meet the design requirements for a gas oil water draw system., (2) The water draw system is not heat traced and does not meet the design requirements for a gas oil water draw system., (3)
32015	Richmond, CA - Refinery	2/21/2012 12:55:00 PM	Closed	Near Loss	Possibly allowed uncleared visitor into facility	A person with proper Government issued ID may have been allowed access to the refinery for pickup/delivery without clearance.	NL-Business Process - Business Process	(1) Complacency. Officer who allowed retired CVX ee to enter facility did not complete the authorization / verification process. Officer checked for valid ID (D/L), saw what appeared to be a company logo on vehicle and allowed person into refinery without verifying that the person was(1) a valid contractor or (2) an authorized visitor, by inquiring as to why ee was coming in thru 31 gate as a contractor instead of 91 gate, and what was his business and who was he visiting and then contacting someone in maintenance shop to get permission for person to be allowed into the facility.
	Richmond, CA -	2/23/2012 10:00:00		Near	E-2301 150 steam boiler on #3 train, gauge glass	E-2301 150 steam boiler on #3 train, gauge glass failed. Had to isolate the only gauge glass on the boiler. California boiler code requires at least one gauge	NL-Equipment/Property Damage - Equipment	

32091	Refinery	AM	Closed	Loss	failure	glass on all boilers under 400 PSIG. #1 plority WR#351797	Damage	
32093	Richmond, CA - Refinery	2/22/2012 4:30:00 PM	Closed	Near Loss	Fork lift struck entry gate in the NGU while moving a tote	An operator had a task of moving a tote from the storage lot to the NGRU. The operator opened the gate. They drove the fork lift from the NGRU to the storage lot to pick up the tote. Once they picked up the tote and started back into the NGRU they did not notice that the gate had partially closed. They struck the gate with the fork lift. There was no damage to the fork lift. There was minor damage to the gate. A work request was issued for the gate repair.	NL-Equipment/Property Damage - Equipment Damage	(1) Lack of fork lift expertise
32095	Richmond, CA - Refinery	2/23/2012 10:00:00 AM	Closed	Near Loss	Monitors 0515-0521-0522-0523 have broken lines that attach to 55 gal drum concentrate. Some lines are sun baked and brittle.	Monitors 0515-0521-0522-0523 have broken lines that attach to 55 gal drum concentrate. Some lines are sun baked and brittle.	NL-Equipment/Property Damage - Equipment Damage	
32095	Richmond, CA - Refinery	2/23/2012 10:00:00 AM	Closed	Near Loss	Monitors 0515-0521-0522-0523 have broken lines that attach to 55 gal drum concentrate. Some lines are sun baked and brittle.	Monitors 0515-0521-0522-0523 have broken lines that attach to 55 gal drum concentrate. Some lines are sun baked and brittle.	NL-Operational Process/Procedures - Safety Systems	
32142	Richmond, CA - Refinery	8/22/2011 12:00:00 AM	Closed	Near Loss	Delayed Procurement Review Of One-Time	Initial email sent by requestor to Procurement in April 2011 to discuss options for new one-time. Requestor was sent requirements to submit one-time request. 08/22/2011 - Requestor submits request for one-time. CS review was submitted and progressed to Category Management. Decision shared, but email cannot be found and was not applied. Buyer managing One-Time transitions to a new job and One-Time is handed off to a different Buyer. New buyer goes out on vacation and transitions to a 3rd Buyer. 12/29/2011 - CS review re-initiated by 3rd Buyer. CS quickly pointed to earlier review and advised to push further. Several conversations and emails were had, but the final determination email was not rediscovered. 02/21/12 - Email sent to Category Manager who participated in review, requesting further support. 02/23/2012 - Final determination was made to proceed without Category Manager documentation with the understanding that the earlier review had resulted in an approval. 02/24/2012 - Updated vendor estimate requested, prequalification request submitted, and charge code requested from new requestor.	NL-Business Process - Business Interruption	
32142	Richmond, CA - Refinery	8/22/2011 12:00:00 AM	Closed	Near Loss	Delayed Procurement Review Of One-Time	Initial email sent by requestor to Procurement in April 2011 to discuss options for new one-time. Requestor was sent requirements to submit one-time request. 08/22/2011 - Requestor submits request for one-time. CS review was submitted and progressed to Category Management. Decision shared, but email cannot be found and was not applied. Buyer managing One-Time transitions to a new job and One-Time is handed off to a different Buyer. New buyer goes out on vacation and transitions to a 3rd Buyer. 12/29/2011 - CS review re-initiated by 3rd Buyer. CS quickly pointed to earlier review and advised to push further. Several conversations and emails were had, but the final determination email was not rediscovered. 02/21/12 - Email sent to Category Manager who participated in review, requesting further support. 02/23/2012 - Final determination was made to proceed without Category Manager documentation with the understanding that the earlier review had resulted in an approval. 02/24/2012 - Updated vendor estimate requested, prequalification request submitted, and charge code requested from new requestor.	NL-Business Process - Business Process	
32186	Richmond, CA - Refinery	2/24/2012 12:33:00 AM	Closed	Near Loss	T-957 exceeded safe oil height	T-957 was filled on 2/21/12. On the evening of 2/22/12 additional bbls were moved into the tank to satisfy a vessel load (68M onboard the Cedar Galaxy) on 2/27/12. Due to heat of the day on 2/24/12 the material in T-957 exceeded Safe Oil Height due to thermal expansion. This exceedance did not result in any loss of containment or equipment damage.	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) No guidline on maximum fill level to prevent Safe Oil Height exceedance due thermal expansion.
32278	Richmond, CA - Refinery	1/1/2012 12:00:00 AM	Closed	Near Loss	2011 CalARP Audit finding A11-20 not completed by due date	Consider consolidating ventilation system information in the EOM to include chemical sensors and shelter in place information and links to applicable drawings.	NL-Business Process - Business Process	(1) Problem Statement (What is the key issue that needs to be addressed?): Overdue 2011 CalARP Audit finding A11-20. 1. Why did "above" happen? Did not fully understand the scope of the general plan and action item plan of the audit finding when agreeing to the due date. 2. Why did "1" happen? Did not involve the right people when making the decision regarding the due date. 3. Why did "2" happen? Thought that ventilation system drawings were readily available as they are Process Safety Information.
32282	Richmond, CA - Refinery	2/23/2012 12:00:00 AM	Closed	Near Loss	2011 CalARP Audit finding A16-01 not completed by due date.	2011 CalARP Audit finding A16-01 not completed by due date.	NL-Business Process - Business Process	
32283	Richmond, CA - Refinery	2/21/2012 2:00:00 PM	Closed	Near Loss	Expired food purchased in vending machine	Employee bought corn nuts from the vending machine at the Cogen Control Room vending machine, #17. He then put a handful in his mouth and noticed a moldy state look in the bag. After further review of the package he noticed it had been expired for 2 years.	NL-Injury/Illness - Employee Injury	

32285	Richmond, CA - Refinery	2/25/2012 11:10:00 AM	Closed	Loss	Loss of seal on P-1831A. P-1831 in shop for repairs. 18 plant shutdown.	SEE ATTACHED LINK FOR COMPLETE TOP REPORT - P-1831A, C-1831 water circulation pump, seal failed.	Equipment/Property Damage	(1) 1. Why did the "above" happen? Seal faces experienced damaging excessive dry run vaporization conditions. (This is worst actor with predictable failures occurring during startups and upsets.) 2. Why did the "above" happen? Single seal is employed using Plan 32 flush This design cannot tolerate dry run vaporization if seal flush is turned off. Seal flush adds too much water for the process to accept. Thus seal flush is minimized or shut off to the point that the seal faces run dry, and if process vaporizes when the flush is off, the faces are damaged. This occurs frequently during 18 Plant startups and plant upsets. This is a design issue. 3. Why did the "above" happen? Sometime in the past, a Plan 52 double seal design was replaced with a Plan 32 single seal design. The Plan 52 design adds no water to the process and the seal faces are kept liquid-lubricated independently from the process. (Plan 52 uses a pressurized buffer fluid – water- between the seal faces. Nitrogen pressure keeps the buffer fluid pressure > process pressure. 4. Why did the "above" happen? There is no documentation as to why the seals were converted from double to single. It may have been seal reliability. After 27 years, we can speculate but cannot confirm reasons. 5. Why did the "above" happen? Speculation only: Possibly lack of knowledge that single seals would result in potentially worse reliability and operability. , (2) SOS: Design & Engineering: Seal Design was changed from double to single face. (3) Sidebar Issues: SOS: Design & Engineering: P-1831A and P-1831 experience cavitation during start-ups .
32327	Richmond, CA - Refinery	2/27/2012 1:00:00 PM	Closed	Near Loss	Green Card. Repair hole. Location: Atrain South Isomax, 5' N of E-333	Green Card Asphalt needs to be repaired. Big hole, serious tripping hazard. Location: Atrain South Isomax, 5' North of E-333	NL-Lessons Learned	
32339	Richmond, CA - Refinery	2/27/2012 2:30:00 PM	Closed	Loss	F-305 trip during pressure survey	A pressure survey was being conducted on the feed gas valves on F-305. When the feed gas flow went to 0 MMSCFD, the fuel gas flow controller closed due to being on ratio control.	Operational Process/Procedures	(1) Fuel gas control valve closes shut due to Feedforward control systems logic instead of going to min flow and not understood by operations. , (2) F-305 Minimum Flow Line Failed to maintain minimum pressure (including PCV-072)., (3) Pig tail past normal life expectancy of 20 years., (4) 20 Plant not shut down under downstream K-1900 upset conditions., (5) Compressor suction pressure dropped from 215 lbs to 90 lbs. In the past, the drop was not as severe or as fast.
32353	Richmond, CA - Refinery	2/27/2012 6:40:00 PM	Closed	Loss	V-1610 psv relived early causing flaging	At approximate y 18.38 (2/27/2012) Flow from the RLOP relief header overwhelmed flare gas recovery and popped the seal on the FCC flare causing visible flaring. Duration of the event was approx 20 minutes(flare sample automatically taken after 15 minutes.) outside operations and CO-6, began searching for the cause at the onset of the event with nothing overt in sight. Outside operations while searching, found the PSV on HNF High pressure separator was lifting and switched PSV's. Normally one is in service and the other is isolated for immediate service when needed, With the loss of a train earlier in the day the bleed was blocked in , in the HNF this started to cause the HNF system pressure to swing. It was running at 2550PSI. At 2650 the PSV-311(IL1600) lifted to relief, it is set to lift at 2751PSI.The CO also cracked open the bleed to stabilize the system pressure. This event was Not an RQ Event as verified by HES	Environmental	(1) Why did V-1610 PSV lift? V-1610 PSV IL#1601 Lifted 100PSI lower than its setpoint. Why did IL#1601 relief valve lift 100PSI lower than its setpoint. IL#1601 lifted 100PSI lower than its setpoint due to error in Setting psv or Physical damage.
32353	Richmond, CA - Refinery	2/27/2012 6:40:00 PM	Closed	Loss	V-1610 psv relived early causing flaging	At approximately 18.38 (2/27/2012) Flow from the RLOP relief header overwhelmed flare gas recovery and popped the seal on the FCC flare causing visible flaring. Duration of the event was approx 20 minutes(flare sample automatically taken after 15 minutes.) outside operations and CO-6, began searching for the cause at the onset of the event with nothing overt in sight. Outside operations while searching, found the PSV on HNF High pressure separator was lifting and switched PSV's. Normally one is in service and the other is isolated for immediate service when needed, With the loss of a train earlier in the day the bleed was blocked in , in the HNF this started to cause the HNF system pressure to swing. It was running at 2550PSI. At 2650 the PSV-311(IL1600) lifted to relief, it is set to lift at 2751PSI.The CO also cracked open the bleed to stabilize the system pressure. This event was Not an RQ Event as verified by HES	Operational Process/Procedures	(1) Why did V-1610 PSV lift? V-1610 PSV IL#1601 Lifted 100PSI lower than its setpoint. Why did IL#1601 relief valve lift 100PSI lower than its setpoint. IL#1601 lifted 100PSI lower than its setpoint due to error in Setting psv or Physical damage.
	Richmond,	2/27/2012				Flaring occurred At about 21:00 on 2/27/2012 both the RLOP and FCC flares due to K-1900 in RLOP surging. Sampling requirements occurred in both flares and HES confirmed an RQ for SO2 on the RLOP flare around 980lbs, thus triggering the Consent Decree and BAAQMD reportable flaring incident criteria. During the incident the cause of the surging in K-1900 was traced back to the 20plant PSA. Due to all the plant feed cuts and shutdowns feed to the PSA was decreasing causing its performance to degrade causing lighter end		

32360	CA - Refinery	9:00:00 PM	Closed	Loss	RLOP Flaring due to K-1900 surging	product to exit down the tail gas line to K-1900. The PSA was immediately shutdown and control was restored to K-1900 and flaring ceased.	Operational Process/Procedures	
32374	Richmond, CA - Refinery	2/27/2012 7:00:00 PM	Closed	Near Loss	During a steam loadshed there were 3 boilers that were not available due to multiple issues.	Refinery has 3 plants still shutdown 14 hours into a H2 emergency and steam loadshed. Boilers should have been available. #7 Boiler was being lined up to start last night and the louvers would not stay open, gradually closed, looks like an air leak. Maint. began working this issue first thing this morning. Wind box full. Why couldn't we run louvers in manual? Took long time to figure out this boiler wasn't goin gto work. Should have cut losses sooner. • #1 boiler has leaks from the drum but can run fine and does not leak once up to temperature. The gaskets were being replaced this Wednesday. The fan was not meggered last night. There may have been a misunderstanding of its availability. Was there not a sense of emergency? • #3 Boiler – operations noticed before the incident happened yesterday that the louvers were not operating properly. Maint. came out for a planned PM on this system. These louvers cannot be greased with fittings as there are none. Sealed bearings. (Maint free....) Should be good to 1500degf. Working with Mashy on how to repair. The louvers stick past 80%. Could have run boiler at reduced loads.	NL-Business Process - Business Interruption	(1) STL made judgment error on keeping #1 boiler available for maint. rather than running it. Vanes sticking on #3 Boiler and a "common" belief that everyone knew why. No information from the PM conducted or the maint repair work. , (2) Poor PM description. Operations is not required or asked to work with the maint. folks to move the vanes and ensure mechanical integrity., (3) #7 and #3 Boiler not run in manual as they could have, (4) No routine health check on the boilers to ensure they are mechanically ready.
32408	Richmond, CA - Refinery	2/16/2012 2:30:00 PM	Closed	Near Loss	Green Card. Condult with exposed electrical wires. Location: S.Isomax	Green Card. On the very top of the strucker next to glass window on Tank D2025 there is a conduit with exposed electrical wires. Location: S. Isomax - Tank D2025	NL-Lessons Learned	
32409	Richmond, CA - Refinery	2/16/2012 10:30:00 AM	Closed	Near Loss	Green Card. Overhead steam leak needs to be fixed. Location: S.Isomax	Green Card. An overhead steam leak needs to be fixed before it gets worse and it needs scaffold to get to the leak. Location: S. Isomax, South of D-2520	NL-Lessons Learned	
32411	Richmond, CA - Refinery	2/16/2012 8:00:00 AM	Closed	Near Loss	Green Card. Overhead steam leak needs to be fixed. Location: NHT R-410	Green Card. An overhead steam leak needs to be fixed because it leaks near walkway and someone can get burned if condensate hits them when they walk by. Location: NHT R-410	NL-Lessons Learned	
32414	Richmond, CA - Refinery	2/21/2012 7:00:00 AM	Closed	Near Loss	Green Card. A steam line leak needs to be fixed. Location: S. Isomax K-300A	Green Card. A few 3/4 welded steam line leaking bad that needs to be fixed because it's near walkway and makes a very high noise. Also some employees are working near the leak. Location: S. Isomax K-300A	NL-Injury/Illness - Employee Injury	
32416	Richmond, CA - Refinery	2/24/2012 4:00:00 PM	Closed	Near Loss	Green Card. Toe boards not secure on deck. Location: S. Isomax	Green Card. Almost tripped while walking the 1st deck when the toe board came off from weld. Location: S. Isomax, F-355/8-Train	NL-Injury/Illness - Contractor Injury	
32553	Richmond, CA - Refinery	2/29/2012 8:00:00 AM	Closed	Near Loss	Tripping hazard on the steps of the Admin. building	A non-skid strip was halfway loose on the stone steps in front of the admin building and creating a potential tripping hazard.	NL-Injury/Illness - Employee Injury	
32600	Richmond, CA - Refinery	2/29/2012 12:00:00 AM	Closed	Near Loss	Primary Communications link down. Ran on backup.	Primary Link intermittant down 80%. Ran on backup which caused no outage or interruption.	NL-Business Process - Business Process	
32646	Richmond, CA - Refinery	2/27/2012 3:00:00 PM	Closed	Near Loss	8 Plant Selenium Excursion to the Bioreactor	On Feb. 27th, 2012 on day shift, Hydrogen A train tripped due to an FSC trip. When Hydrogen A train shuts down, steam becomes scarce throughout the refinery. When the steam becomes scarce, the RSL/STL made the call to go on a "steam load shed" throughout the refinery. 8 Plant steam was chopped by operations to help with the steam load shed. The board operator at OWS1 was assisting OWS2 with the shut down of Hydrogen A train while balancing the steam system at South Isomax. During all the chaos, the OWS1 board operator forgot to make the call to the outside operator to route 8 Plant stripped water off-test. If steam is chopped and the stripped water is still routed on-test, the selenium inside C-820 will get washed away to the bioreactor. This can cause a high amount of selenium to the bioreactor. This incident did not cause a reportable amount of selenium, but did elevate the bio inlet selenium composite sample to be as high as 74 ppb. (Normally, operations tries to keep this selenium at the bioreactor below 34 ppb.)	NL-Environmental - Release	(1) Operator did hold himself accountable for not following procedures. The operator is well aware of routing stripped water off-test when steam is removed from 8 Plant, but he forgot during the chaos of Hydrogen A Train shutting down. 5 Why for LI/NLI ID # 32646 What happened? High selenium was sent to the bioreactor 75 ppb versus normal max of 34 ppb. (No environmental incident occurred, but could have happened if this issues was not resolved.) Why? 8 Plant sent a large amount of selenium after it was shut down due to a steam load shed. Why? 8 Plant stripped water remained on-test after all steam was cut to the plant. (Routed on-test while making off-test product.) Why? Operations forgot (for an hour) to inform outside operator to route stripped water off-test after steam was cut from the plant. Why? During all the chaos of Hydrogen A Train tripping and shutting down, OWS1 operator was distracted with helping OWS2 and balancing steam system. Because of the distraction the operator did not follow procedures.
32669	Richmond, CA - Refinery	2/29/2012 2:00:00 PM	Closed	Near Loss	Fully Crated Equipment delivered without MSDS or evidence equipment was properly cleaned	Crate was delivered from the field to the tally room with NO paper work and the crate was nailed shut so you couldn't tell if it was cleaned. The equipment in the crate was sniffed the day after the crate was delivered. The reason the crate was sniffed was because the Tally Room asked the question if the equipment was clean. The MSDS was brought over the same day the equipment was sniffed.	NL-Business Process - Business Process	
						A review of process vessel depressurization records determined that there were no records for the process vessel depressurization that occurred at R-1410B in the H2SO4 Alkylation Plant commencing on March 7, 2011. Most BAAQMD Reg. 8-10 Process Vessel Depressurization (PVD) monitoring in the refinery is conducted by the Chevron Fire Department (CFD) Fire Marshalls. When a process vessel is first monitored for PVD by CFD, a form is completed		

32680	Richmond, CA - Refinery	3/7/2011 12:00:00 AM	Closed	Near Loss	missing pvd paperwork	to track the progress. When this occurs, the form is handed off to the CFD Battalion Chief for data entry and there is continual tracking until there are three consecutive days of detected VOCs below 100 ppm. Per Reg. 8-10, once this has occurred monitoring is complete. When vessel R-1410B in the Alky Plant was initially monitored, this form was completed by a Fire Marshall, but the form was lost and consequently the next CFD shift was unaware monitoring was ongoing. As a result no monitoring was conducted after the initial day and no record exists of the initial monitoring. On follow-up period, we will: 1. Update Procedure to include turnover process between Fire Marshall and Battalion Chief. 2. Update Battalion Chief turnover to include PVD activities for each shift. 3. Train all crews on PVD Compliance Process.	NL-Regulatory Compliance - Non Compliance - Air	(1) Procedure did not specifically state turnover processes between Fire Marshall, Battalion Chief and from crew to crew. , (2) Procedure did not specifically state turnover processes between Fire Marshall, Battalion Chief and from crew to crew. , (3) Did not understand the severity Environmental Compliance risk for follow-up monitoring.
32722	Richmond, CA - Refinery	3/1/2012 12:30:00 PM	Closed	Loss	NPDES pH exceedance on storm water run-off	As per our NPDES permit, we are required to sample storm water run-off prior to the water entering a public body of water. This is done during storm events for areas where the water isn't contained. The water must meet several constituents to be considered on-test. One of these constituents is pH. The water sampled at Gertrude St site on 3/1/12 tested at 8.7 pH while the upper limit is 8.5	NL-Regulatory Compliance - Non Compliance - Water	(1) Lack of Skill or knowledge
32722	Richmond, CA - Refinery	3/1/2012 12:30:00 PM	Closed	Loss	NPDES pH exceedance on storm water run-off	As per our NPDES permit, we are required to sample storm water run-off prior to the water entering a public body of water. This is done during storm events for areas where the water isn't contained. The water must meet several constituents to be considered on-test. One of these constituents is pH. The water sampled at Gertrude St site on 3/1/12 tested at 8.7 pH while the upper limit is 8.5.	Environmental	(1) Lack of Skill or knowledge
32734	Richmond, CA - Refinery	2/25/2012 3:30:00 AM	Closed	Loss	Minor Flaring due to 16PC000A (Recycle H2 Loop Pressure Contoller) suspected sticking.	Minor Flaring due to 16PC000A (Recycle H2 Loop Pressure Controller) suspected sticking. On 2/25/12 at approximately 03:29 DHT PCO recieved honeywell alarm that V-1620's level (16LC021B) had spiked from 50% to 80% and climbing causing a rapid pressure increase on the H2 Pressure Loop system (which during steady state operation vents to 5 H2S via 16PC000A) As level and pressure increased 16PC000B Which vents directly to flare, opens to 40% output for approximately 15-20 seconds causing minor flaring.	Environmental	(1) V-1620 Level Controller LC-1620 021B sticks intermittently.
32741	Richmond, CA - Refinery	3/1/2012 12:00:00 AM	Closed	Loss	K-910 Starup delayed	K-910 starup was delayed due to it's Shutdow/running button on the honeywell page not being reset to the running mode.This subsequently caused a delay in startup as electricians troubleshot and eventually found the open relay associated with the reset button on the honeywell page.	Operational Process/Procedures	(1) K-910 Startup delayed. Why was K-910 startup delayed? K-910 would not start. Why would K-910 not start? K-910 would not start because of an open relay. Why was there an open relay? The relay was open because the K-910 Reset switch was not reset on the honeywell Why was the reset switch not reset on honeywell? Operators lack of knowlege around this reset.
32755	Richmond, CA - Refinery	3/2/2012 12:00:00 AM	Closed	Near Loss	Missed routine duties and no corrective action form was initiated.	Crude side Intelatrac rounds for 3/2 D not approved. CHO SCBA missed no corrective action entered.	NL-Operational Process/Procedures - Safety Systems	(1) The CHO did not check the hand held for routine duties due on his shift and failed to identify the missed duty during the HO approval process.
32767	Richmond, CA - Refinery	3/3/2012 7:00:00 PM	Closed	Near Loss	Pump tagged out of service	On 3/3/2012 at approximately 19.00 hrs, Operators conducting rounds at 4 Rhen, noticed a large seal leak on P-3592. Operators immediately notified Head Operator of condition, spare pump P-3592A appeared to be out of service, due to a tag stating pump was racked out at MCC. C-3590 Stripper Bottoms level rose as high as 71%, PCO reduced rates at 4 Rhen in order to control level and tried to push out product towards Ref Splitter. Ref Splitter is out of service due to work being conducted for Raman Analyzer. Loto Box # 1897 had a Craft Lock that needed to be removed, CFD was notified and proceeded to cut lock, at the same time Operations noticed P-3592A was not racked out at MCC, assured P-3592A was lined up properly, bleeders closed -- placed pump in service. Level on C-3590 remained in control, Ref Splitter remains out of service and 4 Rhen rates increased back to normal-- 19:35 hrs.	NL-Business Process - Business Interruption	
32768	Richmond, CA - Refinery	3/3/2012 11:15:00 PM	Closed	Near Loss	Loss of flow to FCC during feed switch from T-3194 to T-3196	After getting good samples results on T-3196, T&B got permission from FCC to make a feed switch from T-3194 to T-3196. As soon as T-3196 was switched to the FCC, they saw the feed quality change to a lighter stock and then a loss of flow to their feed pumps and immediately reported it to T&B.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) The line setup was not checked thoroughly enough before the switch was attempted, to find the cold line below platform
32772	Richmond, CA - Refinery	2/27/2012 9:00:00 PM	Closed	Loss	Wash water not shut off in E-711's After TKC Shutdown	After pulling feed from the TKC on 2/27/12 at apx 8:20 PM, the wash water injections to E-714, E-460 and E-711 were left running. Below are the estimated volumes of water and oil that were sent to the FCC feed tank and down the Wild Naphtha line: • To FCC feed tank via C-710 bottoms – 13,000 gallons of stripped sour water • To D&R via V-710 overhead – 3.9 MB of Wild Naphtha with high water content	Operational Process/Procedures	(1) why was there an excessive amout of water carryover to FCC feed tank and wild naphtha stream? Excessive amounts of water due to wash water injections in TKC not being isolated for 25 hrs after feed pull. Why were the water injections left open? Lack of good communication at turnover and operator oversight lead to the injections not being blocked in in a timely manner.
						SISO operators were in the process of setting 20 Plant up for once through cooling of R410/11. Procedures were in hand and being followed, the RLOP overhead gas line was blocked in at 20 plant. The flow would normally be		(1) Why did we overpressure V-1120 and trip the FCC totalizer. Because the V-1120 overhead jumpover line at the NISO boundry was blocked in and normal routing to 20 plant got blocked in of a Once-Through. Why was the overhead jumpover valve blocked in. Because work was done on the line during the 4Q RLOP S/D and did not get unblocked after the line was unblinded. Why did the valve not get unblocked.

32804	Richmond, CA - Refinery	3/4/2012 9:40:00 PM	Closed	Loss	Flaring event while setting 20 plant up for once through to N Iso.	diverted to 4H2S through PC2154. A valve on the RLOP over head gas line out in the pipeway in front of NISO was left in the closed position. This valve is normally left in the open position, and was left closed from the RLOP major. This backed RLOP out of the system which over pressured V1320 lifting the PRD to relief.	Environmental	Because their was confusion on who owned the valve. RLOP believed NISO owned the valve and NISO believed RLOP owned the valve. Why was their confusion on the ownership of the valve. The valve is located along Channel Street outside of NISO's plot limit.
32840	Richmond, CA - Refinery	3/5/2012 4:30:00 AM	Closed	Loss	EE fell through pallet.	EE standing on pallet near 53 Gate fell through.	Injury/Illness	(1) EE failed to realize that stepping upon a pallet is considered unsafe and could lead to injury.
32840	Richmond, CA - Refinery	3/5/2012 4:30:00 AM	Closed	Loss	EE fell through pallet.	EE standing on pallet near 53 Gate fell through.	NL-Injury/Illness - Employee Injury	(1) EE failed to realize that stepping upon a pallet is considered unsafe and could lead to injury.
32844	Richmond, CA - Refinery	3/5/2012 5:20:00 AM	Closed	Loss	Finger caught in vechicle door	While exiting the RLOP van an operator's finger was inadvertently pinched in the door.	Injury/Illness	(1) Hand was placed along door jam between front passanger door and rear sliding door. The injured persons hand was placed there to maintain their balance while they grabbed their personal bag from the back seat. Person exiting front passanger door did not see injured persons hand that had been placed along the door jam. The front passanger door was closed pinching the persons ring finger finger tip in the door .
32884	Richmond, CA - Refinery	3/5/2012 11:40:00 AM	Closed	Loss	During Seal inspection T-3105 observed oil in #2 Pontoon	During Seal Inspection of T-3105 obsevad oil in #1 pontoon of the floating roof and made notification to HES	Environmental	(1) We cannot ascertain the failure without taking tank OOS
32886	Richmond, CA - Refinery	3/5/2012 3:00:00 PM	Closed	Loss	Direct burial line was damaged	While drilling a 24" diameter hole for a camera foundation the drill came into contact with a buried phone line.	Equipment/Property Damage	(1) Markings for the buried cable was approximately 20' away from the drilling location. The crew was more focused on the overhead hazards than the buried phone line which was to be relocated if contact was made.
32936	Richmond, CA - Refinery	3/1/2012 12.00:00 AM	Closed	Near Loss	Vendor sent wrong material 304ss ordered 316ss	vendor sent 304 ss pc. pipe on PO 10133863 and when PMI was done it was 316 ss. pipe was not marked.	NL-Business Process - Business Process	
32936	Richmond, CA - Refinery	3/1/2012 12.00:00 AM	Closed	Near Loss	Vendor sent wrong material 304ss ordered 316ss	vendor sent 304 ss pc. pipe on PO 10133863 and when PMI was done it was 316 ss. pipe was not marked.	NL-Quality - Incorrect Product	
32957	Richmond, CA - Refinery	3/6/2012 9:00:00 AM	Closed	Loss	Pipe rolled off bench and fell on ee foot.	Mechanic was fitting a 10 inch fg to a piece of of pipe about 2 ft long when pipe roled off "V blocks" and struck ee on foot.	Injury/Illness	(1) 1)Lack of adequate procedures or work standards. Incident Number32957 Business Unit Routine Maintenance Location Boiler Shop Facility Name Richmond Refinery Incident date 3/6/2012 Type of Process: Pipe Fabrication Type of Equipment: Team Members: Alan Lowell, Jim Adams Ken Hopkins, Don Lorz Gary House Incident Description: What: On 3/6/2012 a Company mechanic, working alone, was fabricating a piping spool in the Boiler Shop on a large metal work bench about 2 ft high. He was attempting to weld a piece of 10" diameter pipe ~27" long to a 10" weld neck flange. The pipe was resting in 2 "V-blocks" which keep the pipe flat and from rolling off the table (see pictures below). While trying to fit up and tack weld the 10" flange to one end of the pipe, the pipe fell out of the V-blocks and rolled off the table, striking the EE on top of his foot. Where: Boiler Shop When: 3/6/2012 9:00 AM How: Problem Statement (What is the key issue that needs to be addressed?): 1)Pipe fell on employee's foot. FIVE WHY'S 1. Why did "above" happen? Verification Pipe fell off of V-blocks 2. Why did "1" happen? 2A- V-blocks not properly secured to bench and pipe not secured to V-blocks 2B- EE attempting to align pipe and flange in V-block by hand and tack weld 3. Why did "2" happen? EE not aware of shop tools and fabrication techniques EE did not have adequate hands on experience in the Boiler Shop , (2) 2)Lack of experience. Incident Number32957 Business Unit Routine Maintenance Location Boiler Shop Facility Name Richmond Refinery Incident date 3/6/2012 Type of Process: Pipe Fabrication Type of Equipment: Team Members: Alan Lowell, Jim Adams Ken Hopkins, Don Lorz Gary House Incident Description: What: On 3/6/2012 a Company mechanic, working alone, was fabricating a piping spool in the Boiler Shop on a large metal work bench about 2 ft high. He was attempting to weld a piece of 10" diameter pipe ~27" long to a 10" weld neck flange. The pi
								(1) Why Did PSA startup trip FCC/Alky totalizers? PSA startup tripped FCC/Alky flare totalizers because the PSA product line overpressured and went to flare gas recovery.

33003	Richmond, CA - Refinery	3/7/2012 2:30:00 AM	Closed	Loss	PSA startup tripped FCC totalizer	At 02:30 AM in 3/7/2012 operations was attempting to startup the PSA when pressure went past the 360 lb set point and continued to climb. The PSA was immediately shutdown and operations rechecked the lineup. The pressure control valve on the outlet of the PSA 64PC2415 was still single blocked. Operations opened the valve and restarted the PSA with no further issues. Review of the procedure shows no step for ensuring the PC is unblocked.	Regulatory Compliance	Why did the PSA product line overpressure? The PSA product line overpressured because the Pressure controller downstream block valve was closed. Why was the product line valve closed? Operations missed opening the block valve during start up preparations.Due to Head operator radio issues . HO blocked in PC after lineup was verified to Leak check one more valve. He instructed the outside operator to open the PC block up but radio didnt transmit. Started the PSA up before he recieved a confimation of the order. Why Did the HO startup the PSA prior to radio confimation recieved that product controller was unblocked? The head operator shortcut the radio protocal believeing the operator understood or heard his order before the PSA was started up.
33003	Richmond, CA - Refinery	3/7/2012 2:30:00 AM	Closed	Loss	PSA startup tripped FCC totalizer	At 02:30 AM in 3/7/2012 operations was attempting to startup the PSA when pressure went past the 360 lb set point and continued to climb. The PSA was immediately shutdown and operations rechecked the lineup. The pressure control valve on the outlet of the PSA 64PC2415 was still single blocked. Operations opened the valve and restarted the PSA with no further issues. Review of the procedure shows no step for ensuring the PC is unblocked.	Operational Process/Procedures	(1) Why Did PSA startup trip FCC/Alky totalizers? PSA startup tripped FCC/Alky flare totalizers because the PSA product line overpressured and went to flare gas recovery. Why did the PSA product line overpressure? The PSA product line overpressured because the Pressure controller downstream block valve was closed. Why was the product line valve closed? Operations missed opening the block valve during start up preparations.Due to Head operator radio issues . HO blocked in PC after lineup was verified to Leak check one more valve. He instructed the outside operator to open the PC block up but radio didnt transmit. Started the PSA up before he recieved a confimation of the order. Why Did the HO startup the PSA prior to radio confimation recieved that product controller was unblocked? The head operator shortcut the radio protocal believeing the operator understood or heard his order before the PSA was started up.
33045	Richmond, CA - Refinery	3/7/2012 12:00:00 AM	Closed	Near Loss	shelter in place drill @ QCD commuication was very poor.	shelter in place drill at QCD never saw floor warden. no one took role no duct tape in room. The speaker in the room wasn't clear. People sitting out side and not in the bldg.	NL-Business Process - Business Process	
33045	Richmond, CA - Refinery	3/7/2012 12:00:00 AM	Closed	Near Loss	shelter in place drill @ QCD commuication was very poor.	shelter in place drill at QCD never saw floor warden. no one took role no duct tape in room. The speaker in the room wasn't clear. People sitting out side and not in the bldg.	NL-Lessons Learned	
33049	Richmond, CA - Refinery	2/3/2012 12:00:00 AM	Closed	Near Loss	Supplier Overpayment	Order was created and paid against receipt of order instead of paying against invoice. Invoice charge was less than cost on Purchase Order. Purchase order trigged an overpayment of $6,414.11.	NL-Business Process - Business Process	
33134	Richmond, CA - Refinery	3/8/2012 8:00:00 AM	Closed	Near Loss	Green Card. Repair handrail. Location: B&S Bridge 134	Green Card. I used the handrail to balance myself and it gave way. It still appears solid but it is not. Please repair. Location: B&S Bridge 134	NL-Injury/Illness - Employee Injury	
33147	Richmond, CA - Refinery	3/8/2012 9:00:00 AM	Closed	Near Loss	Loss of loto key	Lost K1100A loto key	NL-Business Process - Business Process	
33152	Richmond, CA - Refinery	3/7/2012 12:00:00 AM	Closed	Near Loss	Warehouse representative disposed of 15 reclaimed fire hydrants. Hydrants were later found in a dumpster and recovered.	Warehouse representative disposed of 15 reclaimed fire hydrants that had been sitting outside the #8 warehouse for more than a year. These hydrants were put there based on advice of a material controller who no longer works in the warehouse and did not communicate to his peers what was supposed to be done with the hydrants. The hydrants were put into a dumpster as part of housekeeping and because the storekeeper who was doing the clean-up did not realize the hydrants were to be kept. The dumpster was moved to reclamation where they were recovered. Hydrants relocated to a place in Reclaimation where they would not be disposed of for later use.	NL-Lessons Learned	
33167	Richmond, CA - Refinery	3/8/2012 2:00:00 PM	Closed	Near Loss	Lost LOTO lock key box #1854	While attempting to un-LOTO pump operator found key from lock box #1854 had become lost at some point in the past.	NL-Equipment/Property Damage - Equipment Damage	
33167	Richmond, CA - Refinery	3/8/2012 2:00:00 PM	Closed	Near Loss	Lost LOTO lock key box #1854	While attempting to un-LOTO pump operator found key from lock box #1854 had become lost at some point in the past.	NL-Operational Process/Procedures - Safety Systems	
								(1) The APP failed because Header information went bad on 2 drives Why did the drives fail? Drive failed possibly due to running older FW on Perc6 Why was the server running older firmware? The Perc was still running old firmware since we need to test the new Software on test system before running it in the plant.Why was the formware not tested? The new Perc 6 FW has been install and tested on training system and the Perc FW upgrade has been entered in the Change Management system so we can process with implementation. Why was the tested firmware not installed? The Change has

33170	Richmond, CA - Refinery	2/26/2012 12:00:00 AM	Closed	Near Loss	APP node 32 failed, lost two DMC controlers in D&R	Server failed because 2 of the 5 Raid controller Hard Drives failed. The 2 DMC controllers running within that App Node server for advance control were unavailable for use while the servers were down.	NL-Business Process - Business Process	been approved and we are waiting the bundle this with another Patch upgrade to the APP node so we can minimize APP node reboot and APP node down time. Root cause was not determined. The root cause is pointing to the Perc FW running on the APP node
33105	Richmond, CA - Refinery	3/6/2012 5:00:00 PM	Closed	Near Loss	135# steam introduced into P-2 suction header at #1 separator off-loading facility	Operations was attempting to pump-off a vacuum truck containing gasoline into T-3127. P-2 was having difficulty pumping the product from the vacuum truck; it was not moving. The operator opened the bleeder to vent the pump case and bleed off any air trapped in the line/pump case but was still unable to move product. The pump was shut down and the line was rechecked for a possible closed valve. While rechecking the valve alignment Ops discovered that the discharge line was extremely hot to the touch. Upon further investigation it was determined that a 135# steam valve was cracked open allowing steam into the pump suction header. The steam was pressuring up the suction line and vapor locking the pump.	NL-Lessons Learned	(1) The root cause of the incident was the failure of an unidentified individual to tag a valve that was opened which is normally closed., (2) The turnover did not reflect the current status of the plant; that a normally closed steam valve was opened on the identified pump., (3) Possible unauthorized (contractor) access by an unidentified individual who opened the valve while discharging a truck.
33243	Richmond, CA - Refinery	3/9/2012 9:30:00 AM	Closed	Loss	Operator bang his wrest to keep from falling overboard in a work boat.	During a Oil Spill training exercise a operator was thrown overboard and another injured his wrist trying to keep from being thrown over the side when they were making a turn and a wake hit the boat causing one operator to fall overboard and when doing so the sudden shift in the boat the other operator put his arm out to stabilize himself injuring his arm	NL-Injury/Illness - Employee Injury	(1) Lack of experience on present equipment and training.
33243	Richmond, CA - Refinery	3/9/2012 9:30:00 AM	Closed	Loss	Operator bang his wrest to keep from falling overboard in a work boat.	During a Oil Spill training exercise a operator was thrown overboard and another injured his wrist trying to keep from being thrown over the side when they were making a turn and a wake hit the boat causing one operator to fall overboard and when doing so the sudden shift in the boat the other operator put his arm out to stabilize himself injuring his arm	Injury/Illness	(1) Lack of experience on present equipment and training.
33248	Richmond, CA - Refinery	3/9/2012 4:30:00 PM	Closed	Near Loss	Electrical Lube oil pump K-1601 tripped	The PRT was being taken out of service to prepare for the start up of P-1601a when the Aux lube oil pump started then tripped out. The Breaker tripped in the MCC.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) bearing failure of auxiliary lube oil pump, the pump was original install 20 plus years., (2) back up lube oil pump P1683A hand switch has normally set to off as it is a back up to the spare
33248	Richmond, CA - Refinery	3/9/2012 4:30:00 PM	Closed	Near Loss	Electrical Lube oil pump K-1601 tripped	The PRT was being taken out of service to prepare for the start up of P-1601a when the Aux lube oil pump started then tripped out. The Breaker tripped in the MCC.	NL-Equipment/Property Damage - General Liability	(1) bearing failure of auxiliary lube oil pump, the pump was original install 20 plus years., (2) back up lube oil pump P1683A hand switch has normally set to off as it is a back up to the spare
33255	Richmond, CA - Refinery	3/9/2012 7:00:00 PM	Closed	Loss	Small piping leak on V-1421 (iC4) drain line to blowdown header	At ~ 19:00, while making rounds, the plant operator found an IC4 leak off of the bottom of V-1421 Economizer. The leak is on the 3" drain line off of the outlet of V-1421.	Environmental	(1) Incident Number 33255 Business Unit Cracking Location Alky Facility Name Richmond Incident date 3/9/2012 Type of Process: IC4 Type of Equipment: Piping Team Members: Laura Leeds Mari Lemke/Bobby Guthmiller Pranell Prasad Dale Blume Ron Moore Gerardo Ibarra Ron Moore Incident Description: At ~ 19:00, while making rounds, the plant operator found an IC4 leak off of the bottom of V-1421 Economizer. The leak was on the 3" drain line off of the outlet of V-1421. This investigation covers why did the 3" carbon steel piping fail off V-1421 outlet. FIVE WHY'S 1. Why did "above " happen? The piping had a failure due to under deposit corrosion at a tee connection. 2. Why did "1" happen? -Under deposit corrosion occurred due to the stagnant condition that exist in this piping design. Stagnant conditions allow localized corrosion cells to develop in the presence of water. The location of the failure was at a tee connection where deposits would naturally collect in a stagnant zone. -The exact location of the failure was not being monitored by our inspection program while other locations inches away were being RT monitored on a 10 year frequency per API Class III. 3. Why did "2" happen? -The stagnant conditions exist in the line due to the original design of the piping and its intended purpose. -The piping was being monitored accordingly, but the inspection methods that were used on a 10 year frequency would not have found this failure as no CML was placed on the area of that failure. 4. Why did "3" happen? -The existing original design is a carbon steel dead leg where deposits can accumulate due to the occasional use application of this line for blow down purposes only. -No CML was located on tee (the area where the failure occurred) because appropriate failure modes were not identified during initial inspection plan creation. 5. Why did "4" happen? Line was never evaluated or redesigned for potential failure due to th
								(1) Incident Number 33255 Business Unit Cracking Location Alky Facility Name Richmond Incident date 3/9/2012 Type of Process: IC4 Type of Equipment: Piping Team Members: Laura Leeds Mari Lemke/Bobby Guthmiller Pranell Prasad

33255	Richmond, CA - Refinery	3/0/2012 7:00:00 PM	Closed	Loss	Small piping leak on V-1421 (iC4) drain line to blowdown header	At ~ 19:00, while making rounds, the plant operator found an iC4 leak off of the bottom of V-1421 Economizer. The leak is on the 3" drain line off of the outlet of V-1421.	Loss of Containment	Dale Blume Ron Moore Gerardo Ibarra Ron Moore Incident Description: At ~ 19:00, while making rounds, the plant operator found an iC4 leak off of the bottom of V-1421 Economizer. The leak was on the 3" drain line off of the outlet of V-1421. This investigation covers why did the 3" carbon steel piping fail off V-1421 outlet. FIVE WHY'S 1. Why did "above " happen? The piping had a failure due to under deposit corrosion at a tee connection. 2 Why did "1" happen? -Under deposit corrosion occurred due to the stagnant condition that exist in this piping design. Stagnant conditions allow localized corrosion cells to develop in the presence of water. The location of the failure was at a tee connection where deposits would naturally collect in a stagnant zone. - The exact location of the failure was not being monitored by our inspection program while other locations inches away were being RT monitored on a 10 year frequency per API Class III. 3. Why did "2" happen? -The stagnant conditions exist in the line due to the original design of the piping and its intended purpose. -The piping was being monitored accordingly, but the inspection methods that were used on a 10 year frequency would not have found this failure as no CML was placed on the area of that failure. 4. Why did "3" happen? -The existing original design is a carbon steel dead leg where deposits can accumulate due to the occasional use application of this line for blow down purposes only. -No CML was located on tee (the area where the failure occurred) because appropriate failure modes were not identified during initial inspection plan creation. 5. Why did "4" happen? Line was never evaluated or redesigned for potential failure due to th
33270	Richmond, CA - Refinery	3/6/2012 9:30:00 PM	Closed	Near Loss	Delay in feed switch 220R to 600R in HNF due to out dated sample result	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT Tonight ops was preparing for an HNF block switch from a 220R to 600R run. RLOP normal procedure HNFN4132 Step 1 has us Verify, the current KF H2O sample results, from the waxy feed supply tank is less than 100ppm. Operations noted that the last sample result for KF water was entered into Starlims 1/25, so at 9:30 PM B&S was asked to expedite a KF water sample from T-3159. The Sample arrived at QCD at 11:30 PM and the folks in the lab on nightshift were not familiar with running the sample. After several tries, they continued to get negative numbered results and reported it at 2:30 AM. The SQCO informed Hydro they would have to wait until Dayshift for the chemist to run the sample. RLOP Operations used pause work authority. PED and Global Lubes were called and although we were just on the 600 R run, we all agreed we had time to wait and get the sample run prior to making the block switch. Right now the 220R rundown tank(T-3155) has approx 76,000BBLs of room.	NL-Business Process - Abnormal Supply Occurrence	(1) SOS: Training & Procedures : No One on Impacted Crew Trained, (2) SOS:Training & Procedures: SOP Unclear, (3) SOS: Training & Procedures: No Communication on Priority of When Sample Was to be Run , (4) SIDEBAR ISSUES: SOS: Design & Engineering: QCD Unaware of Need to do MOC when New Equipment is Added
33287	Richmond, CA - Refinery	3/10/2012 11:12:00 PM	Closed	Loss	K-1420 tripped off line, Alky Plant had to be shut down.	On 3/10/12 at 23.12 Utilities Section and the Alky CBO both received alarms that the breakers (12-710 (K-1420) and 12-704 (Harmonic Filter)) for K-1420 had tripped open. Upon investigation and troubleshooting, the breakers would not re-close. Feed from the Alky plant was pulled. Just after daylight savings time at 3am we were able to enable the compressor logic to allow for the breakers to be racked in. Utilities racked in the breakers, K-1420 was started up at 03:20am. Again on Monday 3/12/12 at ~08:16, K-1420 experience another similar trip and were unable to reset the trip condition again which resulted in feed outage at ~08:46 for ~3.5 hrs until the compressor was restarted.	Business Process	(1) Loss -- Alky Plant unplanned shutdown 1. Why did the plant shutdown? a. K1420 tripped offline and could not be restarted. 2. Why did K1420 trip? a. The controller initiated the trip. 3. Why did the controller initiate a trip? a. The controller believed an "external trip" element actuated when the DCS did not see the "external trip" 4. Why did the controller sense an "external trip" event when the DCS did not? a. The controller operated such that the trip cause was undetectable. 5. Why was the controller's actions undetectable? a. Inconclusive at this time. Additional testing is required to determine this answer. The testing requires a shutdown of K1420.
33375	Richmond, CA - Refinery	9/21/2011 12:00:00 AM	Closed	Near Loss	Late Submission of revision to RI-382	CCHMP request for revision and re-submittal of RI-382 Management of Organizational Changes with regard to maintenance and/or health and safety procedures associated with an organizational change.	NL-Business Process - Business Process	
33385	Richmond, CA - Refinery	3/11/2012 6:00:00 PM	Closed	Loss	8" Penhex condensate valve bonnet leak	Operation discovered the 2nd deck plot limit 8" Condensate valve to the Penhex had a severe leak on the bonnet. Several bolts were on the cement below.	Equipment/Property Damage	(1) Newly installed 8" condensate valve developed bonnet leak, (2) Condensate system is not designed optimally for current needs
	Richmond,	1/25/2012			Reduced feed rates on	HNC feed rates have been approximately 17.5 - 20.0 MBPD vs the LROP & AOP plan rate of 24.0 MBPD. Throughput is limited due to a combination of positive draft on the HNC furnace cluster and high NOx on the F-1551 furnace stack. Process Engineering has supplied data showing that the pressure drop across F-1551 DeNOx catalyst module has been increasing since the 4Q11 Major T/A. As the DP increases, the draft on the HNC distillation furnaces (F-1500/1550) will go positive creating an unsafe condition. To mitigate, the DeNOx module is partially by-passed (MOC in place). The module can be by-passed only to the point that the F-1551 furnace stack stays below the 40 ppm		(1) No Standards, Policies or Administrative Controls, (2) Trending Needs Improvement, (3) Situation Not Covered In

33388	CA - Refinery	12:00:00 AM	Closed	Loss	HNC due to F-1551 draft / NOx limitations	NOx limit (8 hr rolling avg). As a result, the HNC is limited by both draft and F-1551 NOx.	Operational Process/Procedures	Procedure, (4) Communication of Standards, Policies, Administrative Controls (SPAC) Needs Improvement
33389	Richmond, CA - Refinery	3/12/2012 6:00:00 PM	Closed	Loss	Hand, finger danger - pinch point car door-personal car--not work car	S.O. slammed finger in car door	NL-Injury/Illness - Contractor Injury	(1) Officer was not paying attention when she closed the door to her car. She did not ensure that her hand was safely out of the way before she shut the door, causing her finger to be smashed between the door and the car body.
33389	Richmond, CA - Refinery	3/12/2012 6:00:00 PM	Closed	Loss	Hand, finger danger - pinch point car door-personal car--not work car	S.O. slammed finger in car door	Injury/Illness	(1) Officer was not paying attention when she closed the door to her car. She did not ensure that her hand was safely out of the way before she shut the door, causing her finger to be smashed between the door and the car body.
33447	Richmond, CA - Refinery	3/13/2012 6:00:00 AM	Closed	Loss	Possible insect bite during fire training	EE showed signs of a possible insect bite on his rt calf	Injury/Illness	(1) unknown possible insect bite
33447	Richmond, CA - Refinery	3/13/2012 6:00:00 AM	Closed	Loss	Possible insect bite during fire training	EE showed signs of a possible insect bite on his rt calf	NL-Injury/Illness - Employee Injury	(1) unknown possible insect bite
33453	Richmond, CA - Refinery	3/10/2012 5:00:00 PM	Closed	Near Loss	Operator missed a once a monthly MTF Intelatrac duty. The HO did not see the missed duty during his approvals and did not challenge the operator to get it done on time.	Operator missed a once a monthly MTF Intelatrac duty. The HO did not see the missed duty during his approvals and did not challenge the operator to get it done on time. MTF Operator claimed he did not see the once a month duty on his handheld	NL-Operational Process/Procedures - Safety Systems	(1) HO did not properly check the Intelatrac database when doing approvals at end of shift., (2) Operator did not scroll far enough in the list. This previous practice was acceptable and not yet corrected., (3) HO did not follow written instruction that was previously followed
33490	Richmond, CA - Refinery	3/13/2012 12:00:00 AM	Closed	Near Loss	Focused on solving the leak problem rather than focusing on how the organization was managing the line leak.	Why did I, as the leak continued, focus on solving the problem rather than focusing on how the organization was managing the V4121 line leak, such as plan development and task assignments? Should have made sure who was doing what and placed expectations on required performance. As the problem was not getting solved, I focused my efforts on the actual problem and potential solutions and not on the process for solving the problem.	NL-Business Process - Business Interruption	(1) Problem Statement (What is the key issue that needs to be addressed?): Why did individual, as the leak continued, focus on solving the problem rather than focusing on how the organization was managing the V4121 line leak, such as plan development and task assignments? Should have made sure who was doing what and placed expectations on required performance. As the problem was not getting solved, leader focused efforts on the actual problem and potential solutions and not on the process for solving the problem. FIVE WHY'S 1. Why did "above" happen? Still not clear how RIC works. I thought we could repair the leak without putting together a formal plan and assigning responsibilities. I assumed everyone knew what they are supposed to do and that everyone was self motivated to get it done. 2. Why did "1" happen? Thought that the performance in the division was good and saw that the OA was all over it so it would get resolved "naturally." 3. Why did "2" happen? Past experience had been that letting things happen naturally has been successful in Cracking. 4. Why did "3" happen? Because LCI Fin Fan repairs had been successful. People performed with a sense of urgency and competency in their respective position and levels so I was able to "ride along" on solving the problem. 5. Why did "4" happen? In the past had been successful in getting the problem resolved by focusing on the problem and not the process.
33507	Richmond, CA - Refinery	3/14/2012 6:15:00 AM	Closed	Near Loss	Green Card. Parking space lines are not visible. Location: Gate 91 parking lot	Green Card. Main parking lot parking space lines are very hard to see when it is dark and rainy. Lines are not very visible any longer. Location: Gate 91 parking lot	NL-Lessons Learned	
33519	Richmond, CA - Refinery	2/14/2012 12:00:00 AM	Closed	Loss	Prioritizing FCC cat dump valve as a four resulted in a catalyst activity loss. FCC catalyst model indicates Loss in high value product is higher than production impact estimate used to set priority for valve repair.	the loss for February is about $213K. The dump valve was broken on 2/14, and the activity slowly declined until 3/3/12 (the last ECAT sample result). assuming the decline in activity & profitability is linear from 2/14, and that the losses are due to only the catalyst activity (excluding feed effects). So if the maximum daily loss was $32k on 3/3/12, then the loss increased by $1778 each day starting on 2/15:	Business Process	(1) Identifying Production loss used to determine priority of work related to catalyst activity is based in after the fact data
								(1) The main problem is that contractor refresher training was not conducted within the required time frame for annual renewal. Why was training not conducted? Because the contractor's Site Supervisor did not request/arrange for a training session for his crew within 1 year of the most recent training session. Why was training not requested? Because the Site Supervisor wasn't sure when training was due. Why was he not sure? Because he was not using the established tracking tool for monitoring the due date (on the training that

33522	Richmond, CA - Refinery	3/13/2012 2:00:00 PM	Closed	Near Loss	Contractor Training out of date	Contractor refresher training not conducted within required time frame for annual renewal.	NL-Regulatory Compliance - Non Compliance	was missed). In fact, he was intentionally disregarding it. Why was he not using the tool? Because the tool, an Excel spreadsheet, was broken. The most recent training date recorded in the sheet was over a year out of date. The Site Supervisor says he knew there had been a more recent class, that the sheet contained errors/omissions, and that he couldn't rely on the sheet as a reminder tool. How did the tool become broken? Because the Site Supervisor was not actively working to get the missing information. There was confusion about whose responsibility it was to follow up. Root Cause identified as Inadequate Communications of Expectations Regarding Procedure. The communication by Management on expectations of the procedure (for tracking and complying with training requirements) needs improvement., (2) The main problem is that contractor refresher training was not conducted within the required time frame for annual renewal. Why was training not conducted? Because the contractor's Site Supervisor did not request/arrange for a training session for his crew within 1 year of the most recent training session. Why was training not requested? Because the Site Supervisor wasn't sure when training was due. Why was he not sure? Because he was not using the established tracking tool for monitoring the due date (on the training that was missed) In fact, he was intentionally disregarding it. Why was he not using the tool? Because the tool, an Exce
33525	Richmond, CA - Refinery	3/13/2012 2:00:00 PM	Closed	Loss	P-104 Lift Pump Upper Bearing Failure	The upper bearing on P-104 was making a grinding noise. Operations S/D the pump and submitted a work request. IMI working with zone maintenance removed the cover plate for the upper bearing and discovered the bearing to be damaged.	Equipment/Property Damage	(1) Bearing failed due to inadequate lubrication level. The Trico oiler was not set at the proper height to maintain the correct oil level., (2) No oil level indicating tags
33533	Richmond, CA - Refinery	3/13/2012 2:30:00 PM	Closed	Near Loss	Manual Vis oil Bath cloudy appearance maybe caused by broken mercury thermometer	Operators entered the Isomax lab 05:25 3/14/2012 and realized the Oil in Manual Vis bath was cloudy. A second operator noticed the cloudy liquid appeared metallic. At the same time they noticed the thermometer was missing. They concluded the oil bath maybe contaminated with mercury; both exited the lab and called the HO. The HO notified the on shift STL and CFD. CFD used a Jerome tester (instrument used to test for mercury vapor and other toxic gases) to test for potential mercury contaminates in the lab. CFD confirmed that there was no mercury (0.000 PPM) outside of the Vis oil bath. The manual Vis bath oil temperature is regulated to 100 C or 212 F. Mercury boiling point is 674 F. Why did the mercury thermometer break? Investigation underway *later update the reflection screen was painted with a metallic finish - the cloudy appearance maybe paint...Hazardous waste and Lab tech to investigate 3/15	NL-Equipment/Property Damage - Equipment Damage	(1) Personnel used a different process improve equipment part life, without following PSM process for change., (2) Personnel did not understand procedure following mercury spill
33536	Richmond, CA - Refinery	3/14/2012 7:13:00 PM	Closed	Near Loss	Contractor could not get Degass Unit running on time when T-3193 roof landed while pumping T-3193 to T-990	T-3193 was being taken out of service and being emptied via its water draw to P-4 at 21 PS and pumping uphill to T-990. 30 minutes prior to landing T-3193's floating roof at 7' - 7" (18:30 hrs) the onsite contractor was notified by the PCO to begin warming up the Degass Unit to start the degas process at appx 19.00 hrs. (time the roof would land). The contractor was also notified that Plant Protection had signed their Hot Work permit for the Degas Unit. The contractor radioed at 19:15 hrs that they could not get the unit started up. By this time T-3193's level was 7' - 0"	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) GEM Mobile did communicate with their technician's the impact of moisture/rain in there igniter system and did not have safeguard in place to protect moisture from getting inside the control panel. , (2) GEM Mobile did communicate with their technician's the impact of moisture/rain in there igniter system and did not have safeguard in place to protect moisture from getting inside the control panel.
33537	Richmond, CA - Refinery	3/14/2012 7:30:00 PM	Closed	Loss	MP-2511 seal loss	MP-2511 seal loss, cause the SRU scur water concentrator to shut down. MP-2511 is the only feed pump. Spare is available to replace only pump in plant.	Equipment/Property Damage	(1) Root Cause Analysis "Five Why" Fact Sheet Incident Title: Incident Description: MP-2511 seal loss, caused the SRU sour water concentrator to shut down. MP-2511 is the only feed pump. Facilitator: JJ Allen Five Why Questions Verification 1. Why did the "above" happen? Seal using excessive seal oil. Operators got a low level alarm in the control house and found that there was excessive seal oil leakage from the seal to the atmosphere. Operations 2. Why did the "above" happen? Atmospheric seal side faces opened up allowing the excessive seal oil leakage. JJ Allen 3. Why did the "above" happen? Seal found to have heavy fouling due to contaminated seal oil. JJ Allen 4. Why did the "above" happen? Contamination caused by process carryover into the seal oil system and or contaminated seal oil added to the seal oil tank. JJ Allen 5. Why did the "above" happen? 6. Why did the "above" happen? 7. Why did the "above" happen? Root Cause(s): What were the Root Causes of your failure? 1 Contamination in the seal oil system caused the seal components to fail allowing excessive seal oil leakage. Basic Cause Category: 2 Basic Cause Category: 3 Basic Cause Category:

33614	Richmond, CA - Refinery	3/15/2012 12:25:00 PM	Closed	Near Loss	Company car illegally parked in front of cafeteria	Company car Lic #5JUJ888 parked in red zone/crosswalk in front of cafeteria	NL-Lessons Learned	
33627	Richmond, CA - Refinery	3/9/2012 4:00:00 PM	Closed	Loss	New workbooks stolen from foot of locker	Boots had be purchased using Employee ledger from Boot Store earlier in the day. Boots had been stored (in box) outside locker in readiness to wear for work. When employee returned at end of work day to change and take boots home, found boots missing.	Equipment/Property Damage	(1) Same action in past had no negative consequences
33631	Richmond, CA - Refinery	3/14/2012 12:00:00 AM	Closed	Near Loss	Water build up on T-634 (Pan Roof Tank) caused roof to tilt.	Water build up on the roof of T-634 (pan roof tank) caused the roof to tilt. The water level near the gauge well was 2'-3' deep. Roof drain was plugged not allowing water to drain properly.	NL-Business Process - Business Process	(1) Operator not trained on BAAQMD requirement to visually check all pan roof tanks during each day that more than 1" of water falls on the refinery.
33659	Richmond, CA - Refinery	3/16/2012 2:00:00 AM	Closed	Near Loss	Contractor locks (2) needed to be removed from Loto Box by Chevron Fire.	2 contractor locks (JVI & Dresser Rand) needed to be cut of Loto Box #2025 at the TG-800 shut down at Cogen. This needed to be done to crack in steam for the turbine case heating (8 hrs) before start-up later in the day. Dresser Rand was completed with their job & forgot to remove their lock. JVI had Matrix finish their work on Thursday night which was completed. Matrix did not have a JVI key to remove the lock. Their jobs were confirmed completed by the S/D operator, Chevron maintenance shutdown supervisor, & myself.	NL-Business Process - Business Process	(1) 5 Why for STG 800 investigation # 21117 What happened: After finishing boundary blind removal for the STG 800 turnaround, warming up the unit was delayed due to mechanics locks from two different companies were left on the LOTO box from the day shift crews. The blinds were complete at approximately 3 am. After a safety assessment of the system(s) downstream of the blind(s), the locks were then cut off, and Operations started warm up of the turbine. All this occurred prior to dayshift crews returning the next day shift. Notes: Day shift piping contractor stayed overtime to remove the blinds that night, but did not complete by time they left at around 10 pm. Assistance was requested and received from the reactor SD nightshift crew. The STG 800 turnaround was planned and executed as a day shift only event. Nightshift activities were arranged for one night only borrowing crews from the other turnaround event. Due to this being a small, low complexity SD, with a limited number of people and a schedule of day shift only, a standard LOTO process was used. This is opposed to using a Supervisor controlled "shutdown" LOTO. Both LOTO variants are acceptable, however, turnaround LOTO is preferred for around the clock, large shutdowns with greater numbers of mechanical groups and individual mechanics. This is to avoid the cumbersome constant changing of locks between shifts a standard LOTO would require on Major turnarounds. This could have been a potential factor with the situation that occurred. It could also be argued that this effect could have been easily nullified by communication and presence of mind of remembering to remove the locks for the known (projected) time for system warm up. 1. Why: Did the delay occur? a. Because the locks were left on the LOTO box. 2. Why: Did the locks get left on the LOTO box? a. The companies' leads that own the locks overlooked removal for system warm up. 3. Why: Did the contractor leads overlook the lock removal?
33712	Richmond, CA - Refinery	2/29/2012 5:00:00 PM	Closed	Near Loss	RLOP Compliance (CME) Report was inadvertently not mailed by the due date.	The RLOP Compliance Report (CME) is required to be submitted to the BAAQMD within 30 days after the end of the month, per Permit Condition #469 in the Title V permit. This is an administative deviation of the Title V permit. The folder containing this report to be sent was inadertently placed with other folders containing reports that had already been processed for certified mailing. The omission was not discovered until reports were being scanned/copied for filing.	NL-Regulatory Compliance - Non Compliance - Air	(1) 5-Why Near loss- Report was late. Why- Report was misplaced. Why- There is no tracking system for report status, and no distinct locations for completed folders vs folders to be mailed, including folders due that day.
33760	Richmond, CA - Refinery	3/17/2012 9:45:00 AM	Closed	Near Loss	Failure of the Dispatch Radio Console	At appr. 8:00 and 9:45 the Radio console in Dispatch had a system failure for appr. 5 minutes each time. When the system failed Dispatch lost 1-D speckers, GLM's monitoring, emergency button notification, Community Warning System notification, In house emergency tonedown and RFD/RPD communications. The Refinery portable radio system did not lose pakset to pakset communication however as mentioned above the emergency buttons on the paksets would not notify Dispatch during the system failure. After each failure the system reset on it's own.	NL-Equipment/Property Damage - General Liability	
	Richmond, CA -	3/14/2012 12:00:00		Near	P&MM Storehouse Main	Storehouse notified Procurement Ops Supervisor that the main roll-up door was not working (motor would not work to raise door). Procurement Ops Supervisor put in an emergency request for repair with the Facility services was called out to assess repairs. Had vendor #1 come out and assess the situation. Service Order was put in place using the replacement of a similar door as a worse case scenario and basis of estimate for approximately $14K. Vendor #1 was recommended by Facility Manager and endorsed by Procurement Ops Manager. Based on this endorsement Facility Manager proceeded with Vendor #1 based on the urgency of the repair. Storehouse employee suggested we call vendor #2 (whose nameplate decal was on door) for quote. Verbal quote came in at approx. $2100. Day after reporting door wouldn't work, vendor 1 submitted a written quote of approx $5600. Facility Services rep advised vendor 1 to proceed with getting permits and scheduling	NL-Business Process	

33844	Refinery	AM	Closed	Loss	Roll-Up Door Repair	repair work. Vendor 2 is a local Richmond business.	- Business Process	
33885	Richmond, CA - Refinery	3/16/2012 7:00:00 PM	Closed	Near Loss	Electrically racked in P1129A	P1129A was electrically racked out. P1119 had high amp reading P1129A is spare pump for P1119 and P1129. In the event of loss of P1119, Result would be cut feed to 4Crude Unit loss of jet production to JHT.	NL-Business Process - Business Process	(1) Communication of specific condition. Tag not updated that there was a ground fault after troubleshooting was completed.
33886	Richmond, CA - Refinery	3/19/2012 10:00:00 PM	Closed	Loss	PUL PRD found releaving into 21 station sump	Board operator informed the Head operator he had received a repeat message for high sump alarm at 21 sta. Operator confirmed filling of the sump and traced out low relieving sound to a PRD on the PUL line and found it had been relieving to the sump. After blocking it in and comparing the PRD to others in the station which are set at between 230 and 275 it took like this setting of 100 PSI may have been set too low. It was installed weeks earlier to protect the line and filter pots at the Sales Racks when the line is isolated above 21 stations for work.	Operational Process/Procedures	(1) Failure to comply with the MOC process.
33907	Richmond, CA - Refinery	3/20/2012 2:00:00 AM	Closed	Near Loss	Seal leak on P-283 (V-283 relief drum pump).	Relief pump P-283 seal started leaking, Ops quickly found the source. Pump was isolated and spare pump put in service. Are was washed down and area cleaned up.	NL-Environmental - Operational Leak	(1) seal leak on P-283
33931	Richmond, CA - Refinery	3/12/2012 12:30:00 PM	Closed	Near Loss	MCP Shot Circuit Protection Setting for MP-8 was set too high.	The MCP (Motor Circuit Protector) for MP-8 was set too high during installation to properly protect the motor. The MCP was found to be left in the "G" setting, which corresponds to a trip value of 1350 Amps. The locked rotor current for this motor is 382 Amps, while the full load current is 65 Amps. With the short circuit protection set this high, there is the risk of damaging the both the motor and motor starter in a fault condition. There is also the risk of un-coordinated protection, causing an MCC trip due to a single motor fault.	NL-Equipment/Property Damage - Equipment Damage	(1) NLI: Potential Damage to MP-8. Why? Motor MCP was set too high. Why? Motor MCP setting was not included in EWO. Why? MCP setting was not determined in a coordination study. Why? Engineer did not know that coordination studies were required for smaller 480V motor installations. Why? Lack of Skill or Knowledge
33933	Richmond, CA - Refinery	2/28/2012 7:00:00 AM	Closed	Near Loss	Green Card. Further cleanup of vegetation needed. Location: LSFO - SW 563/564	Green Card. Traffic visibility obstruction onto Channel St from entrance to Switchgear area from traffic coming from the south. Removed tree vegetation with approval of Chevron Permit Contract Rep; further cleanup of vegetation is needed. Location: LSFO - Switchgear 563/564, West by D&R Flare, LPO Solution # 126206	NL-Lessons Learned	
33939	Richmond, CA - Refinery	2/1/2012 12:00:00 AM	Investigation In Progress	Near Loss	Contract company AC3 invoiced incorrect mechanic labor rate.	CVX company rep called a Procurement category specialist to verify a mechanic labor rate for contract company AC3. The contractor was invoicing for a rate of $95.00/Hr. However, after the category specialist reviewed the contract it was found that the current contract labor rate for a mechanic with AC3 was $70.50 / hr.	NL-Business Process - Business Process	(1) Contractor did not adhere to their contract labor rates. (2) Lack of skill or knowledge by supervisor for not following contractor compensation schedule
33961	Richmond, CA - Refinery	3/20/2012 12:22:00 PM	Closed	Loss	K-1070 shutdown on false low pressure suction alarm resulting in the trip of the FCC totalizer.	K-1070 was running with K-1060 on standby. K-1070 shut down on a low pressure suction alarm 65PL050B. It appears this was a faulting pressure indication. The FCC totalizer tripped with no visible flame.	Environmental	(1) Why did K-1070 trip off line Because suction pressure dropped below 3 inch, which is the S/D point Why did the suction pressure drop below 3 inches Because PT-1050B drifted from 8 inches to 2 inches. Why did PT-1050B drift low Because it and a undetermined failure.
33980	Richmond, CA - Refinery	3/20/2012 12:00:00 AM	Investigation In Progress	Near Loss	Light off torch and tank exposed to flame from training prop	Experienced fire fighter was moving the propane torch tank toward the prop for ignition when the vapors from the prop ignited due to a change in wind direction	NL-Equipment/Property Damage - Equipment Damage	
34059	Richmond, CA - Refinery	3/21/2012 12:00:00 AM	Closed	Loss	Extra Work submittal for 2SRU T/A: GHG meter inspections	The inspection of venturi flow element 22FE300 during the 2SRU T/A was submitted as late, extra work. This item is being submitted as extra work because the CARB AB32 regulations were finalized in Dec 2011 which was after the Aug 2011 scope input freeze date. Doing this work is required as part of our mandatory reporting of Greenhouse Gas and will help to ensure we receive a positive verification from the auditors. Positive verification is critical to our ability to participate in Cap and Trade.	Business Process	(1) The GHG meter inspections were submitted late to the 2SRU work scope Why: The regulation change requiring this work to be completed was released in Dec 2011 which was after the scope input freeze date of Aug 2011
34082	Richmond, CA - Refinery	3/21/2012 12:00:00 AM	Closed	Near Loss	Refinery Home page down because Database saver down (ric841ntg3db3)	Help Desk received phone calls that the Refinery Home page was not coming up. After investigation by IT group, it was determined that one of our main database servers, ric841ntg3db3 was down. Server was brought back online after 2 hours and that fixed the problem. Loss affected the ability for people to access the Richmond Refinery Website. This site is used by the refinery personnel to access local informaiton and links. We experience around 300-500 hits on the website during this timeframe so estimate that approx. 500 people were affected. Workaround would be that other hyperlinks were available outside the main refinery webpage. Took 3 IT people about 1.5 hours to determine issue and power back on server. Estimated cost to return to business would be $500 back on their hourly labor costs.	NL-Business Process - Business Interruption	(1) Richmond Refinery Webpage became unavailable when SQL Server database was unavailable. WHY? Server that runs the SQL Server Database was powered down accidently during electrical work being done in the Data Center. WHY? Document being referenced was mis-read and person performing electrical work did not realize that the server was connected and in use. WHY? Usually a team of two perform this work and one team member will verify the work and documentation. Second team member was unavailable due to a last minute unrelated request and rather than wait for the person, work proceeded. WHY? this type of work had not created a problem in the past., (2) Refinery Webpage should not be tied to SQL Server database being available so that it can function.
34085	Richmond, CA - Refinery	3/21/2012 1:35:00 PM	Closed	Loss	Brand, EE struck on head	Brand,EE was in the process of erecting a scaffold, and due to tight quarters connected a 1 cup extension to the 10' leg before installation.EE then slabbed the 10' leg with the 1 cup extension at the end of the leg, but the two pieces weren't locked together. The extension became separated from the leg due to three overhead conduits,and fell 5 to 6 ft striking the EE on the left side of his hard hat and head below the ear. The extension is 2" dia pipe, 6 1/2" long and weighing 3 1/2 lbs	Injury/Illness	(1) Installed two connected leg sections without locking them together

34093	Richmond, CA - Refinery	3/16/2012 8:00:00 AM	Closed	Near Loss	TP-135 PSV lifted before set pressure	Ops started TP-135 after maintenance was completed. The pump would not come up to normal operating discharge pressure. And the pump low pressure alarm would not clear. IMI was called to check the pump. IMI noticed the PSV on the pump discharge had lifted diverting flow to the reservoir. The pump was shutdown and restarted. The PSV reset the pump was left on line.One hour later the low pressure alarm sounded on the DCS Ops found the PSV had lifted.	NL-Equipment/Property Damage - Equipment Damage	(1) PSV lifted before set pressure
34095	Richmond, CA - Refinery	3/21/2012 9:20:00 AM	Closed	Loss	Technician smelled odor while voc monitoring.	Technician was monitoring VOC at South Isomax Flare Gas Recovery Unit (10.5 plant). He was on the first deck of K-1060 for about three minutes when he smelled light H2S. After a few seconds the odor got stronger so the Technician then got down from the deck and called his Supervisor. While waiting for supervisor the Technician felt sick e.g. spitting and the dry heaves. The supervisor arrived at the site and took technician into the control house and notified operations of incident. Technician told operator where he was at when he notice the odor. Operators then went out to unit to try to detect H2S at 10.5 plant. The technicians personal H2S monitor did not go off and the operators who went out to detect H2S didn't not get any readings. Operations called Chevron's EMT to the control house to assess Technician and determined vital signs were okay. Technician was then taken to the Chevron clinic for further evaluation. The clinic had the same findings on technicians vital signs. After lunch the Technician went back to clinic and said he felt a lot better but had a slight head ache. Technician went back to work after he went to the clinic.	Injury/Illness	(1) Technician smelled H2S and made him nauseous.
34111	Richmond, CA - Refinery	3/21/2012 4:00:00 PM	Closed	Loss	During training a firefighter felt discomfort on both knees. Firefighter was one of the instructors for structure firefighting.	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT.Firefighter had very light burns to the top of both knees. More info to follow by M Ferrer	Injury/Illness	(1) Body position/knees were not rotated frequently enough during structure fire to recreate air gaps between skin and clothing, (2) Firefighter was aware of potential hotter areas of room and where to position himself but was focused on monitoring students as a safety officer
34111	Richmond, CA - Refinery	3/21/2012 4:00:00 PM	Closed	Loss	During training a firefighter felt discomfort on both knees. Firefighter was one of the instructors for structure firefighting.	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT.Firefighter had very light burns to the top of both knees. More info to follow by M Ferrer	NL-Injury/Illness - Employee Injury	(1) Body position/knees were not rotated frequently enough during structure fire to recreate air gaps between skin and clothing, (2) Firefighter was aware of potential hotter areas of room and where to position himself but was focused on monitoring students as a safety officer
34129	Richmond, CA - Refinery	3/21/2012 5:30:00 PM	Closed	Near Loss	Operators personal H2S monitor activated during rounds	The JHT Operator and a trainee were out in the JHT pulling samples for the C-240 out. Standing Between the E248's and P-247A when both noticed personal H2S monitors were going off. They immediately exited the plant and notified the HO and STL of the alarm and the location. The area H2S alarms were not activated.	NL-Operational Process/Procedures - Safety Systems	
34138	Richmond, CA - Refinery	1/26/2012 12:00:00 AM	Closed	Near Loss	Spare Booster MK-900's motor overheating due to space heaters	An LPO field inspection/audit was conducted on 1/26/2012 at the Hensley St warehouse for the Hydro H2 compressor Spare motor which is being stored for future use if needed. The field inspection/audit was actually being performed on the present condition of the factory crated motor that is designated as a spare motor for any of the Hydro H2 Booster MK-900's. It is standard engineering practice that a stored motor of this size/capacity requires stator space heating to reduce moisture and eliminate potential damage of windings and future motor use. The project team requested the mfg to provide adequate space heating hook-up for such storage. The crated motor arrived with a 120volt cord/cap hook-up even though the stator space heater is designed for a 480volt source due to the large heater demand. The team found this 120volt accomdation rather peculiar and small for such large heating needs and decided to hook up 480volt instead as it was designed for in normal operational use. During the LPO, the observer performed a thorough visual inspection of the crate, the 480volt power connection to the heater junction box that they made, as well as the proper sealing of the entry point of the cord cable leading into the crate. The Observee also performed a hand touch test on the crate and found it to be extremely warm to the touch prompting them to have the crate opened and inspected further. Upon further inspection inside the crate, the observer and observee found that the factory packaging plastic covering of the motor was very soft, varied in appearance, and had a mild burnt plastic smell/odor to it. It was evident to them that the heat generated by the 480volt source was too great for the closed crated package unit and that not allowing for ambient outside air cooling was also a contributing factor.	NL-Equipment/Property Damage - Equipment Damage	(1) Why was the crated box warm to the touch, the factory plastic covering of the motor was very soft and varying in appearance, and having a mild burnt plastic smell/odor to it? The space heating was designed for 480volt power but showed up with 120volt and team decided to hook up 480volt anyways. Why did the team hook up 480volt power instead of factory supplied 120volt? They assumed 120volt power would not be enough heating for such large motor. Why did they assume not enough heating would be produced by 120volt power? They did not factor in the sealed crate container with no ambient air flow to cool it and thought it would require the full 480volt power based on the size of the motor and warehouse ambient conditions. Why did they assume improper heating effects? Lack of skill and knowledge. 1) Project team member thought more heat would be better and applied a higher voltage than recommended why 1? 2) Did not adhere to factory specs calling for 208volt power source and did not calculate effects of 480volt nor consulted factory for potential damage for deviation. why 2? 3) lack of experience on storage of such large magnitude asset and not consulting factory or engineering SME's
								(1) 1. Why? – Internal spring is broken and the bellows is holed through (verified through inspection) 2. Why? – unknown (possibilities below including action items to prove right/wrong) a. Bellows and spring material incompatible with process conditions – materials engineers verified bellows made from adequate material for process conditions b. One time large event (process pressure spike) ruptured bellows and broke the spring – not likely, but cannot verify as there is no pressure gauge that records data on C-140. Trends off of V-141 which is past E-140 condensers shows a time

34245	Richmond, CA - Refinery	3/23/2012 7:00:00 AM	Closed	Loss	The PRD on C-140 (IX-121) has a mechanical issue and is leaking by to relief.	The PRD on C-140 (IX-121) has a mechanical issue and is leaking by to relief. It also seems to have a leak on the relief side of the internals that was leaking to almospere through a wheep hole on the PRD body. To replace the PRD it is going to take a full SDA shutdown.	Environmental	corresponding spike, but it is not abnormal compared to normal pressure changes in V-141. - there is no data indicating unusual pressure spikes or swings in the system c. Continuous PRD use – can cause vibration which could lead to spring and bellows failure. Cannot verify this due to lack of pressure gauge that records data on C-140. Continuous PRD use could definitely lead to the bellows failure even with the LCF grade of Inco 625. LCF has resistance to a small number of high stress cycles, but not necessarily the reverse case (a large number of low stress cycles, such as with chattering or vibrations). Operation of the PRD at a pressure within ~10 percent of the set pressure can cause chattering, which leads to cyclic stresses being imposed on the bellows and eventual failure.
34245	Richmond, CA - Refinery	3/23/2012 7:00:00 AM	Closed	Loss	The PRD on C-140 (IX-121) has a mechanical issue and is leaking by to relief.	The PRD on C-140 (IX-121) has a mechanical issue and is leaking by to relief. It also seems to have a leak on the relief side of the internals that was leaking to almospere through a wheep hole on the PRD body. To replace the PRD it is going to take a full SDA shutdown.	Operational Process/Procedures	(1) 1. Why? – internal spring is broken and the bellows is holed through (verified through inspection) 2. Why? – unknown (possibilities below including action items to prove right/wrong) a. Bellows and spring material incompatible with process conditions – materials engineers verified bellows made from adequate material for process conditions b. One time large event (process pressure spike) ruptured bellows and broke the spring – not likely, but cannot verify as there is no pressure gauge that records data on C-140. Trends off of V-141 which is past E-140 condensers shows a time corresponding spike, but it is not abnormal compared to normal pressure changes in V-141. - there is no data indicating unusual pressure spikes or swings in the system c. Continuous PRD use – can cause vibration which could lead to spring and bellows failure. Cannot verify this due to lack of pressure gauge that records data on C-140. Continuous PRD use could definitely lead to the bellows failure even with the LCF grade of Inco 625. LCF has resistance to a small number of high stress cycles, but not necessarily the reverse case (a large number of low stress cycles, such as with chattering or vibrations). Operation of the PRD at a pressure within ~10 percent of the set pressure can cause chattering, which leads to cyclic stresses being imposed on the bellows and eventual failure.
34284	Richmond, CA - Refinery	3/25/2012 8:20:00 AM	Closed	Near Loss	S-5 Lost security keys after opening 119 gate	While opening 119 gate S-5 left keys in lock and left the area	NL-Regulatory Compliance - Non Compliance	(1) Forgetfulness. Supervisor closed gate that normally closes itself automatically after someone departs. Supervisor had trouble closing Gate. He laid down keys and lock to manually close gate and forgot to re-secure gate with W-lock and left his supervisor's keys attached to the W-lock.
34284	Richmond, CA - Refinery	3/25/2012 8:20:00 AM	Closed	Near Loss	S-5 Lost security keys after opening 119 gate	While opening 119 gate S-5 left keys in lock and left the area	NL-Security - Property Loss or Theft - Physical Property	(1) Forgetfulness. Supervisor closed gate that normally closes itself automatically after someone departs. Supervisor had trouble closing Gate. He laid down keys and lock to manually close gate and forgot to re-secure gate with W-lock and left his supervisor's keys attached to the W-lock.
34285	Richmond, CA - Refinery	3/25/2012 8:10:00 AM	Closed	Near Loss	18.6 KV voltage dip during planned T-2000 S/D.	13.8 kilovolt bus voltage dipped to 12.9 kilovolts during a planned shut down of Train-2000 Cogeneration Unit.	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) Lack of TAP changer understand
34339	Richmond CA - Refinery	3/22/2012 1:15:00 PM	Closed	Loss	Vehicle hit guard rail while backing up.	Vehicle contact with guard rail. While backing up a CVX truck, on a un-named dirt road in the tank field, vehicle contacted guard rail with Right front bumper and plastic trim on the side of bumber/wheel well, forward of front wheel. EE states: "whilst backing, considering the stability of the ground with the recent rain, I backed to a stop. I decided to hug the guard rail more closely. Resuming the back up, I hugged the guard rail so closely that I heard friction. I stopped. The tail to the mid of the truck was clear. The front section appeared clear, so I pulled forward to safely stop and inspect the vehicle, suspecting damage to the undercarriage. I saw scratches on the passenger side protector above front wheell. The guard rail had the same material mirroring the scratch marks. I then reported the mishap to my Supervisor	Transportation	(1) Driver could not see right front side of bumper from driver seat
34343	Richmond CA - Refinery	2/21/2012 9:30:00 AM	Closed	Near Loss	Green Card. A mechanic had no earplugs. Location: TKC R-410/R-411	Green Card. Observed 2 mechanics working on nearby equipment with a steam plum in the same area. One mechanic had earplugs and the other mechanic had none. Location. TKC R-410/R-411	NL-Injury/Illness - Employee Injury	
34345	Richmond, CA - Refinery	2/27/2012 1:47:00 PM	Closed	Near Loss	Green Card. Stop sign knocked over. Location: Corner of Mills/Main St.	Green Card. A stop sign is knocked over. Location: Corner of Mills Street and Main Street.	NL-Transportation - Contractor	
	Richmond, CA -	2/27/2012 1:47:00		Near	Green Card. Stop sign knocked over. Location:	Green Card. A stop sign is knocked over. Location: Corner of Mills Street and	NL-Transportation -	

34345	Refinery	PM	Closed	Loss	Corner of Mills/Main St	Main Street.	Company	
34347	Richmond, CA - Refinery	2/27/2012 1:30:00 PM	Closed	Near Loss	Green Card. A big overhead steam leak needs to be fixed. Location: SISO - W.of V-830	Green Card. A big overhead steam leak needs to be fixed because a lot of hot condensate falls down on walkway and it creates a lake. Location: S.Isomax, West of V-830	NL-Injury/Illness - Contractor Injury	
34347	Richmond, CA - Refinery	2/27/2012 1:30:00 PM	Closed	Near Loss	Green Card. A big overhead steam leak needs to be fixed. Location: SISO - W.of V-830	Green Card. A big overhead steam leak needs to be fixed because a lot of hot condensate falls down on walkway and it creates a lake. Location: S.Isomax, West of V-830	NL-Injury/Illness - Employee Injury	
34350	Richmond, CA - Refinery	2/27/2012 7:15:00 AM	Closed	Near Loss	Green Card. A steam leak needs to be repaired. Location. SISO - TP360A	Green Card. As I walk out of Control Room and try to walk to the job site, I could not walk in the walkway because a steam leak makes it hard to see walkway. Location: S. Isomax - TP-360A	NL-Injury/Illness - Contractor Injury	
34352	Richmond, CA - Refinery	2/27/2012 1:00:00 PM	Closed	Near Loss	Green Card. Lots of steam leaks in area. Location: SISO - D252C	Green Card. An employee came out to job site with lots of steam leaks in area and very loud noise without wearing earplugs. Location: S. Isomax D-252C	NL-Injury/Illness - Employee Injury	
34354	Richmond, CA - Refinery	3/1/2012 9:00:00 AM	Closed	Near Loss	Green Card. A very bad steam leak under the deck. Location: SISO K-940	Green Card. A very bad steam leak under the deck on K-940 needs to be fixed because it is hard to walk on the deck while steam blows everywhere. Location: S. Isomax K-940	NL-Injury/Illness - Contractor Injury	
34356	Richmond, CA - Refinery	3/2/2012 12:00:00 PM	Closed	Near Loss	Green Card. A big steam leak on stairway. Location: SISO - behind NISO control rm	Green Card. A big steam leak on stairway needs to be fixed soon because it is in the walkway and someone can get burned by hot condensate falling on their head. Location: S. Isomax , behind the NISO Control Room.	NL-Injury/Illness - Employee Injury	
34357	Richmond, CA - Refinery	3/6/2012 9:00:00 AM	Closed	Near Loss	Green Card. A drain next to V-461 is plugged Location: D&R NHT V-461	Green Card. A drain next to V-461 is plugged and needs to be unplugged because the area and walkways are covered with water.	NL-Lessons Learned	
34359	Richmond, CA - Refinery	3/6/2012 2:30:00 PM	Closed	Near Loss	Green Card. A check valve leak behind insulation. Location: D&R NHT MP-495	Green Card. MP-495 - A check valve leak behind insulation. Cannot see what side it's leaking from, it might be an outlet needs to be fixed. Lots of condensate on walkway. Location: D&R NHT MP-495	NL-Environmental - Operational Leak	
34360	Richmond, CA - Refinery	3/7/2012 2:30:00 PM	Closed	Near Loss	Green Card. A steam leak. Location: SISO - K-950	Green Card. A 3/4 tubing came off and leaking out a lot of steam. It's under 2 steps stair just North of K-950. Location: S. Isomax , North of K-950	NL-Injury/Illness - Contractor Injury	
34362	Richmond, CA - Refinery	3/7/2012 12:00:00 PM	Closed	Near Loss	Green Card. Steam leak. Location: SISO - E-944	Green Card. Lube oil is leaking out at the 3/4 nipple and 1/2 unions and is leaking out to walkways. Location: S. Isomax E-944	NL-Environmental - Operational Leak	
34363	Richmond, CA - Refinery	3/8/2012 7:15:00 AM	Closed	Near Loss	Green Card. Leak on smal manway. Location: D&R NHT V-457	Green Card. Found a leak on small manway and it looks like we need to change out the gasket. Location: D&R NHT V-457	NL-Environmental - Operational Leak	
34365	Richmond, CA - Refinery	3/12/2012 8:30:00 AM	Closed	Near Loss	Green Card. An overhead steam leak. Location: SISO K-960	Green Card. An overhead steam leak behind insulation needs to be fixed because a lot of condensate is falling down in walkways. Location: S. Isomax K-960	NL-Injury/Illness - Employee Injury	
34367	Richmond, CA - Refinery	3/12/2012 7:00:00 AM	Closed	Near Loss	Green Card. A steam leak near walkway. Location: SISO K-910	Green Card. The washdown station at K-910 needs to be fixed because of a steam leak near walkway. It looks very unsafe with tight walkways. Location: S. Isomax K-910	NL-Injury/Illness - Contractor Injury	
34368	Richmond, CA - Refinery	3/13/2012 5:00:00 AM	Closed	Near Loss	Green Card. Posted signs blown over. Location: Gate 91 parking lot	Green Card. There were a lot of posted signs (wind, speed, direction, no parking signs) blown over from the wind. Location: Gate 91 Parking Lot	NL-Transportation - Contractor	
34369	Richmond, CA - Refinery	3/14/2012 8:00:00 AM	Closed	Near Loss	Green Card. A stop sign is down. Location: Mill St/Zerolene St.	Green Card. A stop sign is down again at Mill St. and Zerolene St.	NL-Transportation - Company	
34369	Richmond, CA - Refinery	3/14/2012 8:00:00 AM	Closed	Near Loss	Green Card. A stop sign is down. Location: Mill St/Zerolene St.	Green Card. A stop sign is down again at Mill St. and Zerolene St.	NL-Transportation - Contractor	
34370	Richmond, CA - Refinery	3/14/2012 10:00:00 AM	Closed	Near Loss	Green Card. Bubbles coming up from ground. Location: Gate 91, Timec/Safety Trailer	Green Card. Bubbles are coming up from the ground between Timec Tool Trailer and Safety Gear Trailer. Location: Gate 91	NL-Lessons Learned	
34371	Richmond, CA - Refinery	3/14/2012 9:15:00 AM	Closed	Near Loss	Green Card. A stop sign is down. Location: Bridge 166	Green Card. A stop sign is down at Bridge 166. The wind blew it down.	NL-Transportation - Company	
34371	Richmond, CA - Refinery	3/14/2012 9:15:00 AM	Closed	Near Loss	Green Card. A stop sign is down. Location: Bridge 166	Green Card. A stop sign is down at Bridge 166. The wind blew it down.	NL-Transportation - Contractor	

34372	Richmond, CA - Refinery	3/18/2012 7:30:00 AM	Closed	Near Loss	Green Card. Banding around TK3102 has come apart. Location: 3102 Tank	Green Card. The banding on TK3102 has come apart above sampling platform. It needs to be repaired. Location: Tank Field Bts, 3102 Tank	NL-Lessons Learned	
34374	Richmond, CA - Refinery	3/22/2012 2:30:00 PM	Closed	Near Loss	Green Card. Instrumentation line broke off. Location: 4 Crude, Next to E-1165A	Green Card. 1/2 Instrumentation line broke off hanger. It's laying in pipeway connected at other end causing a tripping hazard and head knocker. Location: 4 Crude, Next to E-1165A	NL-Injury/Illness - Contractor Injury	
34507	Richmond, CA - Refinery	3/27/2012 11:00:00 AM	Closed	Loss	Boiler # 5 tripped off-line and 105MLB/H of steam was loss..	Boiler # 5 tripped off-line and 105MLB/H of steam was loss . Mistras (X-ray) crew was scheduled to x-ray F/G pipping at #5 Boiler. The switch labeled "Boiler Bpass" was activated and not the Flame scanner by pass switch. Mistras set up and proceeded to x-ray and when they started, #5 boiler tripped off-line.	Operational Process/Procedures	(1) Switchs on BMSS Panel labeling caused confusion., (2) Check list PPLC4526 should be a procedure for critical tasks.
34520	Richmond, CA - Refinery	3/8/2012 12:00:00 PM	Closed	Loss	Delays in execution of TP-264 work	1.Week of 2/27 scheduled TP-264 for install in the field with pickers for Wed., however not set to be complete at the shop till Wed. afternoon. 2.Pickers schedule was full on Thursday	Business Process	(1) Pickers scheduled for Wed. however turbine not scheduled to be complete at shop till Wed. Afternoon. a. Scheduler scheduled the work believing that the job would be done at noon Wed. and that was the only time the picker would be available. b. Shop initially advertized noon as a time to be complete c. Scheduler did not receive information from shop that the turbine would not be complete til Wed. end of shift. use of communication on ETC when not all of the information had been analyzed to determine an accurate ETC
34594	Richmond, CA - Refinery	3/26/2012 3:45:00 PM	Closed	Near Loss	Transfield, accidental discharge of air horn	Transfield, EE while climbing a ladder, brushed an obstruction with his back pack activating his air horn. This caused a cold sensation to a spot on his back.	NL-Injury/Illness - Contractor Injury	
34645	Richmond, CA - Refinery	3/27/2012 10:00:00 AM	Closed	Loss	The access key to the barrel lock on top of the 124 control box broke off in the lock. This control box is the unit which houses the motor assembly for the inbound vehicle gate #124.	The access key to the barrel lock on top of the 124 control box broke off in the lock. This control box is the unit which houses the motor assembly for the inbound vehicle gate #124.	Equipment/Property Damage	(1) The key broke off into the lock because the lock was a little sticky. The lock was sticky because it hasnt been maintained in a while. It hasnt been maintained because it is not used often.
34654	Richmond, CA - Refinery	3/23/2012 8:00:00 AM	Closed	Loss	Comapny Vehicle damage/stolen laptop and phone	Company vehicle was parked off site. Rear passenger window and company laptop computer and phone were stolen.	Equipment/Property Damage	(1) Public Affairs team member left company laptop and IPhone on the seat of his company-issued car while he went into a store. He judged that since he was going to be in the store for less than 15 minutes, that it was a busy intersection and early in the morning, that the risk of theft was low.
34731	Richmond, CA - Refinery	3/28/2012 9:30:00 AM	Closed	Near Loss	Green Card. Delivery trucks making dangerous turns. Location: Intersection of Richmond Pkwy/Gate 31	Green Card. Chevron delivery trucks traveling down Richmond Pkwy make a wide right turn as they enter the street leading to Gate 31. Both times I witnessed, scared for my life, as the trucks missed hitting and injuring/killing us as we were traveling in a Chevron car. This is a major safety issue which sooner or later might injure or kill someone. Location: Intersection of Richmond Pkwy/Gate 31	NL-Transportation - Company	
34746	Richmond, CA - Refinery	3/29/2012 6:30:00 AM	Closed	Near Loss	Tipped over small container of Sulfuric Acid	While operator was performing the task of changing out the bottle for the temporary sulfuric acid drainage system, the container tipped over and spilled ~ 1 cup of sulfuric acid into the drainage system.	NL-Environmental - Spill	(1) Design
	Richmond, CA -	3/29/2012 9:00:00		Near	BPR needed additional	BPR required special power, and it was not adequately conveyed to the Planning and Scheduling group when the generators were ordered and permits pulled. Power was procured at last moment, but possibility of the necessity of rescheduling the BPR if power was not available and all the costs associated		(1) 5 Why Investigation The crew was asked to install equipment for the Business Plan Rollout that was not adequate for the needs of the vendor. 1.Crew installed the electrical equipment request on the work order, the request was incorrect. 2.Why did 1 happen? Work request did not include the information from vendor on power needs for event sent to event coordinator. 3. Why did 2 happen? The event coordinator call the electric shop supervisor to discuss power to the café, he thought the power needs would be the same as other event, because no other information was provided to him Root Cause There was not adequate information supplied to the planners, or the crews to properly plan work, get the necessary permits, and install the equipment needed. , (2) 5 Why Investigation The City inspector shutdown the power to the Business Plan Rollout, because the equipment did not match the Sketch on the permit request and the wire size the vendor supplied was too small for the generator was not protected by the generators main breaker 1. The wire that the vendor required for their equipment was too small for the main breaker on the larger size generator, and the crew did not supply a protective device between the generator breaker and the vendor's wire. 2. Why did 1 happen? The crew did not have the equipment to on site to protect the wire Root Cause The crew did not install equipment to protect the wire, required by code, and crew did not us their pause work to

34764	Refinery	AM	Closed	Loss	power	constituted the near-loss	NL-Lessons Learned	aquire correct equipment
34773	Richmond, CA - Refinery	3/29/2012 11:00:00 AM	Closed	Near Loss	Green Card. EE discovered a can of leaking denatured alcohol. Location: Electric Shop	Green Card. Employee discovered a one gallon can of denatured alcohol in the point-of-use area of the cage which had been severely crushed and was leaking. The can appears to have been crushed during shipment. Leaking alcohol presents a possible fire hazard. Location: Electric Shop	NL-Environmental - Spill	
34779	Richmond, CA - Refinery	3/29/2012 11:45:00 AM	Closed	Near Loss	H2S Exposure, unknown source. (14 ppm exposure)	While working in a shallow excavation, a workers personal H2S monitor alarmed.	NL-Injury/Illness - Contractor Injury	(1) H2S release
34779	Richmond, CA - Refinery	3/29/2012 11:45:00 AM	Closed	Near Loss	H2S Exposure, unknown source. (14 ppm exposure)	While working in a shallow excavation, a workers personal H2S monitor alarmed.	NL-Environmental - Release	(1) H2S release
34833	Richmond, CA - Refinery	3/21/2012 12:00:00 AM	Closed	Near Loss	Private Data Left in Common Conference Room	Private data from a management meeting was placed on chair next to computer/presenter table. Was not collected upon leaving meeting. Data was discovered on 3/26 and returned to owner.	NL-Business Process - Business Process	(1) FIVE WHY'S 1. Why did "above" happen? Verification individual did not review workspace appropriately and thoroughly before leaving the conference room. 2. Why did "1" happen? Individual reviewed workspace and conference table before leaving but did not look in chair behind where sitting as chair is not normally used to hold data. 3. Why did "2" happen? Used chair to hold slides as workspace where computer was did not allow enough room to hold required materials and allow space to take notes. 4. Why did "3" happen? First time in this conference room conducting this type of meeting where taking notes, actions, etc is required. Normally in 316 where workspace is adequate at computer desk. 5. Why did "4" happen? Awareness when placing the documents on the chair that there was risk of forgetting them since not part of normal process. Thought to make a note to remind myself but did not..proceeded with meeting believing I would not forget. ROOT CAUSE: What was the Root Cause of your incident? Recognized risk, thought about actions to remove risk but did not act upon it. LPS Factor: B
34860	Richmond, CA - Refinery	3/30/2012 8:30:00 AM	Closed	Near Loss	Unscheduled delivery of exchanger bundle	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT.Unscheduled delivery of exchanger bundle on Friday when limited equipment and staff are available to support. So there was not appropriate personnel and equipment ready to offload it. The bundle was offloaded using a forklift. Bundle was approximately 14000 lbs. and valued at over $200,000. Ordinarily, a crane and rigging are involved in the offloading of material of this nature.	NL-Business Process - Business Process	(1) Unscheduled delivery of Exchanger Bundle by outside company, (2) Some employees used stop work authority because they were unaware that 10-Ton Forklift Can be Used to Safely Unload Bundle
34860	Richmond, CA - Refinery	3/30/2012 8:30:00 AM	Closed	Near Loss	Unscheduled delivery of exchanger bundle	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT.Unscheduled delivery of exchanger bundle on Friday when limited equipment and staff are available to support. So there was not appropriate personnel and equipment ready to offload it. The bundle was offloaded using a forklift. Bundle was approximately 14000 lbs. and valued at over $200,000. Ordinarily, a crane and rigging are involved in the offloading of material of this nature.	NL-Business Process - Abnormal Freight	(1) Unscheduled delivery of Exchanger Bundle by outside company, (2) Some employees used stop work authority because they were unaware that 10-Ton Forklift Can be Used to Safely Unload Bundle
34888	Richmond, CA - Refinery	3/31/2012 2:30:00 AM	Closed	Loss	During start up of C-100 Module, lifted PRD safety.	Relief for C-140 had been replaced While preparing to startup C-100 Mod., the PRD start lifting again and some leakage from the bellows was observed.	Operational Process/Procedures	(1) Overpressured C140 lifted PRD -- bellows failed Why -- Increasing pressure in C140 Why -- Increasing pressure on C140 was due to 2 plugged passes on E-140 Why -- modified startup procedure called for not flushing system with DAO to facilitate a quicker startup after PSV replacedment. , (2) Possible N2 purge left in to, but looking at trends (attached to incident checklist) pressure had dropped to 6.8 PSI prior to starting DAO from C130 to C140. If N2 was left in it could have only been a slight purge. Need to be 100% sure step in procedure is complete before signing off.
34888	Richmond, CA - Refinery	3/31/2012 2:30:00 AM	Closed	Loss	During start up of C-100 Module, lifted PRD safety.	Relief for C-140 had been replaced While preparing to startup C-100 Mod., the PRD start lifting again and some leakage from the bellows was observed.	Environmental	(1) Overpressured C140 lifted PRD -- bellows failed Why -- Increasing pressure in C140 Why -- Increasing pressure on C140 was due to 2 plugged passes on E-140 Why -- modified startup procedure called for not flushing system with DAO to facilitate a quicker startup after PSV replacedment. , (2) Possible N2 purge left in to, but looking at trends (attached to incident checklist) pressure had dropped to 6.8 PSI prior to starting DAO from C130 to C140. If N2 was left in it could have only been a slight purge. Need to be 100% sure step in procedure is complete before signing off.
	Richmond,	4/1/2012				At 3:50 FCC totalizer trip at 208SCF.This was due to Feed in On SDA module. 30 mins after feed in pressure increased in C-140. To prevent a PSV lifting. The outside operator called in to say he was opening the PSV bypass. The PSV bypass was open and pressure was turned at 58 lbs. The safety lifts at 65Lbs. A second compressor was started but was not quick enough to turn the pressure and prevent the trip. Further investigation of the problem Found 2		(1) Fcc totalizer trippeddo to flow from C-140 PSV bypass during SDA 100 module startup. Why was PSV IBypass opened? Psv Bypass was opened due to increasing pressure on C-140 . Why was there increasing pressure On C-140? Increasing pressure on C-140 was due to 2 plugged passes on E-140. Why were there 2 pluged passes on E-140?

34932	CA - Refinery	3:00:00 PM	Closed	Loss	FCC totalizer trip on SDA 100 module startup	passes of E-140's were plugged. These fin fan exchangers Control C-140 pressure and were flushed the night before.	Operational Process/Procedures	Modified Startup proceedure called for not flushing system with DAO to facilitate a quicker starup after PSV replacement.
35017	Richmond, CA - Refinery	3/26/2012 9:00:00 AM	Closed	Near Loss	Green Card. Blind corner while walking. Location: Admin Bldg	Green Card. As I was approaching a sharp corner on the second floor of the Admin bldg, I heard footsteps approaching. I slowed down to ensure I would not run into the approaching person. The person rounded the corner with a full cup of coffee in hand, saw me and stopped quickly. A large portion of the coffee was spilled, luckily, not on either one of us.	NL-Lessons Learned	
35022	Richmond, CA - Refinery	4/2/2012 11:15:00 AM	Closed	Loss	K-920 Unplanad shutdown	During project to install trabon oil system the contractor electricians inadvertently turned a lever causing the compressor to shut down. The electricians thought the lever was the handle to open the control box.	Operational Process/Procedures	(1) K-920 shut down when the contracted electricians opened the back left door of the control panel. This caused a interruption in control power which tripedlopened the breaker/starter. WHY The control panels have a very old system consisting of loose wires and electrical contacts. WHY. They are not presently included in a PM program. WHY. This kind of interruption was not anticipated before. WHY. Work direction had been handled this way in the past and no incident had occurred. There was a verbal request to not work in the panels until a cutover was planed. This was a precaution to avoid opening of the panels. The request was not put in the job scope or work order.
35086	Richmond, CA - Refinery	4/3/2012 1:50:00 AM	Closed	Near Loss	Severe water hammer on 15 lb. steam line inside #1 Power Plant	The 15 lb. steam header (approx 100') from #1 & #2 flash tanks and atmospheric tanks was moved vertically approx 4 - 6 inched & horizontally approx. 6 - 8 inches due to severe water hammer.	NL-Business Process - Business Process	(1) Steam traps are left cold if not discovered by operators. The list of cold traps is not resolved unless a Maximo Work Request is initiated. In most cases we only resolve the top 20% of those that are bad order.
35073	Richmond, CA - Refinery	4/2/2012 6:00:00 PM	Closed	Loss	Pipelines at 21 Pump Station shutdown due to manpower shortage	The pipelines at 21 Pump Station (BAPL & KM3) were shutdown for nightshift 4/2 due to lack of manpower (multiple EE absence) requiring the Retined Head Operator to have to work the SP Hill job.	Business Process	(1) •This incident occurred because current Absence Control Policy needs revision to improve accountability , (2) Deferred hiring of Operators
35108	Richmond CA - Refinery	4/2/2012 12:38:00 PM	Closed	Near Loss	Non Redundant HG failure	EPLCG (Hwy 12) became isolated causing loss of view to K1420	NL-Business Process - Business Interruption	(1) On April 02, 2012 at 12.38, AM 25 reported having received a data frame error from PLCG 53. At the same time, GUS 01 which is the cable administrator, indicated that LCN cable A was silent, indicating that something had gone wrong with Cable A so it was flagged as being failed, ALL communication were switched to cable B and the token ring was re-established. I'm going to assume here that the problem node 53, didn't release the communication token which cause the network to go silent. At 12:39:38 – APP 25 went into warning since it was unable to retrieve any data from EPLCG 53 as it was not responding on multiple retries. At 12:40:51 – APP 59 also goes in warning for the same reasons, no response from EPLCG 53. At 12:40:50 – All LCN nodes report a Watch Dog Timeout against EPLCG 53 indicating that it had not responding on the LCN network for about 2 minutes. At 12:40:51 - The LCN node administrator isolated the EPLCG 53 from all LCN nodes on the LCN network. This will happen when a node has not been responding on the network for about 2 minutes. So what happened here is the EPLCG 53 lost connection to the LCN network and showed no indication of failure other than sending a bad response to APP 25. The events which we cannot explain at this time is; • We do not get a time stamp for when the Cable A went bad at 12:38:31, the event recorded was it was Acknowledged. • The K4LCN had a fault LED indicating a hardware fault although the node address was still displayed on the card. Typically the node address gets replaced with the error code. I logged a case with Honeywell and we discussed this event in more details. We al think that this could have been triggered by hardware fault in the EPLCG node 53. The bad thing, were don't have enough data to help us be specific as to what was the root cause. Honeywell has indicated having seen a similar case in the past were the chassis was the problem. The EPLCG 53 is running in a Dual node card
35127	Richmond CA - Refinery	3/30/2012 11:45:00 AM	Closed	Near Loss	Green Card. Smoke alarm sounded after using toaster. Location: Admin Bldg	Green Card. Smoke alarm sounded in the Admin Bldg. I was toasting a bagel cheese sandwich on the 4th floor. About a 1/2 minute after removing from toaster, the alarm sounded. Location: Admin Bldg, 4th flr.	NL-Fire/Explosion	
35133	Richmond, CA - Refinery	4/3/2012 1:00:00 PM	Closed	Near Loss	Jumping off dock down at the counter	I was walking from the mach.shop when I saw a person jumping off the dock. I yelled for this person to stop but was to late .No injury to the person.	NL-Injury/Illness - Contractor Injury	
						On 3/6/12 at approximately 1215 the PCN Backup Server lost connection to the PCN Storage Area Network (SAN) LUN that is located on SATABEAST 02. This HA mass storage unit is configured as a logical drive on the PCN Backup		

35212	Richmond, CA - Refinery	3/6/2012 12:15:00 PM	Closed	Near Loss	Backup Task for PCN APPnode for System recovery failed validation near end of	Server and physically resides within the Refinery Admin building Data Center. This storage unit hosts the online portion of the Richmond PCN Backup repository and is available for authorized PCN users to manage their production System Image files. It was during this time that an ON-Demand manually configured Acronis backup of the SRU APPnode (LCN Node 53) was being conducted. This particular AppNode is designated for receiving the OPC environmental values generated at SRU. This backup undertaking was part of the PCN Administers LPSA back-out plan, prior to implementing a scheduled IP address change. This entire effort is part of the PCN Network communication switch upgrade project. At the time of the incident, the backup task had already completed and was in its final stages of execution; resultantly the validation portion of the backup task had failed at approximately 90% validation progress. Subsequent attempts to re-validate the file had failed until it was discovered that the storage was no longer available. During this time, it could not be ascertained if the image file generated could be used to positively recover the system from an unexpected software malfunction that the Control System Analysts were experiencing. After the loss of connectivity, the recovery task could not be implemented to restore the image to the pre-change state because the image file was unavailable. The total unplanned outage lasted approximately 3 hours	NL-Business Process - Business Interruption	(1) Why? Unable to get the backup from the SATABEAST2 to restore APPnode. Why? SATABEAST02 was being moved and was unavailable. Why? Notification to PCN team was not communicated. Why? SATABEAST Administrator used old group notification list instead of current one.
35224	Richmond, CA - Refinery	4/4/2012 7:00:00 AM	Closed	Loss	MVA	I received a phone call from RTD this morning informing me that we had a new truck on loan to us for the last couple of weeks and it was returned to RTD yesterday with a dent in the passenger side door. No one on crew reported damage to supervisor. No one reported being involved in an MVA. Truck was parked in back of shop during off shift hours with key in ignition.	Equipment/Property Damage	(1) 5 Why Investigation Electric shop was having one of its pick-up trucks serviced. While the truck was being serviced a loaner truck was provided. When the loaner truck was returned it was found to have been involved in a MVA that was not reported to the electric shop supervisor. 1)Why was the MVA not reported to supervisor? Employee stated he feared that reporting the MVA would compromise his employment. 2) Why did employee fear reporting the MVA would compromising his employment? Employee had recently returned to work after being away for over a year., (2) 5 Why Investigation Employee reported vehicle involved in an MVA. 1)Why was the vehicle involved in an MVA? Employee turned the vehicle too sharply while making a right hand turn and hit a concrete wall. 2) Why did employee turn the vehicle too sharply? Employee stated he lost his focus while stopped at a stop sign just before making the turn. 3) Why did employee lose his focus while driving? While waiting at the stop sign employee allowed his mind to wonder and this caused his loss of focus.
35225	Richmond, CA - Refinery	4/4/2012 12:00:00 AM	Closed	Loss	Sulfidic Caustic leaked from a vacuum truck staged overnight at the NYCP. The truck was staged at the pad due to presence of hydrocarbon created an incompatability with the poly tank designated as the off load location.	A vacuum truck containing sulfidic caustic, removed from V1936, was staged overnight at the North Yard Chem Pad. The truck was staged at the chemical pad because the material on the truck did not match the description on the 3131 and the presence of hydrocarbon created an incompatability with the poly tank designated as the off load location. The truck and material was staged so that an off-load plan and location could be worked out the next day. On April 04 at 05:00 am a sulfidic caustic leak was discovered by Veolia. An estimated 30 gallons of material leaked into cemented secondary containment of the NYCP.	Environmental	(1) Why did the vacuum truck develop a leak over night? There was an aluminum camlock cap placed over the 4" inlet valve camlock fitting - when exposed to caustic over a prolonged period, the aluminum degraded leading to leak-by. Why was an aluminum cap in use? The inlet valve is not used at the Richmond refinery, all vacuuming and off-loading is done through the outlet valve. The fitting appeared to be of carbon steel construction. Why hadn't the fitting been removed to see if it in fact was carbon steel? There was not a system in place to check for metalurgy of that fitting.
35269	Richmond, CA - Refinery	4/5/2012 9:00:00 AM	Closed	Near Loss	Hydrocarbon on ground at TEL injection facility	T&B shutdown operator discovered less than a barrel of hydrocarbon on the ground in the TEL injection facility lot. There are no pipelines in the area and the source of this oil is not readily identifiable.	NL-Environmental - Spill	
35273	Richmond, CA - Refinery	4/2/2012 12:00:00 AM	Closed	Near Loss	2 overdue PRDs in 8 plant	PRDs IX-2502 and IX-2504 are overdue to testing	NL-Operational Process/Procedures - Pressure Relief Devices (PRD)	(1) Why did PRDs go overdue - maintenance was delayed in planning and scheduling the replacement. Why - maintenance was not aware that the PRD replacement could be completed On the run. Why - PRDs were marked as not available on the run in Meridium and feedback was not given to maintenance that the PRDs were indeed available on the run. Why - lack of clear communication to operations prevented complete understanding of information needed for maintenance on "not available OTR" PRDs Why - there was not one person/position assigned to track completion of PRDs labeled as "not available OTR"
35353	Richmond, CA - Refinery	4/8/2012 2:20:00 PM	Closed	Loss	Firefighter injured during training	During training, firefighter climbed over parapet in preparation for a rope repel. Firefighter grasped the parapet with both hands, then swung his body over to get into position for repel. Before the firefighter released arms from wall, a "pop" was felt in right shoulder, causing discomfort.	Injury/Illness	(1) Been awhile since firefighter performed skill
35353	Richmond, CA - Refinery	4/8/2012 2:20:00 PM	Closed	Loss	Firefighter injured during training	During training, firefighter climbed over parapet in preparation for a rope repel. Firefighter grasped the parapet with both hands, then swung his body over to get into position for repel. Before the firefighter released arms from wall, a "pop" was felt in right shoulder, causing discomfort.	NL-Injury/Illness - Employee Injury	(1) Been awhile since firefighter performed skill

35374	Richmond, CA - Refinery	4/1/2012 12:00:00 AM	Closed	Loss	SDA F-120 outside NOx polygon during shutdown to change PSV	We removed feed from the SDA modules but kept charge oil heated up through F-120 and some of the circulation loops to eliminate the need to shutdown and LCO flush resid, DAO and asphalt from entire unit. It was noted on Friday that we were outside the F-120 NOx polygon box once we moved to this mode because there simply wasn't enough duty load on the furnace to allow us to control within the parameters. Once we realized Saturday morning that feed-in would be delayed after we over-pressured and lifted the new C-140 PSV, an action item was given to the RSL to consult with environmental-on-call about the NOx situation. Per the RSL, guidance was given from the on-call that we would be okay with no issues. Upon reviewing the weekend's activity in the refinery on Monday, the environmental group identified an issue with the amount of time we were outside the F-120 NOx box. Furthermore, they determined that we did not qualify for a curtailment exemption in the regs because, although the production was curtailed to basically 0% of normal rates, F-120 furnace firing duty was not curtailed less than 20% of normal. The shutdown exemption is based on furnace operation, not if feed is removed from the plant. Given that we were out of the NOx polygon, we are now required to do a source test at the 'out of box' conditions prior to the next scheduled source test.	Operational Process/Procedures	(1) The environmental on-call person was trained in the NOx rule but was not skilled enough in asking the right questions to Operations in order to make an accurate regulation determination., (2) Operations will typically work with their EFC to understand environmental concerns with unplanned work. When the EFCs are unavailable, there is not a documented process for others in HES to follow to help provide support
35374	Richmond, CA - Refinery	4/1/2012 12:00:00 AM	Closed	Loss	SDA F-120 outside NOx polygon during shutdown to change PSV	We removed feed from the SDA modules but kept charge oil heated up through F-120 and some of the circulation loops to eliminate the need to shutdown and LCO flush resid, DAO and asphalt from entire unit. It was noted on Friday that we were outside the F-120 NOx polygon box once we moved to this mode because there simply wasn't enough duty load on the furnace to allow us to control within the parameters. Once we realized Saturday morning that feed-in would be delayed after we over-pressured and lifted the new C-140 PSV, an action item was given to the RSL to consult with environmental-on-call about the NOx situation. Per the RSL, guidance was given from the on-call that we would be okay with no issues. Upon reviewing the weekend's activity in the refinery on Monday, the environmental group identified an issue with the amount of time we were outside the F-120 NOx box. Furthermore, they determined that we did not qualify for a curtailment exemption in the regs because, although the production was curtailed to basically 0% of normal rates, F-120 furnace firing duty was not curtailed less than 20% of normal. The shutdown exemption is based on furnace operation, not if feed is removed from the plant. Given that we were out of the NOx polygon, we are now required to do a source test at the 'out of box' conditions prior to the next scheduled source test.	Environmental	(1) The environmental on-call person was trained in the NOx rule but was not skilled enough in asking the right questions to Operations in order to make an accurate regulation determination., (2) Operations will typically work with their EFC to understand environmental concerns with unplanned work. When the EFCs are unavailable, there is not a documented process for others in HES to follow to help provide support
35399	Richmond, CA - Refinery	3/28/2012 1:20:00 PM	Closed	Near Loss	Green Card. Propane odor on furnace deck. Location: D&R V-3595	Green Card. Smelled propane on furnace deck (strong odor). Followed smell back to open propane bottle left on deck. Location: D&R, V-3595 4 Rheniformer Furnace 1st Deck	NL-Lessons Learned	
35403	Richmond, CA - Refinery	4/9/2012 2:10:00 PM	Closed	Loss	Quality Control Operator suffered cuts to hands and face.	Quality Control Operator was about to clean a 250 mL beaker after using the beaker in a titration. He rinsed the beaker and began to move the beaker to the dishwasher site. As he lifted the beaker and began to move he struck the edge of the sash of the Fume Hood Sash with the beaker. He suffered minor cuts to his hand and face. After rinsing the cuts with water, the QCO walked to the RIC clinic for first aid.	NL-Injury/Illness - Employee Injury	(1) QCO did not perform LPSA and was rushing through the work to complete work by quitting time.
35403	Richmond, CA - Refinery	4/9/2012 2:10:00 PM	Closed	Loss	Quality Control Operator suffered cuts to hands and face.	Quality Control Operator was about to clean a 250 mL beaker after using the beaker in a titration. He rinsed the beaker and began to move the beaker to the dishwasher site. As he lifted the beaker and began to move he struck the edge of the sash of the Fume Hood Sash with the beaker. He suffered minor cuts to his hand and face. After rinsing the cuts with water, the QCO walked to the RIC clinic for first aid.	Injury/Illness	(1) QCO did not perform LPSA and was rushing through the work to complete work by quitting time.
35445	Richmond, CA - Refinery	4/9/2012 2:40:00 PM	Closed	Near Loss	Green Card. Old walkways need repair. Location: Tanks 921 thru 924	Green Card. Old walkways are decrepit - weakened by old age and neglect. Stairs are missing and falling apart, as is the hand and midrails. Also an eyesore as you drive by on Standard Road. Location: Tanks 921 thru 924	NL-Injury/Illness - Employee Injury	
35446	Richmond, CA - Refinery	4/10/2012 10:00:00 AM	Closed	Near Loss	Green Card. Lack of cleanliness and maintenance. Location: Health Quest	Green Card. Lack of cleanliness and maintenance of men's shower room at Health Quest. When things are broken, they are broken for weeks. Right now the showerhead in large shower is broken and has been for a week now. Toilet is out of order. Other showerheads and curtain rods were broken and changed out by employees at their own expense. Light bulbs were out for weeks and were written up to order a simple light bulb, which is a safety issue, and employee brought one from home again. Cleanliness of the showers is also an issue. We pay for this facility and I use it everyday I'm here and would like a good, clean and maintained facility. Employees should be reimbursed for money spent as well. Location: Health Quest	NL-Lessons Learned	
						Operations is required to adjust flow from the #850 steam header to the #150 steam header located in the pipe way at the north boundary of the plant. This 8" valve is operated manual by an operator and is accessed by a platform. The operator performed an LPSA prior to the task and felt the platform was too small given the resistance provided by the valve. To mitigate the risk and gain		

35447	Richmond, CA - Refinery	4/9/2012 2:00:00 PM	Closed	Near Loss	Operator at risk for a fall injury in pipeway.	mechanical advantage on the valve, the operator proceeded to stand on nearby pipes and operate the valve. They were unable to judge the risks associated with working in a pipe way due to the fact it is a common practice for operations. This task does present a significant risk due the instability of the pipes as a working surface. Stop work authority was used and the task was completed with two operators using two persuaders in order to mitigate the risk of the valve working free resulting in a fall injury.	NL-Injury/Illness - Employee Injury	
35465	Richmond, CA - Refinery	4/9/2012 2:38:00 PM	Closed	Loss	While mechanics were replacing a relay to 86HY-809I on K-1600 RLOP.The compressor unloaded due to a blown fuse	On Monday Apr. 9 2012, I&E were in the process of troubleshooting and repair loader relay 86HY809. At 14:38 OWS 6 called to AO3 operator to verify K-1600 was running without issues. OWS6 had loss all a flow indication for K-1600. AO3 reported to OWS6 that the compressor was running and sounded normal. OMC responded to K-1600 to verify instrument air supply had not been interrupted, Compresser unloaded due to loss of power to the loader relays.	Business Process	(1) K-1600 unloaded when the 24 volt DC main fuse blew that powered all three loader solenoids. WHY - After a new 100% loader solenoid was installed it did not activate so the Mechanics began trouble shooting with the 24 volt DC circuit energized and shorted out the circuit blowing the main fuse to all three of loader solenoids. WHY - 5 year Mechanics did not have a clear understanding of the circuit, a copy of an elementary drawing showing the main fuse nor know its physical location. WHY 1). Original project or modifications were not documented. Red-lined updates were not incorporated into the electronic drawings on Web and not available to mechanics. , (2) K-1600 unloaded when the 24 volt DC main fuse blew that powered all three loader solenoids. WHY - After a new 100% loader solenoid was installed it did not activate so the Mechanics began trouble shooting with the 24 volt DC circuit energized and shorted out the circuit blowing the main fuse to all three of loader solenoids. WHY - 5 year Mechanics did not have a clear understanding of the circuit, a copy of an elementary drawing showing the main fuse nor know its physical location. Why 2) - Lack of skill or knowledge
35494	Richmond, CA - Refinery	4/10/2012 8:30:00 PM	Closed	Loss	K-1171A 2nd stage head split	K-1171A was being put service to ensure Ops had a reliable back up for K-1171. K-3950 relief compressor was being taken down for maintenance and K-1171 was now in this service. Before Ops started the compressor area operator and HO tested all the alarms associated with k-1171A and used Job aid 4CUpt13j . The operator initially attempted to start it, it would not start. Ops called for an electrician, they responded and reset the compressor in the MCC. The Operator started the compressor with the suction blocked in. As he cracked open the suction valve, the compressor shut down. There were no alarms to indicate why it shut down. The HO went out and talked with area operator, and the electrician about why it shutdown. There were no alarms so the electrician checked and reset the compressor in the MCC again. The HO checked the 1st stage sight glass, it was open to relief The outside operator had the suction valve blocked in and the HO pressed the start button. The compresser came on line, the HO had the area operator crack the suction off its seat. The HO was watching the 1st stage bottle sight glass, it was showing some of liquid accumulation. The HO opened the block valve to relief on the 1st stage bottle more to make sure all the liquid was going to relief and not accumulating in the suction bottle. The suction bottle sight glass had maybe 4 inches of liquid in it and holding steady. The HO kept watching it and had the area operator open the suction valve a small amount more. The compressor sounded normal and had no indication of any issues. Ops then heard the compresser split and saw a plume of relief gas coming from the 2nd stage and called plant protection for emergency response. The HO then went around the compressor to block in the discharge valve, and saw that the compressor was still running. The HO had a safe path to the off button shut it down and closed the discharge valve and put the compressor in a safe posture.	Loss of Containment	(1) Operators observed liquid in the 1st stage bottle sight glass and drained it prior to startup. Although liquid was likely present in the second stage dampener bottles, operators did not drain it as there are no sight glasses or alarm instruments to indicate or alert operations personnel to potential liquids. Removing all liquid from K-1171A is critical for safe compressor operation., (2) Operators followed the existing Job Aid to prepare K-1171A for startup and to put it into service; however, it does not describe each step and provide the operating criteria. Contacting the RER or Machinist supervisor would have been an additional way to address the abnormal condition. , (3) Compressor K-1171A does not have a bar-over or jack-over device to verify liquid-free cylinders. A bar-over device could be retrofitted to the compressor fly-wheel and included in detailed startup procedures., (4) Typical compressor suction and discharge bottles of this age have an internal weir to limit the amount of liquid that could enter the cylinder during normal operation. Undrained liquid could have built up and subsequently washed into the K-1171A 2nd stage cylinder. , (5) Back-flow of liquids at the first and second stage suction and discharge bottle drain connections is plausible since there are no check valves in the drain piping configuration that would prevent valve seats leaking by., (6) The K-1171A breaker tripped during the first start attempt at 10:06pm; however, there is no means to record the motor current at each machine relative to their full-load amp ratings. The compressor could have already been internally weakened at the initial overload trip at 10:06pm, and subsequently failed (10:30pm) after the second start without reaching an overload condition. , (7) The prior design of the K-1171A compressor valves were prone to multiple issues that resulted in valve pieces damaging the compressor cylinders; therefore, they were recently upgraded to the more ro
						K-1171A was being put service to ensure Ops had a reliable back up for K-1171. K-3950 relief compressor was being taken down for maintenance and K-1171 was now in this service. Before Ops started the compressor area		(1) Operators observed liquid in the 1st stage bottle sight glass and drained it prior to startup. Although liquid was likely present in the second stage dampener bottles, operators did not drain it as there are no sight glasses or alarm instruments to indicate or alert operations personnel to potential liquids. Removing all liquid from K-1171A is critical for safe compressor operation., (2) Operators followed the existing Job Aid to prepare K-1171A for startup and to put it into service; however, it does not describe each step and provide the operating criteria. Contacting the RER or Machinist supervisor would have been an additional way to address the

35494	Richmond, CA - Refinery	4/10/2012 8:30:00 PM	Closed	Loss	K-1171A 2nd stage head split	operator and HO tested all the alarms associated with k-1171A and used Job aid 4CUp013; . The operator initially attempted to start it, it would not start. Ops called for an electrician, they responded and reset the compressor in the MCC. The Operator started the compressor with the suction blocked in. As he cracked open the suction valve, the compressor shut down. There were no alarms to indicate why it shut down. The HO went out and talked with area operator, and the electrician about why it shutdown. There were no alarms so the electrician checked and reset the compressor in the MCC again. The HO checked the 1st stage sight glass, it was open to relief. The outside operator had the suction valve blocked in and the HO pressed the start button. The compressor came on line, the HO had the area operator crack the suction off its seat. The HO was watching the 1st stage bottle sight glass, it was showing some of liquid accumulation. The HO opened the block valve to relief on the 1st stage bottle more to make sure all the liquid was going to relief and not accumulating in the suction bottle. The suction bottle sight glass had maybe 4 inches of liquid in it and holding steady. The HO kept watching it and had the area operator open the suction valve a small amount more. The compressor sounded normal and had no indication of any issues. Ops then heard the compressor split and saw a plume of relief gas coming from the 2nd stage and called plant protection for emergency response. The HO then went around the compressor to block in the discharge valve, and saw that the compressor was still running. The HO had a safe path to the off button shut it down and closed the discharge valve and put the compressor in a safe posture.	Environmental	abnormal condition. , (3) Compressor K-1171A does not have a bar-over or jack-over device to verify liquid-free cylinders. A bar-over device could be retrofitted to the compressor fly-wheel and included in detailed startup procedures., (4) Typical compressor suction and discharge bottles of this age have an internal weir to limit the amount of liquid that could enter the cylinder during normal operation. Undrained liquid could have built up and subsequently washed into the K-1171A 2nd stage cylinder. , (5) Back-fow of liquids at the first and second stage suction and discharge bottle drain connections is plausible since there are no check valves in the drain piping configuration that would prevent valve seats leaking by., (6) The K-1171A breaker tripped during the first start attempt at 10:06pm; however, there is no means to record the motor current at each machine relative to their full-load amp ratings. The compressor could have already been internally weakened at the initial overload trip at 10:06pm, and subsequently failed (10:30pm) after the second start without reaching an overload condition. , (7) The prior design of the K-1171A compressor valves were prone to multiple issues that resulted in valve pieces damaging the compressor cylinders; therefore, they were recently upgraded to the more ro
35494	Richmond, CA - Refinery	4/10/2012 8:30:00 PM	Closed	Loss	K-1171A 2nd stage head split	K-1171A was being put service to ensure Ops had a reliable back up for K-1171. K-395C relief compressor was being taken down for maintenance and K-1171 was now in this service. Before Ops started the compressor area operator and HO tested all the alarms associated with k-1171A and used Job aid 4CUp013; . The operator initially attempted to start it, it would not start. Ops called for an electrician, they responded and reset the compressor in the MCC. The Operator started the compressor with the suction blocked in. As he cracked open the suction valve, the compressor shut down. There were no alarms to indicate why it shut down. The HO went out and talked with area operator, and the electrician about why it shutdown. There were no alarms so the electrician checked and reset the compressor in the MCC again. The HO checked the 1st stage sight glass, it was open to relief. The outside operator had the suction valve blocked in and the HO pressed the start button. The compressor came on line, the HO had the area operator crack the suction off its seat. The HO was watching the 1st stage bottle sight glass, it was showing some of liquid accumulation. The HO opened the block valve to relief on the 1st stage bottle more to make sure all the liquid was going to relief and not accumulating in the suction bottle. The suction bottle sight glass had maybe 4 inches of liquid in it and holding steady. The HO kept watching it and had the area operator open the suction valve a small amount more. The compressor sounded normal and had no indication of any issues. Ops then heard the compressor split and saw a plume of relief gas coming from the 2nd stage and called plant protection for emergency response. The HO then went around the compressor to block in the discharge valve, and saw that the compressor was still running. The HO had a safe path to the off button shut it down and closed the discharge valve and put the compressor in a safe posture.	Equipment/Property Damage	(1) Operators observed liquid in the 1st stage bottle sight glass and drained it prior to startup. Although liquid was likely present in the second stage dampener bottles, operators did not drain it as there are no sight glasses or alarm instruments to indicate or alert operations personnel to potential liquids. Removing all liquid from K-1171A is critical for safe compressor operation., (2) Operators followed the existing Job Aid to prepare K-1171A for startup and to put it into service; however, it does not describe each step and provide the operating criteria. Contacting the RER or Machinist supervisor would have been an additional way to address the abnormal condition. , (3) Compressor K-1171A does not have a bar-over or jack-over device to verify liquid-free cylinders. A bar-over device could be retrofitted to the compressor fly-wheel and included in detailed startup procedures., (4) Typical compressor suction and discharge bottles of this age have an internal weir to limit the amount of liquid that could enter the cylinder during normal operation. Undrained liquid could have built up and subsequently washed into the K-1171A 2nd stage cylinder. , (5) Back-fow of liquids at the first and second stage suction and discharge bottle drain connections is plausible since there are no check valves in the drain piping configuration that would prevent valve seats leaking by., (6) The K-1171A breaker tripped during the first start attempt at 10:06pm; however, there is no means to record the motor current at each machine relative to their full-load amp ratings. The compressor could have already been internally weakened at the initial overload trip at 10:06pm, and subsequently failed (10:30pm) after the second start without reaching an overload condition. , (7) The prior design of the K-1171A compressor valves were prone to multiple issues that resulted in valve pieces damaging the compressor cylinders; therefore, they were recently upgraded to the more ro
35509	Richmond, CA - Refinery	3/20/2012 9:00:00 AM	Closed	Near Loss	Green Card. Overhead steam leak. Location: S. Isomax K-1060	Green Card. Overhead steam leak and lots of condensate in walkway. The leak needs scaffold and insulation removed. Location: S. Isomax K-1060	NL-Lessons Learned	
35510	Richmond, CA - Refinery	3/20/2012 10:00:00 AM	Closed	Near Loss	Green Card. D-902A is overflowing and leaking out oil. Location: S.Isomax	Green Card. When I was walking out to E-930B, I saw D-902A was overflowing and leaking out oil and it is in the walkway. Location: S. Isomax	NL-Lessons Learned	
35511	Richmond, CA - Refinery	3/29/2012 1:00:00 PM	Closed	Near Loss	Green Card. Oil on ground by E-741. Location: FCC	Green Card. When working at FCC Cat, I noticed oil on the ground by E-741. Location: FCC E-741	NL-Lessons Learned	
35512	Richmond, CA - Refinery	3/26/2012 8:00:00 AM	Closed	Near Loss	Green Card. Tripping and fall hazard. Location: B&S - by E-44	Green Card. When doing work by the exchanger, I noticed there is a tripping and fall hazard - a hole in the ground. Location: B&B, by E-44.	NL-Injury/Illness - Employee Injury	
								(1) We had a opacity violation at the FCC F-300 stack. Title V was entered. The operator was setting up to dump V-13 fines vessel to a vac. Truck. When the vacuum block valve was

35516	Richmond, CA - Refinery	4/11/2012 7:48:00 AM	Closed	Near Loss	Stack Opacity Timer Exceedence	Opacity timer exceedence occurred while setting up to empty V-13 Cat Fines vessel due to K-13B Precipitator hopper 5BW dump valve stuck in the open position.	NL-Regulatory Compliance - Permit Exceedance	closed on the vessel. The vacuum from the precipitator dump transfer line was stopped. Dump valve 5BW of the automated hopper dump valve had failed in the open position. As the pressure in the out of service line increased. The air in the dump line blew up through the failed open dump valve though the hopper to the stack. CBO noticed the opacity, COB instructed the Outside operator to open the vacuum line back to V-13. The Reactor operator went to the hopper deck, discovered the failed open dump valve. The operator proceeded to block in the isolation block valve under the dump valve, but the opacity had exceeded the 180 seconds by that time. Job aid FCCJ003J instructs the operator to place K-13A/B dump cycle on sequence pause. But doesn't instruct the operator to verify the hopper ball valves are closed.
35620	Richmond, CA - Refinery	6/1/2011 10:00:00 AM	Closed	Loss	Incorrect purchase of engineered materials	A Chevron engineer ordred a specialized analyzer for an AD project to optimize cutter injection in the 10 tar line at SISO. The PO was released to the manufacturer and the equipment was designed and built over the next several months. The engineer of record who performed the initial design work elected to leave Chevron in late 2011. In early 2012 a new analyzer engineer was assigned to the project. While performing a design review of the previous engineers work, she noticed technical gaps in his work. The purchased analyzer would not meet the process requirements for a successful installation. The loss incurred is the money spent for the vendor engineering and manufacturing of an analyzer that we can't use.	Business Process	(1) LOSS: Engineering spent $60M on the design and manufacturer of an analyzer that does not meet the technical requirements to make this project successfully. WHY? The engineer specified the wrong equipment for the project. WHY? The engineer didn't fully understand the technical requirements to make this project successful. WHY? The engineer had never tackled a problem like this before. RCF - Lack of skill or knowledge. Note: The five-why analysis was performed by the investigation team. Since the engineer in question no longer works for Chevron, the RCF analysis is based on investigation findings only and not on discussions with the engineer.
35524	Richmond, CA - Refinery	4/10/2012 7:30:00 AM	Closed	Loss	Inventory adjustment made to drum additive location from cycle count	April drum additive cycle count was conducted on 4/9/12. The Infineum T4716, product code 265217985, had a back to physical discrepancy of +187ug (approx 3.5 drums). After review of this additive, it was noted that at the time of cycle count over the past 3 months, this product has had a consecutive gain into inventory (each monthly adjustment was more than 2 drums).	Business Process	(1) Infineum T4716 (Drummed Additive) has been being received for an amount of 52 US Gallons and the actual amount in the drum is 53.87 US Gallons. The TIHI in the OCS is 52 X 1. Why? Drum actual is 53.87 US Gallons Why? The TIHI in the OCS is 52 X 1 and the warehouse receives for that amount. Why? Receiving Operator didn't verify the amount in the drum with the amount on the BOL were the same when received for. Why? To do this it would have taken more time and effort to complete the validation of the amount received for. Infineum T4716 (Drummed Additive) has been being received for an amount of 52 US Gallons and the actual amount in the drum is 53.87 US Gallons. The TIHI in the OCS is 52 X 1. Why? Drum actual is 53.87 US Gallons Why? The TIHI in the OCS is 52 X 1 and the warehouse receives for that amount. Why? TIHI was not adjusted to match the actual amount in the drum Why? The correct individuals were not involved when actual amounts where changed or TIHI was developed.
35525	Richmond, CA - Refinery	4/11/2012 12:00:00 AM	Closed	Near Loss	Abdomin discumfort	Employee complaining of abdominal discomfort.	NL-Injury/Illness - Contractor Injury	
35530	Richmond, CA - Refinery	3/21/2012 4:30:00 PM	Closed	Near Loss	Green Card. Employee vehicle was almost hit. Location: Center St. Bridge	Green Card. Employee was driving vehicle over a narrow bridge. This bridge is only wide enough for one car to pass at a time. However, an oncoming car did not wait their turn and almost side swiped the other person's car. Location: Center St. Bridge (South of 126 Center St)	NL-Injury/Illness - Employee Injury	
								(1) Incident Number 35543 Business Unit Cracking Location Alky Facility Name Richmond Incident date 4/11/2012 Type of Process: iC4 Type of Equipment: Piping Team Members: Laura Leeds Bobby Guthmiller Pranell Prasad Ron Moore Gerardo Ibarra Incident Description: Plant operator noticed a LPG vapor cloud near FV-711, P-1420 minimum flow controller. The section of piping was isolated to stop the leak. Liquid spray from pipe leak was stopped within 10 minutes. CFD was notified and responded as a precaution. This investigation covers why this piping leaked. FIVE WHY'S 1. Why did "above " happen? The carbon steel piping leaked due to pinhole found in the reducer downstream of FV-711. 2. Why did "1" happen? The pinhole in the carbon steel piping was caused by erosion/corrosion in the pipe occuring at a weld. 3. Why did "2" happen? Erosion/corrosion occurred in the carbon steel piping at the weld due to trace amounts of sulfuric acid at high velocities and turbulent conditions. 4. Why did "3" happen? Trace amounts of sulfuric acid is expected in this piping as a part of the alkylation-refrigeration process. The high velocity occurred due to the change in pipe diameter from 6" to 3" and the current flow rate in the piping

35543	Richmond, CA - Refinery	4/11/2012 1:25:00 PM	Closed	Loss	Pinhole leak on P-1420 minimum flow line down stream of FV-711	Plant operator noticed a LPG vapor cloud near FV-711, P-1420 minimum flow controller. The section of piping was isolated to stop the leak. Liquid spray from pipe leak was stopped within 10 minutes. CFD was notified and responded as a precaution.	Environmental	due to operation of the unit. The turbulence occurs due to the control valve and the reduction/expansion that occurs nearby the control valve cause turbulent flow conditions. 5. Why did "4" happen? The change in pipe size occurred to accommodate the size of the control valve FV-711 which is a 3" valve that was sized for this application in 1995. Initial installation criteria did not identify this area as potential for erosion corrosion due to high velocity hydrocarbon with trace sulfuric acid entrainment. ROOT CAUSE(S): What were the Root Causes of your incident? Add more as needed 1 High velocity and turbulent flow in carbon steel piping. (inadequate tools/equipment) 2 Initial installation of unit did not
35570	Richmond, CA - Refinery	4/12/2012 7:00:00 AM	Closed	Near Loss	Lab samples are not being processed in a timely manner.	Potentialy Lab samples are not being processed in a timely manner causing delays in putting stock into locations. Warehouse HW and Supervisor will meet with the Lab Supervisor to follow up to see if test results are being faxed to Warehouse for put a ways .	NL-Lessons Learned	
35580	Richmond, CA - Refinery	4/1/2012 7:30:00 AM	Closed	Near Loss	Green Card. Overhead steam tracing leak. Location: S. Isomax V-1052	Green Card. 1/4" steam tracing leak overhead needs to be fixed, because hot condensate leak down to walkway. Location: S. Isomax V-1052	NL-Injury/Illness - Employee Injury	
35581	Richmond, CA - Refinery	4/1/2012 7:00:00 AM	Closed	Near Loss	Green Card. Overhead steam leak needs to be fixed. Location: S. Isomax K-1060	Green Card. Overhead steam leak needs to be fixed because a lot of hot condensate falling right onto the walkway. The leak needs insulation removal and scaffold. Location: S. Isomax K-1060	NL-Injury/Illness - Contractor Injury	
35583	Richmond, CA - Refinery	4/2/2012 10:00:00 AM	Closed	Near Loss	Green Card. Open flange policy. Location: S. Isomax V-1050	Green Card. My understanding is Chevron has a No Open Flange policy. On V-1050 there's a 7in. open flange on the vessel. Location: S. Isomax V-1050	NL-Lessons Learned	
35584	Richmond, CA - Refinery	4/2/2012 1:00:00 PM	Closed	Near Loss	Green Card. Replace bridge siding. Location: D&R Bridge #38, across from control rm	Green Card. The bridge's wooden sidings are rotten and need replacing. Location: D&R Bridge #38 Across from Control Room	NL-Injury/Illness - Employee Injury	
35585	Richmond, CA - Refinery	4/3/2012 2:00:00 PM	Closed	Near Loss	Green Card. Section line is leaking. Location: B&S Ethyl Plant	Green Card. Section line leaking on Standard Ave., tours Ethyl area and a good section stain on the ground. Location: B&S Ethyl Plant	NL-Lessons Learned	
35586	Richmond, CA - Refinery	4/10/2012 5:30:00 AM	Closed	Near Loss	Green Card. Ceiling board is hanging by the entry door. Location: D&R Conf Rm 214	Green Card. The ceiling board is hanging by the entry door. Location: D&R Conf Rm 214	NL-Lessons Learned	
35589	Richmond, CA - Refinery	4/12/2012 9:00:00 AM	Closed	Loss	Two cases tipped over and got caught by the sweeper arm.	While running the Jug palletizer, two cases flipped over and caught on the pusher bar causing a crash in the machine. WHS opened case and found a tear on side of bottle that allowed oil to leak inside of case which tipped over when the pusher bar pushed case when palletizing product.	Business Process	(1) What? Jug of Delo 400 LE 15w40 leaked inside of its box Why? Jug had a split when loaded into the box. When box tipped over, product leaked out Why? PPK jugs occasionally split due to flimsy design compared to the Graham jug. When packed by the drop packer, the liquid pressure causes the bottle to split., (2) Duplicate investigation
						Graham moved their facility from Richmond, CA to Modesto, CA. Graham is the regular supplier of gallon jug bottles to RLP although during this transitional period Plasti-Pak (PPK) was contracted to satisfy gallon jug bottle inventories to RLP. The Procurement Operations (POPs) team in Houston was heavily engaged in the coordination of the transition and working with the plant to avoid any disruption to operations. The RLP POPs Buyer, responsible for purchasing empty bottles, places all purchase orders within SAP against respective supplier for bottle inventory. All suppliers, including Graham and PPK, have a vendor number assigned to them. The vendor number is pre-populated on the SAP purchase order. As RLP, normally receives bottles from Graham the Graham vendor number is pre-populated in SAP on purchase orders specific to purchases for bottles. A decision was made by the Procurement Operations Houston team to not have the vendor numbers changed in SAP resulting in a manual work around by the RLP POPs Buyer. The work around required the RLP POPs Buyer to manually change the vendor number each time a purchase order was processed for bottles. An email was received by the RLP POPs Buyer regarding an upcoming fill requesting a purchase of bottles. The RLP POPs Buyer placed an order 3/1 Delo 10w30 gallon jugs (component code 980045995) to accommodate the fill scheduled to take place on 4/13. Per process, the Buyer went into OCS to order the components and the order defaulted to the SAP vendor number assigned to Graham. During a weekly engagement with Graham, facilitated by the Houston Procurement Ops team, Graham confirmed that they would be unable to produce this bottle for RLP requesting that the order be redirected to PPK. The POPs Buyer did not change the vendor number in SAP/OCS to the vendor number assigned to PPK. PPK confirmed available ship date from		(1) A. What? RLP missed a production fill of Delo 10W30 due to lack of bottle availability a. Why? Bottles for 3/1 gallon Delo 10w30 jugs (980045995) were out of stock b. Why? Appropriate vendor/supplier did not receive Purchase Order for bottles. c. Why? Vendors have assigned vendor numbers and purchase orders are processed through SAP with default vendor/supplier designation d. Why? A decision was made to not change SAP vendor numbers by Procurement Operations

35636	Richmond, CA - Refinery	4/12/2012 12:00:00 AM	Closed	Near Loss	Jug Bottles ordered from wrong vendor	Highlands on 4/17 for plant receipt on 4/26 to accommodate rescheduled fill of 4/27. This near loss resulted in zero down time on the jug line and no customer cuts. It has been confirmed that Graham Modesto is now fully servicing RLP with gallon jug bottles and PPK Highlands is no longer required to provide routine bottle supply to RLP.	NL-Business Process - Business Process	Houston requiring manual work processes by RLP POPs Buyer to change vendor number manually in SAP. e. Why? POPs Buyer did not make the manual change to the SAP vendor number resulting in purchase order misdirection to the wrong supplier.
35636	Richmond, CA - Refinery	4/12/2012 12:00:00 AM	Closed	Near Loss	Jug Bottles ordered from wrong vendor	Graham moved their facility from Richmond, CA to Modesto, CA. Graham is the regular supplier of gallon jug bottles to RLP although during this transitional period Plasti-Pak (PPK) was contracted to satisfy gallon jug bottle inventories to RLP. The Procurement Operations (POPs) team in Houston was heavily engaged in the coordination of the transition and working with the plant to avoid any disruption to operations. The RLP POPs Buyer, responsible for purchasing empty bottles, places all purchase orders within SAP against respective supplier for bottle inventory. All suppliers, including Graham and PPK, have a vendor number assigned to them. The vendor number is pre-populated on the SAP purchase order. As RLP, normally receives bottles from Graham the Graham vendor number is pre-populated in SAP on purchase orders specific to purchases for bottles. A decision was made by the Procurement Operations Houston team to not have the vendor numbers changed in SAP resulting in a manual work around by the RLP POPs Buyer. The work around required the RLP POPs Buyer to manually change the vendor number each time a purchase order was processed for bottles. An email was received by the RLP POPs Buyer regarding an upcoming fill requesting a purchase of bottles. The RLP POPs Buyer placed an order 3/1 Delo 10w30 gallon jugs (component code 980046995) to accommodate the fill scheduled to take place on 4/13. Per process, the Buyer went into OCS to order the components and the order defaulted to the SAP vendor number assigned to Graham. During a weekly engagement with Graham, facilitated by the Houston Procurement Ops team, Graham confirmed that they would be unable to produce this bottle for RLP requesting that the order be redirected to PPK. The POPs Buyer did not change the vendor number in SAP/OCS to the vendor number assigned to PPK. PPK confirmed available ship date from Highlands on 4/17 for plant receipt on 4/26 to accommodate rescheduled fill of 4/27. This near loss resulted in zero down time on the jug line and no customer cuts. It has been confirmed that Graham Modesto is now fully servicing RLP with gallon jug bottles and PPK Highlands is no longer required to provide routine bottle supply to RLP.	NL-Quality - Product Unavailable	(1) A. What? RLP missed a production fill of Delo 10W30 due to lack of bottle availability a. Why? Bottles for 3/1 gallon Delo 10w30 jugs (980046995) were out of stock b. Why? Appropriate vendor/supplier did not receive Purchase Order for bottles. c. Why? Vendors have assigned vendor numbers and purchase orders are processed through SAP with default vendor/supplier designation d. Why? A decision was made to not change SAP vendor numbers by Procurement Operations Houston requiring manual work processes by RLP POPs Buyer to change vendor number manually in SAP. e. Why? POPs Buyer did not make the manual change to the SAP vendor number resulting in purchase order misdirection to the wrong supplier.
35647	Richmond, CA - Refinery	4/13/2012 9:00:00 AM	Closed	Near Loss	Drot boom struck overhead wooden structure	Removing Drott from weld bay mechanic did not notice boom was lifted when performed walk around. Vehicle had been previously parked with boom not completely stowed. When driving through gate boom caught wooden structure above. Wood broken no damage to drott	NL-Equipment/Property Damage - General Liability	(1) Why 1 - Drove boom into overhead structure. Why 2 - Did not lower boom before moving. Why 3 - Did not notice it was parked with boom elevated. Why 4 - Did not use pre trip inspection form. Why 5 - Did not use in the past and had no problems.
35708	Richmond, CA - Refinery	3/30/2012 12:00:00 AM	Closed	Near Loss	Started Filling T-1966 before the MOC 24530 Stage II was signed off	Started filling T-1966 prior to the MOC 24530 being signed off in Stage II	NL-Business Process - Business Process	(1) Communication to the on shift personnel was less than adequate., (2) Communication to the on shift personnel was less than adequate., (3) Compliance with the MOC/PSSR process was less than adequate.
35734	Richmond, CA - Refinery	4/16/2012 9:15:00 AM	Closed	Loss	Impact to lower lip causing a cut to the inside of the month.	At approximately 09:15 am, on Monday, 04/16/12, a mechanic was replacing the PRD off of the air cylinder underneath the diesel pump platform at #13 separator; and, while tightening a 7/8" nut on the inlet flange, the wrench slipped off the nut and struck the mechanic in the lower lip, resulting in a small cut to the lower lip and slight swelling.	Injury/Illness	(1) The mechanic was in the line of fire by pulling the wrench at himself. Mechanic agrees that he should push the wrench away from himself whenever possible.
35752	Richmond, CA - Refinery	4/16/2012 12:30:00 PM	Closed	Near Loss	EE feeling ILL and taken to clinic for evaluation.	EE was feeling ILL and was taken to clinic	NL-Injury/Illness - Employee Injury	
35753	Richmond, CA - Refinery	4/16/2012 12:00:00 AM	Stewardship Review	Near Loss	Operating Below NH4Cl Sublimation Temp on V-710 Overhead Piping	The V-710 overhead temperature is operating close to and sometimes below the ammonium chloride sublimation temperature, which means salts could be subliming in the run of pipe upstream of E-711. Raising the temperature will help keep the salts in the vapor phase until wash water is injected at E-711. While working with ETC to troubleshoot the cause of a previous failure on E-711, it was learned that the calculation method used to calculate the ammonium chloride sublimation temperature on the V-710 overhead piping was incorrect. It was previously thought that the V-710 overhead piping temperature (73TI7111) was operating more than 15 degF above the ammonium chloride sublimation temperature. The corrected calculation shows that the V-710 overhead piping temperature is operating very close to the ammonium chloride sublimation temperature, and sometimes below.	NL-Equipment/Property Damage - Equipment Damage	(1) The ammonium chloride sublimation was not calculated correctly. 5 Why: 1. Why was the operating temperature close to and sometimes below the ammonium chloride sublimation temperature? The ammonium chloride sublimation temperature was calculated incorrectly. 2. Why was the ammonium chloride sublimation temperature calculated incorrectly? a) The initial calculated done during the TEMA design phase used a lower ammonia concentration and higher steam rate than current operating conditions. b) The daily PMO calc did not take ammonia concentration in to account in the calculation of the ammonium chloride sublimation temperature. 3a. Why 2a? Sufficient plant data was not available to determine the actual ammonia content and an incorrect assumption was made. 3b. Why 2b? An incorrect equation was used to calculate the ammonium chloride sublimation temperature. 4. Why 3a and 3b? Lack of knowledge.
	Richmond,	4/12/2012			Safety Bypass Form not	IL-1656 the PRD on E-1601 spillback was lifting allowing waxy feed to leak by	NL-Operational	

35811	CA - Refinery	1:00:00 AM	Closed	Near Loss	completed when IL1656 was isolated.	to relief. The PRD was blocked in, but this was not clearly communicated to the HO. A Safety Bypass Form was not completed at this time	Process/Procedures - Safety Systems	(1) Operator was not fully aware of Bypass Safety Form usage / had not been involved in the process before.
35853	Richmond, CA - Refinery	3/24/2012 12:00:00 AM	Closed	Loss	High H2O by dist. level in T-1899 could not be feed until water was dropped out to water trapped between foam dam and tank roof seal	On March 24th water trapped between the foam dam and T-1899's roof. Further inspection showed that the foam dam had become plugged with debris from nearby pine needles located on the hillside. The water buildup at the foam' dam caused water to migrate into the product through the gauge well gap within the roof deck. The water migrating to the product resulted in a high S & W. It was determined by ofls planning and put in the orders that loading the bottom slops (including the water) onto a HSFO barge was a good way to remove the water. The barge was loaded off the VERY bottom of the tank. A significantly higher volume of water was loaded onto the barge than was expected.	Quality	(1) There was no procedure/ Job aid to define the required checks that required operators to conduct during heavy rain event of 1-2 inch per hour.
35859	Richmond, CA - Refinery	4/17/2012 12:30:00 PM	Closed	Near Loss	21 station sump over filled into containment basin	: 21 sta. sump which pump into the 16 drop line was blocked in because of the scheduled work on the relief header in 17 station. A vacuum truck was on site to pump out the sump whenever the sump reached high level. During that time there was a emergency job at 17 sta. and the vacuum truck was reassigned to 17 PS. A second vacuum truck was called to cover the job at 21 pump station sump. When the Head operator arrived at 21 sta. to show the driver where to tie-in the hose, he saw the sump was starting to over flow. The Refine Board operator did not receive a high level alarm. The 17 P. S. sump is a sealed system and there is no existing PM program. There is no routine duty to test the high level alarm.	NL-Environmental - Spill	(1) No routine monthly check done on the high level alarm.
35895	Richmond, CA - Refinery	4/17/2012 11:35:00 PM	Closed	Loss	LNC wash water flow controll chopped while testing the HNC low flow chop. Causing the PRD to lift on P-1453A.	While testing HNC wash water low flow chop, wash water dipped in the LNC. This caused the LNC wash water flow controller to chop. This caused the PRD to lift on P-1453A.	Operational Process/Procedures	(1) "FIVE WHY" One Page Report Incident Number 35895 Business Unit Hydro Location RLOP Facility Name HNC Incident date 4/17/2012 Type of Process: Wash Water Type of Equipment: Pump P-1453A Team Members: Incident Description: What:Operator testing WW low flow shutdown on HNC. Standard guidelines have the operator handjack open control valve slightly, then zero the meter. While slightly handjacking HNC WW, this caused the flow to dip on the LNC WW. This caused LNC to trip, causing the WW pump discharge pressure to rise. PRD lifted on P-1453A. Where (location or where in the process):HNC When: 23:30 4/17/2012 How:Routine duty alarm testing Problem Statement (What is the key issue that needs to be addressed?): 1.tripped LNC ww while testing HNC 2. PRD lifted and did not properly re-set. FIVE WHY'S 1. Why did "above" happen? Verification Tripped LNC WW causing P-1453A discharge pressure to jump. 2. Why did "1" happen? While handjacking open the HNC ww flow dipped to LNC causing low flow chop. 3. Why did "2" happen?Standard guidlines the operators use to test these trips. 4. Why did "3" happen?Procedure in Intelitrak outdated. 5. Why did "4" happen?When Honeywell system was put in place, procedure was not updated ROOT CAUSE: What was the Root Cause of your incident? 1.Outdated procedure 2.P-1453A PRD lifted and did not properly re-set. , LPS Factor: , (2) "FIVE WHY" One Page Report Incident Number 35895 Business Unit Hydro Location RLOP Facility Name HNC Incident date 4/17/2012 Type of Process: Wash Water Type of Equipment: Pump P-1453A Team Members: Incident Description: What:Operator testing WW low flow shutdown on HNC. Standard guidelines have the operator handjack open control valve slightly, then zero the meter. While slightly handjacking HNC WW, this caused the flow to dip on th
35961	Richmond, CA - Refinery	3/8/2012 12:00:00 AM	Closed	Loss	T-1492/1493 & T-1634 out of compliance on flash point, T-3194 out of compliance for API	While scoping a home for light diesel for an Isomax test run, it was suggested that this material go to T-1492/1493 DHT Feed tanks. HES and PED were consulted and determined that these tanks would not be suitable since they are not permitted to store material at or below a flash point of 130 F. PED raised a concern that we currently may not be above 130F. PED and HES reviewed data going back to April 2007 and found that both tanks have stored material below 130 degrees F around 50% of the time After identifying T-1492/93 as out of compliance, HES & PED did a review of all tanks that were classified as exempt tanks to find any other issues. T-1634 (Jet) was found out of compliance on flash point, and T-1394 (FCC Feed) was out of compliance on API.	NL-Regulatory Compliance - Non Compliance - Air	(1) When the Title V permit was adopted, HES did not communicate the designated limit for the exempt tanks., (2) Develop CEVs for all regulated and exempt tanks.
						While scoping a home for light diesel for an Isomax test run, it was suggested that this material go to T-1492/1493 DHT Feed tanks. HES and PED were consulted and determined that these tanks would not be suitable since they are not permitted to store material at or below a flash point of 130 F. PED raised a concern that we currently may not be above 130F. PED and HES reviewed data going back to April 2007 and found that both tanks have stored material		

35961	Richmond, CA - Refinery	3/8/2012 12:00:00 AM	Closed	Loss	T-1492/1493 & T-1634 out of compliance on flash point, T-3194 out of compliance for API	below 130 degrees F around 50% of the time After identifiying T-1492/93 as out of compliance, HES & PED did a review of all tanks that were classified as exempt tanks to find any other issues. T-1634 (Jet) was found out of compliance on flash point, and T-1394 (FCC Feed) was out of compliance on API.	Regulatory Compliance	(1) When the Title V permit was adopted, HES did not communicate the designated limit for the exempt tanks., (2) Develop CEVs for all regulated and exempt tanks.
36005	Richmond, CA - Refinery	4/17/2012 10:00:00 AM	Closed	Near Loss	Green Card. Uneven surfaces. Location: Near Firehouse turnstile	Green Card. Several of us were parking vehicles in this area. There is a burm to park the vehicle over. However, it is difficult to see when getting in and out of one's vehicle and/or moving around one's vehicle. Location: Parking lot near Firehouse turnstile on Chem Lab side of fence	NL-Injury/Illness - Employee Injury	
36035	Richmond, CA - Refinery	4/19/2012 2:30:00 PM	Closed	Loss	PARTICLE IN THE EYE	Welder grinding went to break and felt something in eye.	Injury/Illness	(1) Employee may have taken his welding hood off improperly.
36045	Richmond, CA - Refinery	4/17/2012 7:00:00 PM	Fact Gathering	Near Loss	Loss of Power to RFMS VM Host Server	Electrical work had been planned to replace designated 20 amp breakers with 30 amp breakers within 3 Breaker Panels located at the Richmond Refinery Data Center. Prior to this job task, some pre-work was performed to ensure that all equipment in the datacenter had dual power supplies with each power supply going to different power distribution units (PDUs) connected to different Breaker panels. As the first Breaker Panel was de-energized, the RFMS VM Host Server RIC841RFMESX2 lost all power.	NL-Business Process - Business Interruption	(1) Shutting down power to Breaker Panel for scheduled Panel work resulted in loss of power to both power supplies on the RIC841RFMESX2 Server. Though both power supplies were plugged into different PDU's, both PDU's were connected to the same Breaker Panel.
36095	Richmond, CA - Refinery	4/20/2012 12:00:00 AM	Closed	Loss	C-180 overpressure	While putting C-180 in service the column overpressured and lifted a safety.	Operational Process/Procedures	(1) FIVE WHY'S 1. Why did "above" happen? Verification C-180 over pressured and vented to relief. 54PC182 2. Why did "1" happen? Following procedure step to heat up when column pressure went high prior to the desired temperature. 3. Why did "2" happen? The column and overhead accumulator was full when starting the procedure with stock. Operator believed the level to be at top of gage glass and manageable. 54LI180 4. Why did "3" happen? Did not realize it was liquid packed as far as it was. Started reflux and trying to heat up column when pressure increased. 5. Why did "4" happen? Lack of operating experience and checklist wrote for an empty column.
36095	Richmond, CA - Refinery	4/20/2012 12:00:00 AM	Closed	Loss	C-180 overpressure	While putting C-180 in service the column overpressured and lifted a safety.	Environmental	(1) FIVE WHY'S 1. Why did "above" happen? Verification C-180 over pressured and vented to relief. 54PC182 2. Why did "1" happen? Following procedure step to heat up when column pressure went high prior to the desired temperature. 3. Why did "2" happen? The column and overhead accumulator was full when starting the procedure with stock. Operator believed the level to be at top of gage glass and manageable. 54LI180 4. Why did "3" happen? Did not realize it was liquid packed as far as it was. Started reflux and trying to heat up column when pressure increased. 5. Why did "4" happen? Lack of operating experience and checklist wrote for an empty column.
36130	Richmond, CA - Refinery	4/22/2012 1:10:00 PM	Closed	Near Loss	Had to use MK-102 to pull in messenger line for spring lines to MK-103 during berthing of CSK Shelton. This placed a tremendous strain on the messenger line as well placing personnel and equipment at risk.	Mk-103 (Captsan winch) at Berth 1 has a failed motor mount which will require extensive repair. RLW crews are using MK-102 to pull in the messenger line attached to the vessel spring lines looping around a remaining section of the corroded metal at MK-103 in order to place the spring lines onto MK-103 hooks. This creates tremendous strain on the messenger line which could snap possibly resulting in personnel injury. Additionally, by having to loop the messenger line around the corroded metal the strain while pulling tension could cause the already corroded metal to break and similarly poses a risk to personnel. Berth 1 is also undergoing fender repairs and some of the staging attached to the face of the dock was snagged by the spring lines and had to be dislodged by Operators using poles.	NL-Equipment/Property Damage - Equipment Damage	(1) • There is no existing inspection program in place to regularly check corrosion on the Winches at the Long Wharf.
36224	Richmond, CA - Refinery	4/23/2012 2:25:00 PM	Closed	Near Loss	P-3301 sour water leak tripped Personal Monitor	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. - At 14:20 two Contractor EE's in process to access work area one Personal H2S monitor alarmed and cleared (once out of the area) Both wee within 2' of each . Contraction EE personal H2S monitor alarmed and cleared – EE immediately stopped and backed out of the area. Reported the incident to HO (Operations founded pump with plastic case leaking sour water) (Pump was isolated and area cleaned) EE's Foreman and Chevron Rep were notified. EE was with a partner (~two feet apart) and both were wearing personal H2S monitors and respirators with vapor cartridge. (High heat paint vapor prevention) EE's did not smell H2S at anytime CFD was dispatched and checked Jeffco EE vitals. All vitals checkout with no issues. EE did not want to visit Refinery or off site clinic or AMR. EE personal monitor reading was 15 PPM. EE was instructed to get new monitor or bump the used one. EE release back to work without restrictions	NL-Injury/Illness - Contractor Injury	(1) Teflon diaphragm cracked, (2) Metal check valve on exhaust line too heavy for plastic threaded pump connection
						A SISO operator was performing a LOTO on MP-332(A-train MEA pump).While isolating the suction valve which has a chain operator, He noticed the valve was not moving and the chain was slipping indicating the valve was		(1) Why did SISO operator injured right shoulder attempting

35238	Richmond, CA - Refinery	4/23/2012 8:00:00 PM	Closed	Loss	Operator shoulder injury	not moving. After accessing the situation he decided to use portable stairs and a persuader to try and close the valve. After several unsuccessful attempts to move the valve he tried one last time and put extreme effort into trying to close the valve. It was at this time he felt pain in his right shoulder. He tried 2 more times to close the valve. The pain in his shoulder was getting stronger so he stopped the LOTO effort and informed his HO of the issue with his shoulder at which time the STL and Plant protection were notified.EE was taken to of site clinic.	Injury/Illness	to close a valve?. Operator attempted to increase the force on the persuader to close valve. Why did operator increase the force required to close the valve? The operator increased the force on the valve because the valve was not moving after several attempts. Why did the operator continue to try to close the valve which was not moving after several attempts? The operator did not do an LPSA after several failed attempts to access the path forward. Why the the valve not moving?
35297	Richmond, CA - Refinery	4/19/2012 10:00:00 AM	Closed	Near Loss	Green Card. Need a KEEP CLEAR sign near gate entrance. Location: Main Gate and Gate 14	Green Card. When stopping at the gate entrances to swipe badge, the gate won't open sometimes. So we backed up to clear the gate sensor but the vehicle behind us was so close we could not see it. Location: Main Gate and ETG (Gate 14). TOP INVESTIGATION: INITIAL DESCRIPTION FOR FULL DESCRIPTION SEE LINK IN INVESTIGATION	NL-Transportation - Company	(1) Refinery Gate sensors (loaders) frequently malfunction and cause has not been determined, (2) Vehicles need to reverse away from gate sensor to reset and "engage" it which could cause collision with vehicle waiting in line , (3) Light post at Gate 124 (firehouse side) could be experiencing effort (light dims down/ out intermittently)
35300	Richmond, CA - Refinery	4/24/2012 12:00:00 AM	Closed	Loss	Nalco Chemical Amine spilled to grade - fully contained	Approximately 2 pm 4/24/12, Cogen operator found Amine leaking from a chemical pump drawdown sight glass crack. Operator immediately blocked in sight glass and made notifications to the STL and to Nalco. Upon initial investigation, there is approx 50 gallons of Amine spilled to grade that is fully contained within the berm area. Operators filled the berm with fresh water to dilute and lower pH down to 12.0. A Vacuum truck is ordered to remove all liquid from berm area and will be on hold until we come up with a plan to drain it. Consulting with FED and Nalco for recommendations of how to remove liquid from vacuum truck.	Environmental	(1) Gage glass valve left open
35351	Richmond, CA - Refinery	4/20/2012 10:00:00 AM	Stewardship Review	Near Loss	Rio541n3netmon server stopped working	Server stopped working without any notice and was not fixed by rebooting the server. The monitoring software running on the server was not available to monitor our systems. This unit is used internally only so there was no effect on the customer base. Internal monitoring was unavailable for roughly 4.5 hours. Cost to repair was the Server Admin's time to troubleshoot and restore the unit, which was about 2.5 hours (est. $400).	NL-Business Process - Business Process	(1) component problem. WHY - old equipment that should be replaced. WHY - Equipment is not under maintenance. WHY - Server is 7 years old and unsupported, and additional parts are not available. WHY - Server is scheduled to be replaced later this year.
35402	Richmond, CA - Refinery	4/23/2012 4:45:00 PM	Closed	Near Loss	Contractor nearly hit by truck in gate 91 parking lot	Green Card - While exiting the restroom at the 91 gate parking lot, a pick up truck came in from the opposite side of the lot and crossed my way (missing me about 5ft away).	NL-Injury/Illness - Contractor Injury	
35415	Richmond, CA - Refinery	4/25/2012 1:00:00 PM	Closed	Near Loss	Gate Arm Lowered While Driving Through Gate 31	Two people were in a company car so two badges were swiped at the entrance to 31 Gate, (the driver heard the "beep" of both badges being registered) the gate guard was there to push the button at the same time and the gate arm was up. While proceeding past the guardhouse the gate arm began to lower. Fortunately the driver always performs an LPSA when driving through the gates (based on their experience hearing about either gate failures in the Daily Reports). The driver stopped abruptly in order to avoid the arm that lowered, backed up and then re-swiped the badges with the guard present, after asking the guard if it was safe to go through. The vehicle went through the gate without incident the second time. The driver then turned around and parked to gain an understanding from the gate guard as to why the arm came down.	NL-Transportation - Company	(1) Security Officer did not inform driver to wait until gate arm cycled.
	Richmond, CA -	4/26/2012 12:15:00			Loss of K-1400 / HHC	K-1400 thrust bearing probes (2), one went to danger state and the other probe	Equipment/Property	(1) Hazard Analysis NI. The conduit routing used for the eddy probe cables had an excessive number of elbows without intermediate pull boxes. This was not discovered and corrected. The conduit routing caused the cables and connectors to be damaged when they were pulled into the conduit during installation. Damaged insulation, water and cable contact comprise the voltage drain path. Initially and for years there was no loss of voltage but with time degradation occured. There was initial undetected damage not effecting voltage and then progressive degradation began -not a sudden loss of signal- which eventually resulted in voltage leakage, drifting of reported axial position from the true position and the turbine trip. The initial cable insulation damage was not detectable once the cable had been pulled into the conduit. Removal of cable for inspection is impractical and counterproductive since it would only add to insulation damage. . (2) Enforcement NI – Corrective Maintenance on the R-VB142 thrust channel was not initiated and performed in time to correct the problem with the channel. The thrust channel repair was unsuccessful, but the outcome was not monitored long enough to identify variance and take corrective action and perform rework repairs before the trip occurred. Although the thrust channel output was questionable and other machinery condition indicators provided contradicting information to the thrust eddy probes which indicated TX-1400 was not in/near a danger condition and did not require a shutdown, consideration of these contradicting variables did not result in bypassing the vibration system until the accuracy of the thrust channels

36434	Refinery	AM	Closed	Loss	Plant shut down	went to alert state.	Damage	could be corrected and verified.
36434	Richmond, CA - Refinery	4/26/2012 12:15:00 AM	Closed	Loss	Loss of K-1400 / HNC Plant shut down	K-1400 thrust bearing probes (2), one went to danger state and the other probe went to alert state.	Operational Process/Procedures	(1) Hazard Analysis NI. The conduit routing used for the eddy probe cables had an excessive number of elbows without intermediate pull boxes. This was not discovered and corrected. The conduit routing caused the cables and connectors to be damaged when they were pulled into the conduit during installation. Damaged insulation, water and cable contact comprise the voltage drain path. Initially and for years there was no loss of voltage but with time degradation occurred. There was initial undetected damage not affecting voltage and then progressive degradation began -not a sudden loss of signal- which eventually resulted in voltage leakage, drifting of reported axial position from the true position and the turbine trip. The initial cable insulation damage was not detectable once the cable had been pulled into the conduit. Removal of cable for inspection is impractical and counterproductive since it would only add to insulation damage. , (2) Enforcement NI – Corrective Maintenance on the 84VI514Z thrust channel was not initiated and performed in time to correct the problem with this channel. The thrust channel repair was unsuccessful, but the outcome was not monitored long enough to identify variance and take corrective action and perform rework repairs before the trip occurred. Although the thrust channel output was questionable and other machinery condition indicators provided contradicting information to the thrust eddy probes which indicated TK-1400 was not in/near a danger condition and did not require a shutdown, consideration of these contradicting variables did not result in bypassing the vibration system until the accuracy of the thrust channels could be corrected and verified.
36435	Richmond, CA - Refinery	4/25/2012 5:00:00 PM	Investigation In Progress	Loss	Fire on analyzer AI-993	Operations responded to fire at AI-993, 3rd stage H2 purify analyzer to RLOP	Fire/Explosion	(1) Why was there a fire in the analyzer cabinet? Because the root valve was closed but leaked by and the second block valve was still in the open position without a bleeder open. Analyzer has been out of service since 2003 and was slated for replacement, but was not isolated properly. Unable to determine the cause due to the original isolation was done 9 years ago.
36465	Richmond, CA - Refinery	4/24/2012 10:00:00 AM	Closed	Near Loss	Green Card. Catwalk on top of tank overloaded. Location: HazWaste Annex	Green Card. Catwalk on top of tank overloadad with materials while not properly supported, bending catwalk down to tank under load and consequently bending up on the opposite end causing a tripping hazard. Location: HazWaste Annex	NL-Equipment/Property Damage - Equipment Damage	
36483	Richmond, CA - Refinery	4/26/2012 10:00:00 AM	Closed	Loss	T-3076 Mixer Leak	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. . While the operator was checking T-3076 for the 1st fill per the tank checklist it was observed that oil was coming out of the mixer shaft location. About 5 gals of TKN feed type spilled into the concrete primary containment.	Quality	(1) SOS: Maintenance & Inspections Mechanical Integrity: Valve was not listed in OEM parts illustration. Shop left vent valve out., (2) SOS: Training & Procedures: QC/ Install checklist not used during installation onto tank. Checklist roles & Responsibilities not clearly defined. Mechanics overlooked the missing vent valve during installation, (3) -Sidebar Issue. Maintenance & Inspections (Mechanical Integrity): • A second leak was found the next day on a second mixer for tank T-3076: It was reported that a part had been improperly aligned and also lose bolts contributed to this leak. This problem was not identified during the quality inspection and assurance process performed shortly after assembly of mixer • Tank mixer assembly is not pressure tested prior to installation and commissioning into service. Sometimes bolts, screws, and other parts can be jostled during the transportation process. These parts need to be verified in the field before installation.
						INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR		(1) SOS: Maintenance & Inspections Mechanical Integrity: Valve was not listed in OEM parts illustration. Shop left vent valve out., (2) SOS: Training & Procedures: QC/ Install checklist not used during installation onto tank. Checklist roles & Responsibilities not clearly defined. Mechanics overlooked the missing vent valve during installation, (3) -Sidebar Issue. Maintenance & Inspections (Mechanical Integrity): • A second leak was found the next day on a second mixer for tank T-3076: It was reported that a part had been improperly aligned and also lose bolts contributed to this leak. This problem was not identified during the quality inspection and assurance process performed shortly after assembly of mixer.• Tank mixer assembly is not pressure

36483	Richmond, CA - Refinery	4/26/2012 10:00:00 AM	Closed	Loss	T-3076 Mixer Leak	COMPLETE TOP REPORT. . While the operator was checking T-3076 for the 1st fill per the tank checklist it was observed that oil was coming out of the mixer shaft location. About 5 gals of TKN feed type spilled into the concrete primary containment.	Environmental	tested prior to installation and commissioning into service. Sometimes bolts, screws, and other parts can be jostled during the transportation process. These parts need to be verified in the field before installation.
36486	Richmond, CA - Refinery	4/26/2012 12:00:00 AM	Closed	Loss	Oil Spill to Ground at T-3194 Tank	While taking the Heater Circulation pump out of service at T-3194 tank the pump was loto'd and electricly isolated. After deenergization the pump had to be drained. It appeared to the operator to have no pressure on the pump case and the pump was not equiped with a drain valve on the pump case. The bull plug on the pump case was removed as the only other way to drain the system at which time the pump burped gas oil under pressure to containment.	Environmental	(1) Work process failure allowed pump to be installed without valve.. (2) Operator Failed to identify the risk that the system may still be under pressure regardless what was was shown on the pressure guage.
36499	Richmond, CA - Refinery	4/26/2012 12:30:00 PM	Stewardship Review	Loss	Electrical contact with PGE overhead powerline	The task involved the pole topping of the existing pole line for TL/11&12 at Pole 4038. While loading pole pieces, crane operator boomed the crane up close enough to the existing PG&E energized overhead lines to energize the crane. The crane shocked the groundman when he touched the crane.	Injury/Illness	(1) Root Cause: Work package / Permit NI Causal Factors (from TapRoot Analysis): 1.-Critical lift plan not in place 2.-No designated spotter for boom position 3.-Ground man attempts to climb on right rear of crane truck to help lineman with pole 5.- No mitigation taken for 12KV lines, (2) Root Cause: Communication of SPAC NI Causal Factors (from TapRoot Analysis): 1.-Critical lift plan not in place 2.-No designated spotter for boom position , (3) Root Cause: Accountability NI Causal Factors (from TapRoot Analysis): 1.-Critical lift plan not in place , (4) Root Cause: Pre-job briefieng NI Causal Factors (from TapRoot Analysis): 2.-No designated spotter for boom position 3.-Ground man attempts to climb on right rear of crane truck to help lineman with pole 4.-Crane truck operator states that he raised boom without retracting. He was unclear of the position of boom. 5.- No mitigation taken for 12KV lines, (5) Root Cause: No Supervision during work Causal Factors (from TapRoot Analysis): 3.-Ground man attempts to climb on right rear of crane truck to help lineman with pole 4.-Crane truck operator states that he raised boom without retracting. He was unclear of the position of boom. , (6) Root Cause: Human Engineering Causal Factors (from TapRoot Analysis): 4.-Crane truck operator states that he raised boom without retracting. He was unclear of the position of boom.
36505	Richmond, CA - Refinery	4/24/2012 12:00:00 AM	Closed	Near Loss	Communications Board failure affects dispatch control	Communications Board failure affects dispatch control. No failure occured but a break was registered 7 times and restored.	NL-Business Process - Business Process	
36512	Richmond, CA - Refinery	4/26/2012 1:30:00 PM	Closed	Loss	E-1411 head leak	When K-1400 was started, liquid and vapor began to flow through HNC high pressure system. The temperature difference between products caused Channel Head to Shell Head joint to leak hydrocarbon onto the asphalt below. (tube side effluent fr R-1410 to R-1411) (Shell side cracked stock Fr V-1420/E-1504 B&A to F-1500).	Operational Process/Procedures	(1) Equipment Environment Not Considered. A design review by DED and the gasket SME revealed E-1411 is susceptible to low gasket stress and subsequent leakage if; once heated up, the shell section is caused to cool greatly and rapidly with respect to the channel section. In this case the shell flange will contract from cooling while the studs will stay hot (and thermally expanded). This differential growth can greatly lower the stud loads imparted and allow gasket loading to reach low enough levels as to not allow for product containment.
36512	Richmond, CA - Refinery	4/26/2012 1:30:00 PM	Closed	Loss	E-1411 head leak	When K-1400 was started, liquid and vapor began to flow through HNC high pressure system. The temperature difference between products caused Channel Head to Shell Head joint to leak hydrocarbon onto the asphalt below. (tube side effluent fr R-1410 to R-1411) (Shell side cracked stock Fr V-1420/E-1504 B&A to F-1500).	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) Equipment Environment Not Considered. A design review by DED and the gasket SME revealed E-1411 is susceptible to low gasket stress and subsequent leakage if; once heated up, the shell section is caused to cool greatly and rapidly with respect to the channel section. In this case the shell flange will contract from cooling while the studs will stay hot (and thermally expanded). This differential growth can greatly lower the stud loads imparted and allow gasket loading to reach low enough levels as to not allow for product containment.
36522	Richmond, CA - Refinery	4/26/2012 12:00:00 PM	Closed	Near Loss	T-3193 Suct and Fill lines incorrectly tied into the tank.	During the shutdown of T-3193 inspection called about the suction and fill lines configuration. After futher inspection with operation it was determined that the suction and fill pipelines had been incorrectly tied in to the tank. (Fill line-->Swing Line & Suction Line--> Fill line defuser)	NL-Business Process - Business Process	(1) Insufficient QA/QC that led to not identifying the design flaw.
36551	Richmond, CA - Refinery	4/26/2012 5:00:00 AM	Closed	Loss	Misinterpretation of Managers E-Mail	Misinterpretation of Managers e-mail causing the wrong supporting documents to be delivered to him for stewardship activities out in the field. This caused loss of time for him and re-work for me.	Business Process	(1) upon re-reading the e-mail it is clearly written and my mistake.
	Richmond, CA -	4/27/2012 10:00:00			K-1400 seal trap stuck open tripping FCC/RLOP	While setting up the HNC for long loop circulation in an effort to heat up E-1411 evenly and mitigate the chance of a leak, Flare Gas Recovery began to see a significant increase in flow. The Pressure control valve was single blocked again and flow to flare gas did not decrease. Thinking it was the low pressure separator system delayed troubleshooting other systems. Once operations verified it wasn't the Low pressure separation system they continued troubleshooting other areas and found the Seal oil controller on K-1400 stuck	Operational	(1) Why did RLOP and FCC flare totalizers trip? Totalizers tripped due to high flow from K-1400 seal oil traps. Why was there high flow from K-1400 seal oil traps? Seal oil level controller stuck open. Why did the seal oil level controller stick open? The seal oil level controller failer open due to a

36571	Refinery	AM	Closed	Loss	totalizers	open.	Process/Procedures	breakdown.
36601	Richmond, CA - Refinery	4/27/2012 6:30:00 PM	Closed	Loss	Employee got sunscreen in eye	Employee had used sunscreen on face and accidentilly got some in her eyes. Chevron fire was called and responded. Employee was treated by chevron fire utilizing eye wash to clean her eyes. Employee was then released to return to work.	Injury/Illness	(1) Perspiration caused sunscreen to run into eye. Person didn't realize sweat was running down her forehead into her eyes.
36601	Richmond, CA - Refinery	4/27/2012 6:30:00 PM	Closed	Loss	Employee got sunscreen in eye	Employee had used sunscreen on face and accidentilly got some in her eyes. Chevron fire was called and responded. Employee was treated by chevron fire utilizing eye wash to clean her eyes. Employee was then released to return to work.	NL-Injury/Illness - Contractor Injury	(1) Perspiration caused sunscreen to run into eye. Person didn't realize sweat was running down her forehead into her eyes.
36605	Richmond, CA - Refinery	4/27/2012 9:12:00 PM	Closed	Loss	Firefighter hit in mouth by hose coupling	Firefighter was deploying firehose (#1 preconnect) from fire engine (Foam 60). The nozzle coupling of the fire hose struck firefighter in mouth area, causing the loss of two (top front) dental implants	NL-Injury/Illness - Employee Injury	(1) 1) Preconnect hose loops were not long enough for firefighter to grab the hose from the ground level. , (2) 2) Nozzle wasn't secure or placed toward the middle of the crosslay.
36605	Richmond, CA - Refinery	4/27/2012 9:12:00 PM	Closed	Loss	Firefighter hit in mouth by hose coupling	Firefighter was deploying firehose (#1 preconnect) from fire engine (Foam 60). The nozzle coupling of the fire hose struck firefighter in mouth area, causing the loss of two (top front) dental implants.	Injury/Illness	(1) 1) Preconnect hose loops were not long enough for firefighter to grab the hose from the ground level. , (2) 2) Nozzle wasn't secure or placed toward the middle of the crosslay.
36623	Richmond, CA - Refinery	4/28/2012 3:00:00 AM	Closed	Near Loss	13 FC017 was suppose to be closed -6.9 but was open + 6.9	During the start up of the Butamer plant, C-1320 overhead pressure increased from 200 psig to 300 psig (Normal), Flow through FV017 increased to 104 bpd to E-1301(Not normal). The pressure increased on E-1301and the exchanger over pressurized at 360 PSIG and lifted the PRD BU-1303 to the relief vessel V-1360.	NL-Operational Process/Procedures - Safety Systems	(1) Operator failed to confirm the set point input to ensure the proper entry was made into the DCS. 1. Why did "above" happen? The pressure increased on E-1301 2. Why did "1" happen? FV017 flow increased to 104BPD to E-1301. 3. Why did "2" happen? 13FC017 was still open 6.5% (Should have been -6.5% per procedure). 4. Why did "3" happen? Operator attempted to enter -6.5% and actually entered 6.5% into the DCS. 5. Why did "4" happen? Entry was not checked by operator to ensure the correct entry was made into the DCS. 6. Why did "5" happen? CBO made the correct entry onto the keyboard and assumed it was correctly entered but didn't take steps to confirm the screen 7. Why did "6" happen? Operator was busy on start up and made an error.
36637	Richmond, CA - Refinery	4/29/2012 6:00:00 AM	Closed	Near Loss	2.5" guide bar for the mooring line guide broke off and flew forward about 20' nearly hitting an Operator	On April 29, while tying-up the vessel Eugene in Berth #4, the mooring line hanged up on the fender chains, the operator puts a third wrap on the mooring wench. One of the two Operators attending to MK405 was between the vessel and the mooring wrench but not in the line of fire. After the Operator resumed pulling the mooring line, the guide bar snaps and flies 20 feet before falling over the berth and into the water, narrowly missing a second operator that is positioned on the berth to assist the berthing. When the guide bar broke, the rope flipped-up and bounced towards to the operator attending to the mooring wench and struck him on the chin. Was evaluated by Plant Protection and returned to work without restrictions.	NL-Injury/Illness - Employee Injury	(1) No formal inspection of the guide bars conducted., (2) Additional consideration: Portion of guide bar that extends out from wench plate is not reinforced, (3) Additional consideration: The severe corrosion / deteriorated condition of the guide bars were not highlighed during routine inspection, (4) Additional consideration: Risks was not fully recognized and exposed the Operator on the line of fire while tying up the ship
36641	Richmond, CA - Refinery	4/29/2012 12:00:00 AM	Closed	Loss	Visible flame from NISO flare	NISO Flare had a visible and some smoke at 2PM this afternoon. No totalizer trip occurred. Believe it was condensed light ends from NISO blowing down E-767 when it stalled last night. Blew down again this morning at 8 am. Light ends also causing P-283's to gas up operations working through that issue.	Operational Process/Procedures	(1) WHy NISO flare had visible flaming? Light ends in Flare base liberated during heat of the day Why were light ends in the flare base? Light ends in the flare base came from NISO blowing down E-767 due to it being percieved to be stalled WHy did E-767 seem to stall? E-767 seemed to stall Because the column was actually flooded and the column has no delta p alarm. Ops was not aware of the flooding in the column.
36685	Richmond, CA - Refinery	4/25/2012 4:00:00 PM	Closed	Near Loss	Changing Defstan additive, inconsistent information from HES on if this needed permitting	D&R would like to switch from EC5208N to EC5208A additive for Defstan/JP-8. This material is more readily available and more cost-effective. This material was approved to bring in to the JHT through the RI313 process which included Environmental sign offs, this review occurred in the summer of 2011. The ABU proceeded with ordering a truck of this material. However, when the Environmental group perform a review during the MOC review process, it was determined that the napthalene content of the EC5208A material would require a health risk screen or permitting through the BAAQMD. The MOC was reviewed by different people in the Environmental group than the RI313.	NL-Regulatory Compliance - Non Compliance - Air	(1) The 5Why investigation is here: https://collab001-hou.sp.chevron.net/sites/dsgmfgos/LPSOut/RIDocLib/5Why%20report%20Naloe%20Additive.docx The RI313 database is lacking triggers for doing HRSA review. (2) Specialist was trained on HRSA reviews, but did not complete one for this chemical
36686	Richmond, CA - Refinery	4/21/2012 6:30:00 AM	Investigation In Progress	Near Loss	A/C failure caused hi temp in Server Room	A/C failure caused hi temp in TC320 Server Room - On Saturday 4/21 at 6:30 in the morning the A/C unit in TC320 failed and shutdown. This caused the temperature in the room to exceed 100 degrees. The servers in the room shutdown due to the hi temperature in the room. FOS was not notified of the hi temp due because TC320 had not been added to their paging system yet.	NL-Equipment/Property Damage - Equipment Damage	(1) The monitoring on the 3rd floor server room was not set up properly so that the FOS office received notice when the high temperature limit was reached. Why? We have not recently had an issue with the A/C and temperature alarms in that room. Apparently it has not be set properly for quite some time. Why? No testing of the high temp alarm has been conducted. Why? On setup, no testing of the system was done to determine if the high temp alarm would be transmitted to FOS in RTC.
						Was advised on April 26, 2012 that an Ariba invoice from a Standing Contract Vendor was paid on April 4, 2012 and contained an over-billing error (Office Manager position was included in invoice, but Master Contract specifically		(1) What: $10 K over-billed for Office Manager, which isn't a billable position according to the Vendor/Chevron Contract. Why 1: Billed Office Mnger because vendor's Timekeeper received verbal instruction to bill the Office Mgr, than vendor's billing system generated "no rate to match" error code.

36706	Richmond, CA - Refinery	4/26/2012 3:00:00 PM	Closed	Loss	$10K worth of Contractor Billing Errors	prohibits this). Upon further review, discovered the individual occupying this Office Manager position was regularly paid in Maximo in early 2011 as a higher pay grade Craft Apprentice (this individual never worked as a Craft Apprentice and was always an Office Manager). It was also observed that this individual's Maximo craft code was changed from the Craft Apprentice code (when it was regularly billed) into the Office Manager code (billed just twice), then this individual was no longer included in invoices until the fore-mentioned April 4, 2012 billing.	Business Process	Overrode this error code by choosing a different rate. Why 2: Overrode error check with a different rate because vendor's Timekeeper was familiar with the pre-2010 Capital Contract and coupled with the verbal instruction to bill the Office Mgr, the Timekeeper felt it was okay to bill the Office Mgr. Why 3: Researching the cause of the system error code would take more time and over-riding the error code in this manner has usually been the right thing to do.
36734	Richmond, CA - Refinery	4/26/2012 5:00:00 PM	Closed	Near Loss	Missed Intelatrac round CFO 4/26 nightshift - No exception entered	The CFO Operator completed his Intelatrac rounds for 4/26 nightshift and attempted to download them shortly after midnight because there were only 2 functioning units for the T&B section that evening. The CFO operator was trying to ensure that everyone would have access to a handheld until prior to the end of shift. The download failed to reflect nightshift and instead showed up as a late round for 5/26 dayshift. When the Head Operator went to approve the round it would not clear. The Head Operator was not clear on the requirment to enter a corrective action before the end of shift.	NL-Business Process - Business Process	(1) Training is less than adequate to address the critical step to check the date/ shift of data that was downloaded
36769	Richmond, CA - Refinery	4/26/2012 9:00:00 AM	Closed	Near Loss	Green Card. Contractor PFD's look really worn. Location: Long Wharf	Green Card. PFD's are required PPE at the Wharf. Some PFD's worn by contractors (supplied by their company) looked really worn. This is a safety concern in case of rescue: Will it provide enough flotation time to allow for rescue? What is the life expectancy of PFD's? Are they being used correctly and maintained appropriately? Location: Wharf INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT.	NL-Injury/Illness - Contractor Injury	(1) Not given PFD User's Manual, (2) Not given instructions on how to inspect PFDs, (3) RI-380 is not clear on PFD training expectations , (4) Fix equipment in disrepair
36784	Richmond, CA - Refinery	4/30/2012 7:30:00 AM	Closed	Near Loss	Green Card. Bump tester needs repair or replacement. Location: Bldg 214	Green Card. Tried to bump test 2 H2S monitors at Bldg 214 Bump Station and they both failed. I went to the fire station and tested the same 2 monitors and they both passed. Location: Bldg 214	NL-Lessons Learned	
36793	Richmond, CA - Refinery	5/1/2012 10:30:00 AM	Closed	Loss	Company EE aggravated prior non-work related injury to right hand while swinging a hammer. EE was working on K-1171A cylinder repairs.	Company EE aggravated prior non-work related injury to right hand while swinging a hammer. EE was working on K-1171A cylinder repairs. EE seen at clinic and release to personal physician.	Injury/Illness	(1) Company EE aggravated prior non-work related injury to right hand while swinging a hammer. Why did above happen...? 1. While the EE was undoubtly engaged in productive work the EE should / could have better utilized his LPSA for personal risk assessment while swinging the sledge hammer and taken it upon himself to take a break and or handed the hammer off to work partner.
36860	Richmond, CA - Refinery	4/23/2012 2:00:00 PM	Closed	Near Loss	Green Card. Steam leak. Location: D&R 4Cat next to P-3595	Green Card. Steam leak on steam trap piping overhead on trap # 124 and 112 next to P-3595. Location: D&R 4Cat	NL-Injury/Illness - Contractor Injury	
36863	Richmond, CA - Refinery	4/24/2012 3:00:00 PM	Closed	Near Loss	Green Card. Aluminum insulation wrap is coming off. Location: D&R F-3550	Green Card. By F-3550 ground level there is aluminum insulation wrap coming off. The insulation can possibly cut. It's sharp thin aluminum sheeting. Location: D&R F-3550	NL-Injury/Illness - Contractor Injury	
36866	Richmond, CA - Refinery	4/25/2012 9:00:00 AM	Closed	Near Loss	Green Card. A big overhead steam leak. Location: S. Isomax F-330/F-320	Green Card. A big overhead steam leak needs insulation removed and scaffold to be built to get to the leak. Location: S. Isomax F-330/F-320	NL-Environmental - Operational Leak	
36909	Richmond, CA - Refinery	5/2/2012 11:24:00 PM	Closed	Near Loss	V-730 filled over top causing flow to Alky Flare of 7 scfd	V-1441 PSV is leaking to relief. Liquid LPG caused P-730A to gas up filling V-730 over 100%. The temporary spare in place of P-730 did not have the capacity to keep up with the quantity of liquid entering V-730. Liquid LPG in the relief header vaporized and overloaded the capacity of Flare Gas recovery compressors.	NL-Regulatory Compliance - Non Compliance	
36930	Richmond, CA - Refinery	5/1/2012 5:00:00 AM	Closed	Near Loss	Missed Intelatrac / Wharf Lab / Program error	The Intelatrac round for 5/1/12 for the Wharf Lab was missed (Procedure Auditor check). Corrective action was not initially entered.	NL-Business Process - Business Process	(1) Lack of understanding of Intelatrac roles & responsibilities by Operator / Head Operator
36940	Richmond, CA - Refinery	5/2/2012 2:00:00 PM	Closed	Loss	PARTICAL IN EYE	MECHANIC WAS WORKING IN HIS AREA WELDING AND GRINDING. ANOTHER EMPLOYEE CAME TO ASK HIM ABOUT A JOB. HE STOPPED WORKING AND FELT SOMETHING ENTER HIS EYE.	Injury/Illness	(1) DID NOT SEE THE HAZARD, OR THE NEED TO LEAN FORWARD
36956	Richmond, CA - Refinery	4/30/2012 10:00:00 AM	Closed	Near Loss	Green Card. Found liquid leaking down fuel gas line. Location: D&R 4Cat	Green Card. Found liquid leaking down fuel gas line. Location: D&R 4Cat	NL-Environmental - Operational Leak	(1) SOS: Training & Procedures (Communications & Lessons Learned): Liquid Observed Leaking Out of Fuel Gas Line. Contract Mechanic in Area made observation and reported it to operations and supervisor, as expected.Operations investigated and found liquid fill gauge leaking onto fuel gas line. Share non-event near loss to encourage reporting of potential hazard with contractors and operations.
36973	Richmond, CA - Refinery	5/2/2012 12:00:00 PM	Closed	Loss	Missed IntelaTrac Duty	Missed IntelaTrac Duty.	Business Process	(1) Understanding on the monthly duty is less than adequate.
	Richmond, CA -	5/3/2012 6:30:00		Near	Aqueous centrate water leaked from portable frac tank to secondary asphalt containment in Haz Waste	At start of shift, contractor noticed quantity of water with oil sheen was pooled around the centrifuge work area in Haz Waste Annex. Water appeared to be leaking from underneath a portable tank containing centrate water intended for pump off to 1A Separator. Estimated no more than 40 bbls water leaked. Oil	NL-Environmental -	

36977	Refinery	AM	Closed	Loss	Annex area	sheen only, so hydrocarbon estimated < 1bbl.	Spill	
37057	Richmond, CA - Refinery	5/4/2012 5:40:00 PM	Closed	Loss	D&R totalizer trip & possible flaring due to high level in V-1660	D&R totalizer trip & possible flaring event due to S/D of K-242 & 252 caused by a high level in V-1660. V-1660 currently had instrumentation issues on 16LC061 earlier in the day as control valve was in manual operating mode.	Environmental	(1) "FIVE WHY" One Page Report Incident Number Business Unit D&R Location Facility Name Richmond Incident date 5/4/12 Type of Process: Type of Equipment: Team Members: Scott Kawahara Bill Vasalo Incident Description: What: Totalizer trip & possible flaring event due to K-242 & 252 tripping due to a high liquid level in V-242 1st stage KO drum which may have had possible flaring. Where: DHT Plant When: 5/4/12 @ 17:40 How: Bad instrumentation values on V-1660'oil level transmitter via 16LC061 resulting in liquid carry over into 1st stage KO V-242 Both level controllers in manual carried into shift change and at time of K-242-252 trip. Problem Statement (What is the key issue that needs to be addressed?): 16LC061 to be repaired. FIVE WHY'S 1. Why did "above" happen? Verification Totalizer trip and Possible flaring PI002 high pressure 2. Why did "1" happen? High level in V-242 KO Field verification 3. Why did "2" happen? Tripping of K-242-252 Shutdown of K-242-252 4. Why did "3" happen? Bad Instrumentation on 16LC061 showing a bad value @ V-1660 Confirmed by DHT PCO & East Side HO 5. Why did "4" happen? 6. Why did "5" happen? 7. Why did "6" happen? 8. Why did "7" happen? ROOT CAUSE: What was the Root Cause of your Incident? Instrumentation issues on 16LC061 LPS Factor: Factor G: Inadequate Tools or Equipment
37115	Richmond, CA - Refinery	5/7/2012 7:30:00 AM	Closed	Loss	Vehicle backed into overhead electrical extention cord	Contractor vehicle backed into a new installation of an overhead electrical cord. (Was in process of cleaning port-a-potty)	NL - Equipment/Property Damage - Equipment Damage	(1) Area was not accessed properly to identify risks of running cord overhead
37115	Richmond, CA - Refinery	5/7/2012 7:30:00 AM	Closed	Loss	Vehicle backed into overhead electrical extention cord	Contractor vehicle backed into a new installation of an overhead electrical cord. (Was in process of cleaning port-a-potty)	Transportation	(1) Area was not accessed properly to identify risks of running cord overhead
37119	Richmond, CA - Refinery	5/5/2012 1:00:00 AM	Closed	Loss	backed into a yellow pole in the gravel lot out near DHT.	EE was called out after hours on an instrument job for D&R on Friday night 5-4-12. He backed into a yellow pole in the gravel lot out near DHT. It was about 1:00 AM when this occurred. He was off work on Saturday 5-5-12 for company convenience due to the time he left the refinery on Saturday morning	Transportation	(1) "FIVE WHY" One Page Report Incident Number 37119 Business Unit D&R Location Richmond Facility Name Incident date 5/5/2012 Type of Process: Type of Equipment: Team Members: Tony Vink Sylvia Ballard Incident Description: What. MVA Where (location or where in the process): DHT When:5/5/2012 1:00am How: Backing truck up. Problem Statement (What is the key issue that needs to be addressed?): Backed truck into a yellow pole in the gravel lot out near DHT. FIVE WHY'S 1. Why did "above" happen? Verification Did not see the pole. 2. Why did "1" happen? Conditions changed from day to night, did not do a walk around truck before leaving. 3. Why did "2" happen? Long day ready to go home. 4. Why did "3" happen? 5. Why did "4" happen? 6. Why did "5" happen? 7. Why did "6" happen? 8. Why did "7" happen? ROOT CAUSE: What was the Root Cause of your Incident? LPS Factor:
37140	Richmond, CA - Refinery	5/3/2012 8:00:00 AM	Closed	Loss	K-300A loss of lube oil to ashalt grade resulting in K-300 A and B shutdown.	Operations discovered lube oil escaping for K-300A gearbox vent and bearing lube oil return oil vents.	Environmental	(1) At 08:00 on 5/3 operation discovered oil escaping out the atmospheric vents on K-300A gear box and bearing vents. The compressor was immediately shutdown. The likely scenario is that the seal oil traps failed blowing natural gas into the lube oil reservoir, pressuring up the reservoir enough to prevent the atmospheric drains on the gear box and bearing from draining back to the reservoir. The lube oil continued to pump to both the bearing and gearbox until oil began spilling from the vents. We have instructed operation to keep the seal pot return line blocked in back to the lube oil reservoir. Operations will monitor and manually drain the seal pot level as necessary. An earlier test indicated that the seal oil trap level increased at a rate of 4-5 inches an shift. 5-Why.... Why did lube oil escape out vents. Because lube oil tank pressured up Why did lube oil tank pressured up. Because natural gas flowed from the seal oil trap to the lube oil reservoir. Why did the natural gas flow into the reservoir? Because the seal oil trap froze in the open position, allowing natural gas to be routed to the lube oil reservoir. Why did the seal oil trap freeze in the open position? Equipment is old and of obsolete design. Earlier attempt to repair at shop failed after a few days in service
								(1) "FIVE WHY" One Page Report Incident Number #37149 Business Unit Cracking Location Richmond Facility Name

37149	Richmond, CA - Refinery	5/2/2012 8:00:00 AM	Closed	Near Loss	1 SIDECUT GASO line bowed due to temp of stock	Inspections noticed the 3" line in SGRU pipe way was bowed out of position. Inspector notified Ops. That he thought a gasoline line was damaged. It was discovered the 1SIDECUT GASO line was bowed in the pipe way outside the SGRU boundary leading east. DED was called, it was determined the line had grown almost 30inches in the north/south direction, bending the east/west section of line. Several ¾" condensate lines hanging from supports off the north/south run are also bent. DED determined the north/south line expansion was due to thermal growth. Stress calculations were completed by DED and determined line failure was not imminent. A review of MOC 21949 Removing the side cut gaso coolers referred to increase temperature at the pumps, with no change on downstream piping.	NL-Equipment/Property Damage - Equipment Damage	FCC Incident date 5/2/12 Type of Process: S/C Gasoline Type of Equipment: Piping Team Members: Laura Leeds Brian Scalef Nate Tyson Josh Buchanan Tim Wadkins Karla Salomon Mark Materne Incident Description: Inspections noticed the 3" line in SGRU pipe way of the FCC was bowed out of position. Inspector notified Ops. That he thought a gasoline line was damaged. It was discovered the 1SIDECUT GASO line was bowed in the pipe way outside the SGRU boundary leading east. This investigation covers why the line was bowed out of position. FIVE WHY'S 1. Why did "above" happen? The line is bowed out of position due to the thermal growth of the 1035' of piping. 2. Why did "1" happen? The thermal growth of the piping occurred due to the piping originally operated at 100 deg F where thermal expansion would only have been 3-4" of growth over that length from ambient conditions. However, in 2010, the operating temperatures were increased to 350deg F where thermal expansion could be 23" over that length from ambient conditions. The thermal growth of the piping occurred due to the piping being constrained on both ends of the pipe way allowing for only 2" of growth unconstrained over the 1035' of pipe. 3. Why did "2" happen? The temperature increased by 150 deg F as a result of MOC 21949 to remove E-162A/B bundles from service. The bundles were fouled and were expected to fail. The Design Review of the piping system included review of potential overpressure scenario of the piping as a result of the temperature increase. But did not include a flexibility analysis. 4. Why did "3" happen? No flexibility analysis was performed because the temperature increase was not viewed as significant change for off plot piping systems that generally have plenty of unconstrained space available for growth. This step was missed in the design review.
37150	Richmond, CA - Refinery	5/7/2012 2:00:00 PM	Closed	Loss	Worker accidentally hit thumb with a hammer while constructing concrete forms.	Worker was constructing wooden concrete form and hit his thum with a hammer as he attempted to hit a nail.	Injury/Illness	(1) Failure to focus on task at hand
37187	Richmond, CA - Refinery	5/4/2012 10:00:00 PM	Closed	Near Loss	Power supply unit for a DCS HM module malfuntioned, resulting in temp loss of process data.	At around 10:00 PM on 5/4/12 at the U&E Cogen control room, the History Module on the DCS system was "reset" (like a cycle power command), from a possibly from a malfunctioning power supply forcing it to a "Power On" state, rendering it inoperable. This caused the loss of historized process data (trending), followed, soon after by "severe" alarms on 1 through 4 operator Gus stations as they reported loss of communications with the HM.	NL-Business Process - Business Process	(1) Hneeywell History Module (HM) failed Why did HM fail? It appears to have failed due to a loss of power Why did the failure seem to be relate to a powere failure? The failure seemed to be related to loss of power because the node was in the Power On state after the failure.
37187	Richmond, CA - Refinery	5/4/2012 10:00:00 PM	Closed	Near Loss	Power supply unit for a DCS HM module malfuntioned, resulting in temp loss of process data.	At around 10:00 PM on 5/4/12 at the U&E Cogen control room, the History Module on the DCS system was "reset" (like a cycle power command), from a possibly from a malfunctioning power supply forcing it to a "Power On" state, rendering it inoperable. This caused the loss of historized process data (trending), followed, soon after by "severe" alarms on 1 through 4 operator Gus stations as they reported loss of communications with the HM.	NL-Operational Process/Procedures - Safety Systems	(1) Hneeywell History Module (HM) failed Why did HM fail? It appears to have failed due to a loss of power Why did the failure seem to be relate to a powere failure? The failure seemed to be related to loss of power because the node was in the Power On state after the failure.
37196	Richmond, CA - Refinery	5/7/2012 10:00:00 AM	Closed	Near Loss	Green Card. Repaint parking stripes. Location: 91 Gate - Main Lot - Pass Control Side	Green Card. White parking stripes are not visible during wet weather. Repaint stripes. Location: 91 Gate, Main Lot, Pass Control Side	NL-Transportation - Contractor	
37201	Richmond, CA - Refinery	3/23/2012 12:00:00 AM	Closed	Near Loss	Exceeded compliance due date for PHA action Item 17225 for RLOP K-1800 KO drum level Instrumentation	PHA action Item 17225 due date of 3/23/12 exceeded Added man hours required for HES to work with the county to extend the due date.	NL-Regulatory Compliance - Non Compliance	(1) Near Loss – Potential for fines from the county for PSM non-compliance. (1) Why the potential for a fine? Because a PHA action item due date was exceeded. (2) Why was the date exceeded? Because the project was not started early enough to absorb the scope change and unexpected material delays. (3) Why wasn't the project started early enough? Because an I&E engineering resource was not available to start the project earlier. (4) Why were resources unavailable? Because the I&E Lead Engineer (me) did not vocalize a concern about a man power shortage to meet both the RLOP T/A staffing needs and PSM compliance items. (5) Why didn't the lead engineer voice a concern about staff shortage? Because he thought starting the PSM compliance item post T/A would allow sufficient time to complete the project by the due date. (6) Why did the lead engineer think he allocated enough time? RCF – lack of knowledge regarding how big of a contingency should be allowed to address unexpected items when planning for jobs with firm due dates.
								(1) Loss: Conductivity off-spec. Why? Not enough

37229	Richmond, CA - Refinery	5/7/2012 10:00:00 AM	Closed	Near Loss	PMI Cargo Teesta Spirit Conductivity Off-Test	A total of 285 MB of high density diesel was loaded for PMI on the Teesta Spirit starting May 4th at 2:00 and ending May 7th at 12:30. During the load conductivity additive was thought to be injected to a target of 0.20 gal/MB to meet the conductivity specification of 100 ps/m. However, following the departure of the ship the inspector, inspectorate, reported that conducivity of the vessel composite sample was only 37 ps/m. The material loaded met all other specifications.	NL-Quality - Additive Injection (Ext)	conductivity additive was injected. Why? Monitoring of the conductivity additive injection rate was not sufficient. Why? Procedures do not specify to monitor the tank level drop during the load to verify the amount of additive injected., (2) Loss: Conductivity off-spec. Why? Not enough conductivity additive was injected. Why? Monitoring of the conductivity additive injection rate was not sufficient. Why? The online conductivity analyzer did not indicate that the additive inject on rate was too low.
37288	Richmond, CA - Refinery	4/28/2012 10:00:00 AM	Closed	Near Loss	Green Card. Bracket screws are rusty. Location: T-992	Green Card. On T-992 from top of tank on stairs first light pole over stairs is secured to a channel flange (galvanized) support brace. The screw that goes through both sides of the brackets that are secured to channel brace is not stainless and has rusted out (about 85%) almost completely. Extremely high winds rock light back and forth constantly. When bolt breaks, it will cause light to fall and possibly hurt someone. Not if but when (soon) due to location (isolated). Probably no one will get hurt (Do you feel lucky?) Location: T-992	NL-Lessons Learned	
37291	Richmond, CA - Refinery	4/28/2012 10:00:00 AM	Closed	Near Loss	Green Card. Platform grading has rust problems. Location: T-992	Green Card. At the top of the stairway on T-992 the grading on the platform has some serious rust problems. In some areas completely gone, in other areas 40 to 75% rusted out. Then on handrail going down on the 4th step before the second light on the stairs on the underside of the handrail, it is rusted out 3/4" wide by 1 1/2" long. Serious problem if you grab handrail there without gloves on, could get tetanus. Make sure you get your shots first, that way it wont be a recordable, just a first aid. Location: T-992	NL-Lessons Learned	
37292	Richmond, CA - Refinery	5/2/2012 7:45:00 AM	Closed	Near Loss	Green Card. Someone tried to cross the barricade tape. Location: D&R F-3560 Washdown Station	Green Card. While doing a steam cleaning in the ground with barricade tape, somebody tried to cross the barricade tape. Location: D&R F-3560 Washdown Station	NL-Lessons Learned	
37293	Richmond, CA - Refinery	5/8/2012 6:30:00 AM	Closed	Near Loss	Green Card. The crosswalk is poorly lit. Location: B&S (Main St) T125 Gate	Green Card. While driving on Main St., I barely saw a pedestrian crossing the street from T125 (turnstile). The crosswalk is poorly lit especially in the morning. Location: B&S - T125 Gate	NL-Transportation - Company	
37326	Richmond, CA - Refinery	5/9/2012 4:30:00 PM	Closed	Near Loss	Crack in FCC South GRU relief line	Cracking insepctions discovered an appoximately 2" long crack on the FCC south GRU relief header.	NL-Environmental - Operational Leak	(1) 2. Inspection strategy and inspection points were not adequate for predicting this corrosion/failure., (2) 1. Relief line is past original design life.
37344	Richmond, CA - Refinery	5/8/2012 12:00:00 PM	Closed	Near Loss	Green Card - Contractor noticed low hanging wire on petrolite street	While driving on petrolite steet, noticed low hung wire, got in contract with Chevron Safety, who in return contracted Plant Protection and the electrical personal.	NL-Injury/Illness - Contractor Injury	
37345	Richmond, CA - Refinery	5/10/2012 8:10:00 AM	Closed	Near Loss	Driver of a truck gets out of a running vehicle to have a converstation with another person in a roadway.	A stake bed truck and pick up stopped in the middle of the intersection, window to window, in order to have a conversation. The driver of the stake bed truck got out in the intersection in order to carry on the discussion leaving the vehicle running and the door open. Meanwhile, other vehicles had to go around this conference. The pickup eventually went into the tank field by tank 3158 and the stake bed truck proceeded down Main. Note: There was a recent fatality associated with carrying on a conversation in the roadway and exiting a running vehicle.	NL-Injury/Illness - Contractor Injury	
37346	Richmond, CA - Refinery	5/9/2012 12:00:00 AM	Closed	Near Loss	T-991 failed certification because the gas blender comparator engines were not properly reset after routine maintenance	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. Gas blender comparator engines were not properly reset after routine maintenance resulting in T-991 failing certification. The failed certification requires check samples to be sent to an alternate source for verification which in turn causes a delay in acquiring a certificate of analysis.	NL-Business Process - Business Process	(1) SOS: Training & Procedures: Oil change was not in the daily orders Other operators assumed the operator was aware of the weekly job duty. Assumed operator had switched the engines to run after the mechanic.
37354	Richmond, CA - Refinery	5/10/2012 12:00:00 AM	Closed	Near Loss	T-990; off test product sold on pipe line.	Premium gasoline from T-990 was set to sell on the Bay Area Pipe Line (BAPL). Operations noticed that the routine pipe line samples did not match the Certificate of Analysis (COA). Check samples were pulled on the tank and pipe line as well as the retained sample from the COA. The pipe line and tank samples were consistent but differed for the COA and retained sample. T-990 continued to sell after 23:00 when we were aware that sample results exceeded the alloted .5 differential for gravity between the COA and the pipe line samples.	NL-Quality - Product Quality (Ext)	(1) STL did not use Stop Work Authority to shutdown T-990 going to the BAPL even though the BAPL had given permission to keep it going. Not aware that we can refinal tank with a new batch number.
37354	Richmond, CA - Refinery	5/10/2012 12:00:00 AM	Closed	Near Loss	T-990; off test product sold on pipe line.	Premium gasoline from T-990 was set to sell on the Bay Area Pipe Line (BAPL). Operations noticed that the routine pipe line samples did not match the Certificate of Analysis (COA). Check samples were pulled on the tank and pipe line as well as the retained sample from the COA. The pipe line and tank samples were consistent but differed for the COA and retained sample. T-990 continued to sell after 23:00 when we were aware that sample results exceeded the alloted .5 differential for gravity between the COA and the pipe line samples.	NL-Quality - Product Quality (Int)	(1) STL did not use Stop Work Authority to shutdown T-990 going to the BAPL even though the BAPL had given permission to keep it going. Not aware that we can refinal tank with a new batch number.
	Richmond,	5/6/2012			Green Card. Overhead steam leak down to			

37375	CA - Refinery	4:00:00 PM	Closed	Near Loss	walkway. Location: SISO K-1060	Green Card. Overhead steam leak down to walkway needs to be fixed and needs scaffold to get to the leak. Location: S. Isomax K-1060	NL-Lessons Learned	
37380	Richmond, CA - Refinery	5/9/2012 12:00:00 PM	Closed	Near Loss	Green Card. A valve on burne: #26 was leaking. Location: JHT F-247	Green Card. I found a valve on burner #26 was leaking. Smelled fuel gas. Location: JHT F-247	NL-Environmental - Operational Leak	
37381	Richmond, CA - Refinery	5/9/2012 12:00:00 PM	Closed	Near Loss	Green Card. Possible dehydration, heat stress. Location: Refinery	Green Card. It is starting to get really hot! Possible dehydration and heat stress. Location: Refinery	NL-Injury/Illness - Contractor Injury	
37382	Richmond, CA - Refinery	5/9/2012 11:00:00 AM	Closed	Near Loss	Green Card. No spotter. Almost ran into a forklift. Location: Powerhouse	Green Card. Three man in a vehicle didn't use a spotter and almost ran into a forklift. Location: Powerhouse	NL-Transportation - Contractor	
37383	Richmond, CA - Refinery	5/9/2012 12:45:00 PM	Closed	Near Loss	Green Card. Fumes from grinding building up in the shop. Location: 3Dist Weld Bay	Green Card. A worker was grinding/cutting in the shop. Fumes from the job was building up in the weld bay. Location: 3Dist	NL-Lessons Learned	
37384	Richmond, CA - Refinery	5/9/2012 2:30:00 PM	Closed	Near Loss	Green Card. Loose toe board needs welding. Location: SISO K-1060	Green Card. A toe board next to the steam leak is loose and needs some welding work to tie back into the deck. Location: S. Isomax K-1060	NL-Injury/Illness - Contractor Injury	
37385	Richmond, CA - Refinery	5/9/2012 1:30:00 PM	Closed	Near Loss	Green Card. Steam leak. Location: S. Isomax D-1020	Green Card. A steam leak at a fitting needs to be fixed. Please send someone out to get a look at it. Location: S. Isomax D-1020	NL-Environmental - Operational Leak	
37487	Richmond, CA - Refinery	5/11/2012 11:50:00 AM	Closed	Loss	Plant shut down work and equipment failure.	1.K900A hydrocom failed, compressor quit pumping. 2. No working flow meters on HEL Line H2 made it difucult to control loading and flow. 3. K3950 discharge safety failed, lifting prematurely. 4. Relief system overloaded during 5 Rhen depressuring.	Environmental	(1) PRD lifted early
37491	Richmond, CA - Refinery	5/12/2012 8:00:00 AM	Closed	Near Loss	Major Vacuum Leak on Tetra Ethyl Lead System	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT.After making the TEL railcar connection the system was being checked for vacuum leaks and it was discovered during this process the: the railcar flange connection was slightly cocked just enough due to the restricted sprocket action of the temporary connection to pinch only one side of the flange face. This produced an uneven bite (flange connection) which leaked vacuum. The system was only able to establish 10 hg of vacuum due to the leak on a system that typically builds and hold 25 hg. This was a significant leak.	NL-Environmental - Operational Leak	(1) Misalignment between railcar and loading arm flanges due to arm not being flexible and hitting the platform railing, (2) Eductor and Pump do not meet design flow rates
37494	Richmond, CA - Refinery	5/12/2012 2:46:00 AM	Closed	Near Loss	While performing F-731 Manual S/D Quick Test (ISOA7693), F-731 went to min fire.	While performing F-731 Manual S/D Quick Test(ISOA7693), F-731 went to min fire.	NL-Operational Process/Procedures - Safety Systems	(1) F-731 went to min fire while performing quick test. FIVE WHY" One Page Report Incident Number 37494 Business Unit Hydro Location North Isoamax Facility Name ISO-7 Incident date 5/12/2012 Type of Process: Fuel Gas Type of Equipment: F-731 Team Members: Incident Description: What:While performing F-731 Manual S/D Quick Tes, F-731 went to min fire. Where (location or where in the process):ISO-7 F-731 When: 14:46 How: While performing F-731 Manual S/D Quick Tes, F-731 went to min fire. Problem Statement (What is the key issue that needs to be addressed?): F-731 went to Min fire while performing Manual S/D quick test. FIVE WHY'S 1. Why did "above" happen? Verification Outside operator hit the manual shutdown of F-731 2. Why did "1" happen? Thought they were instructed to perform that step of the procedure. 3. Why did "2" happen? Had procedure, were not following along as the test was performed. 4. Why did "3" happen? Following instructions by CO-3, however did not follow procedure. ROOT CAUSE: What was the Root Cause of your Incident? .Outside operators failed to follow along with procedure. LPS Factor:
37503	Richmond, CA - Refinery	5/12/2012 10:10:00 PM	Closed	Loss	Lost HNF bottoms pump due to ground fault at RLOP sub station.	Lost HNF bottoms pump P-1635 due to ground fault at RLOP sub station. This loss of flow caused F-1650 to go to full trip.Ground fault cleared and pump put back on line. F-1550 was resulfed for light off by CFD and burners put back on. Products were routed off test for an hour while plant was restabilized.	Operational Process/Procedures	(1) No reason found for trip or fault. Have had no reacurrance
37512	Richmond, CA - Refinery	5/13/2012 9:20:00 AM	Closed	Near Loss	F-1500 and F1550 minimum fire tripped	F-1500 and F-1550 furnaces tripped to minimum fire, due to loss of air flow. Cause by #16 breaker trip at field mounted electrical panel No. 11-dp-60 located at stanchion 31F.Breaker #16 feeds current to F-1500 Combustion air flow (85ft708, 85ft708A, and 85ft708B) and to f-1550 combustion flow (85ft742, 85ft742A, 85ft742B)	NL-Operational Process/Procedures - Safety Systems	(1) Heavy S/D activity in area of the panel likely lead to accidental tripping of the circuit breaker. Circuit has been checked and no issues with the circuit can be identified.
	Richmond, CA -	5/13/2012 11:02:00		Near	Trip of the RLOP totalizer and flaring on the RLOP	The RLOP totalizer was tripped and there was visible flare. The source of the flow appears to be from RLOP via V-1970. This might be associated with the	NL-Regulatory Compliance - Permit	(1) Flaring was associated with ongoing RLOP S/D activities. Crews were communicating with SISO on room at FGR. The last move to increase flow to relief was made at 10:50 pm. For some reason that can not be explained, 12 minutes later, FGR overpressured. All investigations could not determine

37529	Refinery	PM	Closed	Loss	flare	LNF shutdown.	Exceedance	any additional flow besides the S/D activity.
37585	Richmond, CA - Refinery	5/14/2012 9:50:00 AM	Closed	Loss	SISO Booster Deck Overhead Gantry Crane was being positioned at K-910 when during this process the catwalk made contact with previously staged scaffolding. This bent the vertical staging bar and scratched the catwalk. No personnel injuries.	Overhead Gantry Crane was being positioned by Chevron employee when during this process the catwalk made contact with previously staged scaffolding. This bent the vertical staging bar and scratched the catwalk. No personnel injuries.	Equipment/Property Damage	(1) SISO Booster Deck Overhead Gantry Crane was being positioned at K-910 when during this process the catwalk made contact with previously staged scaffolding. This bent the vertical staging bar and scratched the catwalk. Why did "above" happen? Contract Company Staging EE's set up scaffolding along the travel path of the SISO Overhead Gantry Crane without hanging Caution Flags on the scaffolding and or Warning Tag on the control stating the condition change. Why did "1" happen? Because even though an acceptable practice exists and is technically right, it needs to be improved (improve clarity, cover additional scenario/steps, etc) to ensure the appropriate work force is notified of the condition change i.e. the JHA needs a step added to ensure hazards are flagged on appropriate equipment. , (2) SISO Booster Deck Overhead Gantry Crane was being positioned at K-910 when during this process the catwalk made contact with previously staged scaffolding. This bent the vertical staging bar and scratched the catwalk. Why did "above" happen? Company EE did not recognize hazardous condition change present from scaffolding that had been erected along the travel path of the SISO Overhead Gantry Crane. Why did "1" happen? Because even though an acceptable practice exists (LPSA) and the person was trained...the person operating the overhead crane needed to further commit to the use their LPSA's by using more often, more practice, i.e. more repetition needed to better enable hazard recognition.
37666	Richmond, CA - Refinery	5/10/2012 8:30:00 AM	Closed	Near Loss	Transported P-124 from 465 platform to the machine shop without the shipping tag completely filled out.	P-124 was removed from SISO and sent to the machine shop for repairs. It was noted after being received that the shipping tag was missing MSDS numbers, precautions required and that the "white" hazardous tag section was still attached to the tag. Furthermore there was a small amount of product leaking out of a flange on the pump.	NL-Regulatory Compliance - Non Compliance - Company Policy	(1) Incident Description: Pump was delivered to machine shop with incomplete shipping tag per RI-304 FIVE WHY'S 1. Why did "above " happen? Verification RTD transported pump with shipping tag incomplete and hazardous "white section still on tag. 2. Why did "1" happen? Mechanics place pump on shipping platform with tag incomplete and hazardous "white section still on tag 3. Why did "2" happen? Operations placed shipping tag on pump with missing information and hazardous "white section still on tag. 4. Why did "3" happen? Operations didn't recognize tag was missing information and "white" hazardous tag section needed to be removed 5. Why did "4" happen? Didn't follow RI-304
37667	Richmond, CA - Refinery	5/12/2012 12:00:00 AM	Closed	Near Loss	Unpredictable D&R Hydrogen balance with 6 Cat and NHT S/D's resulting in unpredictable jet and diesel production.	During the transitional phases of the 5 Cat shutdown (5/12 12:01 AM) and NHT shutdown (5/13 12:01AM) we ended up with a lower than predicted hydrogen balance in the southyard. As a result, both the JHT and DHT were near minimum rates on Sunday and into Monday morning. This caused conservative estimates on future jet and diesel productions, causing churn with the supply chain.	NL-Business Process - Business Interruption	(1) No strategy to balance H2 line reliability (4-6MMSCF to keep dry) against minimizing flow (fill out south yard H2 consumers) during a S/D, when HEL H2 was not available.
37672	Richmond, CA - Refinery	5/11/2012 1:45:00 PM	Closed	Near Loss	Notification not given to HES prior to stopping Bioreactor aeration	The air was S/D to the bioreactor aerators to allow a depth survey to be conducted to determine the sludge depth. Flow to the Bay continued for the 4 hours while the air was off. This is allowable under the NPDES permit provided advance notice is given to the RWQCB. Notification to HES by Operations was not given prior to this event resulting in the RWQCB not being notified in advance.	NL-Regulatory Compliance - Non Compliance - Water	(1) Operations did not inform HES of the intent to stop aeration in the Bioreactor prior to the stoppage.
37673	Richmond, CA - Refinery	5/15/2012 12:00:00 AM	Closed	Near Loss	Lost LOTO box key	Key lost to LOTO box. Sometime between the start of the D&R Flare project the key was lost. Unknown time of lost key to box	NL-Operational Process/Procedures - Safety Systems	
37729	Richmond, CA - Refinery	5/11/2012 12:00:00 AM	Closed	Near Loss	Additive shortage	RLP uses HITEC 577 (SKU 266141990) in almost every blend for fast moving finished products. During a heavy promotial time blending and terminalling raised concerns of potential additive shortage that could've resulted in production down time, customer cuts, etc.	NL-Business Process - Business Process	(1) What? Potential production downtime due to shortage of HITEC577 Why? Increased production due to promotional demand resulted in heavy use of additive and planned through APO to trigger purchasing by plant purchaser Why? Plant purchaser leveraged APOPURCH03 to order this additive to support plant production schedule based on supplier lead times although railcars were not arriving as planned Why? The vendor lead-time was not accurately reflected in OCS; the vendor lead time was showing 26 days vs. 90 days. This lead time changed in 2011 from 26 days to 90 days but was not changed in OCS.
37755	Richmond, CA - Refinery	5/16/2012 7:30:00 AM	Closed	Near Loss	No MOC created for change of tank service	Change of tank service T-3074. The service change included converting T-3074 from TKN to FCC feed inport tank.	NL-Business Process - Business Process	(1) LACK OF FOCUS TO GENERATE MOC PRIOR TO THE CHANGE OF SERVICE
	Richmond,	4/8/2012						(1) PM procedures were not adequate to facilitate an effective PM to identify issues prior to causing damage to the frame,

37758	CA - Refinery	12:00:00 PM	Closed	Loss	K-910 S/D due to cracks in the base	K-910 (H2 booster compressor) SD due to cracks in the base, causing H2 production loss.	Equipment/Property Damage	(2) Age related deterioration of the grout cap resulted in separation of the sole plates from it
37802	Richmond, CA - Refinery	5/16/2012 4:45:00 PM	Closed	Loss	Cooling water piping damaged while in the process of moving the K-910 motor stator back with porta-power.	5yr motor PM work was in progress for K-910 motor. During the process there were some insulators that appeared to be loose. A decision was made to move the motor stator back for further inspection. A contract company was requested to disconnect the cooling water piping under the compressor deck. The disconnected piping was then supported by the contract company to prevent unnecessary pipe strain. This positioned the piping flange back together. The Major Machinery Crew did not recognize the piping had been supported after the disconnection since they were monitoring the stator move. During the process of moving the stator with the porta-power the cooling water piping was damaged.	Equipment/Property Damage	(1) Cooling water piping damaged while in the process of moving the MK-910 motor stator back with 2 porta-powers. Why did the above happen? 1. After the motor exchanger/cooler piping flanges were separated the spool / piping was "block supported to prevent pipe strain" and this was not recognized by the compressor crew prior to the move. Why did above happen? Inadequate communication during pre job meeting about how to perform the work. (The crew was focused on the .250 clearance between the stator and rotor and did not account for needing someone below the deck to monitor the move) Root cause was a lack of communication of potential equipment damage during the move which should have been discussed during pre job meeting.
37806	Richmond, CA - Refinery	5/7/2012 12:00:00 AM	Management Review	Near Loss	Transmission of annual property tax data to County lacked information protection	Annually we file a number of reports in spreadsheet, PDF, and document format with the Contra Costa County Assessors office to support the current year requests for information. Some of these items include company confidential information (we are required to provice so no issue there). These documents were sent as email attachments to the correct contact in the Assessors office. Information protection protocal was not followed.	NL-Security - Information Protection Loss - Other	(1) Not familiar with the technology available to secure data with external parties., (2) process not in place to apply new standards to current processes - information protection standards where not applied to procedures - see additional root cause - procedures did not exist, (3) procedures for the process do not exist
37807	Richmond, CA - Refinery	5/17/2012 7:40:00 AM	Closed	Loss	Operator suffered minor cut to finger, from glass sample bottle with chipped neck.	Employee cut his finger, while removing a cork from the neck of a 4OZ size glass sample bottle. Afterwards, employee noticed that the bottle was chipped at the neck, and suffered a minor cut even though he was wearing nitrile exam gloves.	NL-Injury/Illness - Employee Injury	(1) Bottle with chipped neck was distributed through the lab, (2) "FIVE WHY" One Page Report Incident Number 37807 Business Unit Quality Control Div Location Bldg35 Facility Name Richmond Refinery Incident date 5/17/2012 Type of Process: Lab Testing Type of Equipment: Sampling Bottle Team Members: Adam Williams Jr, James Fox Incident Description: What: QCD Lab Operator suffered minor cut to finger from a glass sample bottle with a chipped neck. Where (location or where in the process): Accident occurred at QCD in GC Lab RM 1125. When: Morning of 5/17/2012 at 7:40 am. How: Employee cut his finger, while removing a cork from the neck of a 4OZ size glass sample bottle Problem Statement (What is the key issue that needs to be addressed?): How to increase awareness of the risks involved with the handling glassware at QCD. FIVE WHY'S 1. Why did "above" happen? Verification A sample bottle with a chipped neck was allowed to be distributed thru the lab. 2. Why did "1" happen? Several employees who handled the bottle didn't notice the chipped neck 3. Why did "2" happen? Operators need to conduct closer inspections of glassware for cracks and chips. 4. Why did "3" happen? Sometimes sample tags can obscures clear view of neck of 4OZ bottle. 5. Why did "4" happen? Handling glassware is a routine activity that employees have become overly confident of not getting injured ROOT CAUSE: What was the Root Cause of your Incident? Bottle with chipped neck was allowed to be distributed thru the lab.
	Richmond, CA -	5/17/2012 7:40:00			Operator suffered minor cut to finger, from glass sample bottle with chipped	Employee cut his finger, while removing a cork from the neck of a 4OZ size glass sample bottle. Afterwards, employee noticed that the bottle was chipped at the neck, and suffered a minor cut even though he was wearing nitrile exam		(1) Bottle with chipped neck was distributed through the lab, (2) "FIVE WHY" One Page Report Incident Number 37807 Business Unit Quality Control Div Location Bldg35 Facility Name Richmond Refinery Incident date 5/17/2012 Type of Process: Lab Testing Type of Equipment: Sampling Bottle Team Members: Adam Williams Jr, James Fox Incident Description: What: QCD Lab Operator suffered minor cut to finger from a glass sample bottle with a chipped neck. Where (location or where in the process): Accident occurred at QCD in GC Lab RM 1125. When: Morning of 5/17/2012 at 7:40 am. How: Employee cut his finger, while removing a cork from the neck of a 4OZ size glass sample bottle. Problem Statement (What is the key issue that needs to be addressed?): How to increase awareness of the risks involved with the handling glassware at QCD. FIVE WHY'S 1. Why did "above" happen? Verification A sample bottle with a chipped neck was allowed to be distributed thru the lab. 2. Why did "1" happen? Several employees who handled the bottle didn't notice the chipped neck 3. Why did "2" happen? Operators need to conduct closer inspections of glassware for cracks and chips. 4. Why did "3" happen? Sometimes sample tags can obscures clear view of neck of 4OZ bottle. 5. Why did "4" happen? Handling glassware is a routine activity that employees have become overly confident of not getting injured ROOT CAUSE: What was the Root Cause of your Incident? Bottle with chipped

37807	Refinery	AM	Closed	Loss	neck.	gloves.	Injury/Illness	neck was allowed to be distributed thru the lab.
37810	Richmond, CA - Refinery	5/16/2012 12:00:00 AM	Investigation In Progress	Near Loss	Loss of RLOP/SISO DMC Server	ON 5/16 8am server was found to be not responding. Logging into the server via KVM showed that the server was hung up on initializing RAID controller. Server was booted up and found to have self-rebooted. It was found that one of the four primary hard drives failed and the server was using the global hot spare. The reboot was due to a hardware fault during hot spare rebuild. Some of the firmware was found to be out of date as well. Server was rebooted again after troubleshooted and controllers started up on 5/17.	NL-Business Process - Business Interruption	(1) Suffered 2 drive logical failure. This caused the server to reboot. After rebooting the server hung up and needed to be hard reset. WHY? Needed to reboot server to investigate. Faulty drive was rebuilt after investigation. WHY? Firmware was also found to be out of date by one version from investigation. Firmware was left at current revision. Out of date firmware is not believed to have contributed to the failure. WHY? Server is 6+ year old. Drives and hardware are past MTBF. WHY? Funding unavailable to replace APC servers. WHY? Waiting for global project to replace APC servers. This project has been delayed serveral times.
37828	Richmond, CA - Refinery	5/7/2012 5:30:00 AM	Closed	Near Loss	Green Card. Poor visibility. Location: Gate 91	Green Card. As I turned into Gate 91, there was a car in front of me that was almost in a head-on accident with an oncoming car exiting Gate 91. I have mentioned this before. Not only is the visibility poor due to darkness but the white & yelow lines on road are barely visible. You can't tell you're in the wrong lane until it's almost too late. We need to either put more lighting on road or put new paint down. I feel it's only a matter of time before there is an accident. Location: Gate 91	NL-Lessons Learned	
37830	Richmond, CA - Refinery	5/10/2012 12:30:00 PM	Closed	Near Loss	Green Card. Nails and screws on ground. Location: Behind CTR/Boiler Shop	Green Card. Nails and screws on ground. Trailers, service trucks and forklifts getting punctured tires constantly. Location: Behind CTR/Boiler Shop	NL-Equipment/Property Damage - Equipment Damage	
37831	Richmond, CA - Refinery	5/10/2012 11:00:00 AM	Closed	Near Loss	Green Card. Soiled coveralls and PPE. Location: Cafeteria	Green Card. Numerous employees/contractors in cafeteria with soiled coveralls and PPE. Personnel sit at tables contaminating tables and chairs with unknown chemicals. Others sit in these chairs transferring unknown chemicals onto their personal clothes. Location: Cafeteria	NL-Lessons Learned	
37833	Richmond, CA - Refinery	5/11/2012 1:00:00 PM	Closed	Near Loss	Green Card. A lot of cracks/sink holes. Location: RLOP	Green Card. There are a lot of cracks and sink holes throughout RLOP. Marking paint is good for tripping hazards but not for sink holes. I feel that during shutdowns when foot traffic is high we should get bags of cut-back (temp asphalt) to fill holes. This will be a good remedy for injuries and temp asphalt comes in small 15lb bags which would make an efficient quick fix. Location: RLOP	NL-Injury/Illness - Contractor Injury	
37835	Richmond, CA - Refinery	5/12/2012 2:00:00 AM	Closed	Near Loss	Green Card. Need to implement a plan to expedite cleanups. Location: RLOP	Green Card. There was a spill on surface that required immediate attention. Went to get citri-kleen but tank was empty. Instead of having to call and wait for new tank to be ready, could we implement some sort of plan to expedite cleanups and safety? Maybe have a tank on both sides or ends. Especially in RLOP which is known for slippery chemical spills. Location: RLOP	NL-Lessons Learned	
37836	Richmond, CA - Refinery	5/14/2012 7:00:00 AM	Closed	Near Loss	Green Card. Low hanging board on staging. Location: TK-992 (TAR)	Green Card. On Tank 992, had to move to another entry. Manway on backside of ladder was under staging boards. When climbing up or down, people would bump their heads. So I did an LPSA and decided to move the staging board over and out of the way to make it safe to climb up or down the ladder without any potential injury or problems of slipping caused by low-hanging board on the staging or the grating	NL-Injury/Illness - Contractor Injury	
37839	Richmond, CA - Refinery	5/14/2012 12:00:00 AM	Closed	Loss	damage to boiler insulation/refractory, added cost to boiler SD	On 5/14/12 ops discovered #3 Boiler damage to the boiler skin, insulation and brickwork on the rear mud-drum area. Insulation & brickwork collapsed which fell to grade level exposing many steam tubes affecting draft and stack O2 levels. We shutdown the boiler on 5/15 to minimize further damage and cleanup the possible asbestos pieces that fell to grade.	Equipment/Property Damage	(1) The boilers are 75 years old and deterioition of the exterior steel has corroded thru and lost support for the insulation.
37843	Richmond, CA - Refinery	5/17/2012 2:10:00 PM	Closed	Near Loss	Non-Work related health issue	EE was transported off site by ambulance for a non-work related health issue. While at the clinic for an evaluation, the clinic made the determination that the EE needed to be transported by ambulance to off sight medical facility.	NL-Injury/Illness - Employee Injury	
37932	Richmond, CA - Refinery	5/18/2012 6:00:00 PM	Closed	Near Loss	working without a quilified HO	Last Night 18 May 2012, an operator was forced to work as an HO when he was not qualified for the position. There was a force for vacation for 2 months and the dates were not covered. They were covered when an HO came back off of leave and then was forced in the next two nights. He ended up calling in sick for the forces, leaving the crew short. We sent an operator home to come back that night to cover the board job that is needed. Making one operator go home after working 9 hr. off for 8 then work another 9 hours. Because of this, it forced the board operator to work 16 hours. This same incident occured again the following night shift.	NL-Regulatory Compliance - Non Compliance	
	Richmond, CA -	5/18/2012 6:00:00		Near	working without a quilified	Last Night 18 May 2012, an operator was forced to work as an HO when he was not qualified for the position. There was a force for vacation for 2 months and the dates were not covered. They were covered when an HO came back off of leave and then was forced in the next two nights. He ended up calling in sick for the forces, leaving the crew short. We sent an operator home to come back that night to cover the board job that is needed. Making one operator go home after working 9 hr. off for 8 then work another 9 hours. Because of this, it forced the board operator to work 16 hours. This same incident occured again	NL-Business Process	

37932	Refinery	PM	Closed	Loss	HO	the following night shift.	- Business Process	
38017	Richmond, CA - Refinery	5/21/2012 10:30:00 AM	Closed	Loss	Pickup truck contacted guard rail	While passing by a vac truck on SP Hill Rd by T-952 pickup truck contacted guard rail on the passenger side of the truck causing minor damage to the truck.	Transportation	(1) Driver thought he had enough room to make it through but could not see right side of truck from driver seat to confirm
38022	Richmond, CA - Refinery	5/21/2012 1:30:00 PM	Closed	Loss	Pin hole leak 8 plant NH3 line	Pin hole leak on 1 1/2 " pipe up strem of LC-831 and downstream of E-831	Equipment/Property Damage	(1) Piping design promotes turbulence by allowing socket welded flanges in a highly corrosive system.
38028	Richmond, CA - Refinery	5/21/2012 9:60:00 AM	Closed	Loss	Sub-Contractor ran over EDMUD valve box.	Sub-contractor ran over a valve box which was on the shoulder of Western Dr. As a result the walls of the valve box was broken causing a plastic nipple on a air valve to crack.	Equipment/Property Damage	(1) Sub-Contractor park in front of the valve box which was located off Western Dr. He had noticed the box when he arrived but forgot about it when he was pulling away.
38032	Richmond, CA - Refinery	5/21/2012 3:00:00 PM	Closed	Loss	3.5 BBLS OF JET MATERIAL SPILLED INTO SECONDARY CONTAINMENT WHILE PREPAINING THE 14 GAS FOR LINE REPAIRS	In preparation of the scheduled 14 gas line repairs for maint a section of the 14 gas line which was previously used for JP-5 was isolated at about 12PM. This section of line has been a dead leg since we shutdown the jet blending facilities more than 10 years ago. Part of the plan was to drain the 60 foot section of line, since we identified the line would not be have sun relieve protection. However the low point bleeder on the dead leg portion of the line was plugged. At about 1500H, the leak was observed coming under Midway St.	Loss of Containment	(1) Past practice of using a non-standard pipe sleeve (used an old pipe as a sleeve) was less than adequate and resulted to accelerated corrosion of buried pipelines, (2) Additional Consideration: Mothballing scheme that was implemented on the JP5 facility was less than adequate. Vessels still have clay materials and lines were not emptied / not water washed , (3) Reinforce the use of SWA for any deviation on approved procedures.
38032	Richmond, CA - Refinery	5/21/2012 3:00:00 PM	Closed	Loss	3.5 BBLS OF JET MATERIAL SPILLED INTO SECONDARY CONTAINMENT WHILE PREPAINING THE 14 GAS FOR LINE REPAIRS	In preparation of the scheduled 14 gas line repairs for maint a section of the 14 gas line which was previously used for JP-5 was isolated at about 12PM. This section of line has been a dead leg since we shutdown the jet blending facilities more than 10 years ago. Part of the plan was to drain the 60 foot section of line, since we identified the line would not be have sun relieve protection. However the low point bleeder on the dead leg portion of the line was plugged. At about 1500H, the leak was observed coming under Midway St.	Environmental	(1) Past practice of using a non-standard pipe sleeve (used an old pipe as a sleeve) was less than adequate and resulted to accelerated corrosion of buried pipelines, (2) Additional Consideration: Mothballing scheme that was implemented on the JP5 facility was less than adequate. Vessels still have clay materials and lines were not emptied / not water washed , (3) Reinforce the use of SWA for any deviation on approved procedures.
38040	Richmond CA - Refinery	5/21/2012 10:15:00 PM	Closed	Loss	Loss of FCC electrical breaker #149 which resulted in the loss of critical equipment.	At 2015 the FCC unit experienced an electrical problem on breaker 148. The loss of equipment associated with this breaker required a reduction in feed rates until the plant could be stabilized and the issue resolved.	Operational Process/Procedures	(1) FCC operators called the Utilities DHO reporting loss of power to MCC-9, located on Transformer Bank 148. The DHO found the main feeder for MCC-9 in the open position, found Utilities breaker 148-1 in the open position and found the breaker for MP-113C in the open position. None of the three open breakers had any "trip" indication on their protective device. The MCC-9 breaker's trip unit battery was dead so it could not show a trip indication. The battery maintains the trip indication once the circuit breaker opens. Utilities STL contacted Utilities OA for assistance. The maintenance on-call supervisor called two electricians to help with the troubleshooting and restoring of power to switchgear at MCC-9. The electricians performed megger testing of all motor feeders, bus, and switchgear. All testing showed no indication of any fault on the system. Utilities began restoring power beginning with the 480V switchgear follow by the 480V MCC-9. Once normal power was restored, Operations began returning essential equipment to service. Non-essential equipment was tested on dayshift and returned to service. Motor tests were performed on MP-113C on dayshift. The motor tested good and was started without incident. No root cause could be identified. There has been no loss of equipment since the system was returned to normal service. The one unknown is the condition of MCC-9 feeder breaker. The trip indication battery was dead. A replacement battery was installed as the equipment on TX Bank 148 was returned to service.
38102	Richmond CA - Refinery	5/17/2012 3:30:00 PM	Closed	Near Loss	Green Card. Multiple boards on walkway are rotten. Location: #1 Pump Station, 10' N of MP-101	Green Card. While carrying material for my job, I noticed that multiple boards on the walkway are rotten. Upon further review, the supports underneath the walkway are rotting as well. Location: #1 Pump Station, 10' North of MP-101	NL-Injury/Illness - Contractor Injury	
38106	Richmond CA - Refinery	4/17/2012 12:00:00 AM	Closed	Loss	RIC/Cracking/Alky/V-1440 Lost	V-1440 (Acid Wash Drum) Electrostatic Precipitator went to ground (failed) on March 9, 2012. Unit was shut down to open, inspect and repair the ESP on April 12, 2012 with feed in on April 19, 2012	Business Process	(1) The insulators were were approximately 10 years old. Age related degradation (Casual Factor 1), (2) Flow is lost to the ESP insulator housing for 40 hours (Casual Factor 3), (3) No corrective actions were taken to ensure OEM evaluation from 2000 S/D were noted and acted upon to prevent future failures of the insulators. (Casual factor 2), (4) Position of the rag layer is unknown in the vessel (Assumption Casual Factor 4)and Existing procedure to remove rag layer is not adquate to ensure rag layer is gone. Since this causal factor cannot be factually tied to the root cause of this failure, it is only considered in this investagation as an area for improvement in order to avoid future failures of the ESP.
								(1) 1. Why did K-930 1st stage cylinder get hot? A 1st stage

38107	Richmond, CA - Refinery	5/22/2012 2:00:00 PM	Closed	Loss	K-930 hot 1st stage discharge	Shortly after placing K-911C back in service after a filter change out, K-930 1st stage dischage tempeture jumped, exceeding 400F. This required K-930 to be shutdown.	Equipment/Property Damage	cylinder discharge valve was damaged 2. Why was the discharge valve damaged? The discharge valve was damaged because it was plugged up with hydrated iron chloride material 3. Why was the discharge valve plugged with hydrated iron chloride material? Inadequate treating for chlorides upstream in C-960 chloride scrubber. Iron scale in piping systems and chlorides combine to form iron chloride material 4. Why was there inadequate treating for chlorides in C-960? The level transmitter LT9602 and level indication LI9602 were providing erroneous information. By way of operating C-960 with poor level indication, dumping / charging of caustic levels were incorrectly performed – leading to loss of caustic level in C-960. This resulted in a failure to remove chlorides in the H2 stream. 5. Why would an Operator not know that there was inadequate treating for chlorides in the H2? The H2 is not routinely sampled and tested for chlorides (Draeger tube) downstream of C-960, and there is no dedicated sample point. 5A. (from 3) Why was the discharge valve plugged with hydrated iron chloride material? A small volume of water in the piping system is sufficient to break loose material that has accumulated on the pipe walls. 6A. Why was there water present in the piping system? Water remained in the piping following commissioning of K-911C filter coalescer. 7A. Why did water remain in the system following commissioning of K-911C? Water accumulated in piping between equipment block valves with K-911C out of service for filter change 8A. Why did water accumulate in the piping? There is no procedure for commissioning K-911C. For example, a procedure would indicate valve orientation, blow down points, where to blow down piping, etc. 9A. Why was there no procedure to commission K-911C? The MOC process at the point where K-911C was installed did not recognize the risk to downstream equipme
38110	Richmond, CA - Refinery	5/21/2012 10:00:00 AM	Closed	Loss	Drill into miss identified utility pipeline (identified on ISO drawing as Dead Sewer Line)	During the Capital project job to modify the RDC Pipeway, a miss identified construction drawing showed a fresh water line as a dead sewer line. The line was painted orange for demo and cut tape was applied in preparation to verify pipeline condition. Contractor with operation standing by drilled into the line assuming that it was a sewer line as indicated on the ISO drawings. After drilling the line fresh water came out the drilled hole and was immediately plugged with a tapered plug.	Operational Process/Procedures	(1) (1) Drawing in execution package mis identified the fresh water line as a sewer line. , (2) 2) No positive isolation by Operations before releasing line . (3) ((3) Change of conditions were not effectively communicated in several areas
	Richmond, CA -	5/21/2012 12:00:00	Stewardship		Natural gas release during commission of new flare	During commesion of natural gas system and the in-line filters for F3950 a low point drain valve was left in the open position and was not identified when the system was filed walked. This allowed natural gas to vent through the low point		(1) 1. Why was hydrocarbon vented to atmosphere? A drain valve was left in the open position. The natural gas sub system was being put in service as part of the F-3930 recommissiong project 2. Why was the drain valve left in the open position? The natural gas system was commissioned without verifying that all valve line ups were correct to avoid unintended flow to the flare 3. Why was the system commissioned without verifying all valve line ups were correct? A thorough field walk and review to understand the system did not occur 4. Why did a thorough field walk not occur prior to commissioning? The Operator was primarily focused on checking bleeders and vents to atmosphere during his field walk and didn't understand the new line routing which tied the open drain valve into the flare (previously drained to pad). He also assumed that others working the project had checked line ups 5. Why didn't the Operator take the time to understand the system and walk it down himself thoroughly to ensure all line ups were correct? In the past this had been done and no incident occurred (Factor B) 5A. (from 4) Why wasn't it clear if a thorough field walk and line up check had been completed? An Operational Readiness Review Checklist (ORRC) and yellow line review of this sub system had not been completed. The Management of Change (MOC) for this sub sytem had also not been signed off in the database 6A. Why was an ORRC and documented yellow line review not completed? Team didn't understand these to be required for subsystem commissioning. The plan was to complete the ORRC as part of the final Pre-S/U Safety Review (PSSR) prior to full project commissioning or turnover. Yellow line reviews are considered a best practice for verifying the integrity of complex systems as part of the final PSSR process 7A. Why are ORRCs and yellow line reviews not required prior to commissioning subsystems? In the past sub systems

38111	Refinery	AM	Review	Loss	F3930	drain into the idle flare.	Loss of Containment	associated with projects have been commissi
38111	Richmond, CA - Refinery	5/21/2012 12:00:00 AM	Stewardship Review	Loss	Natural gas release during commission of new flare F3930	During commission of natural gas system and the in-line filters for F3950 a low point drain valve was left in the open position and was not identified when the system was filed walked. This allowed natural gas to vent through the low point drain into the idle flare.	Environmental	(1) 1. Why was hydrocarbon vented to atmosphere? A drain valve was left in the open position. The natural gas sub system was being put in service as part of the F-3930 recommissiong project 2. Why was the drain valve left in the open position? The natural gas system was commissioned without verifying that all valve line ups were correct to avoid unintended flow to the flare 3. Why was the system commissioned without verifying all valve line ups were correct? A thorough field walk and review to understand the system did not occur 4. Why did a thorough field walk not occur prior to commissioning? The Operator was primarily focused on checking bleeders and vents to atmosphere during his field walk and didn't understand the new line routing which fled the open drain valve into the flare (previously drained to pad). He also assumed that others working the project had checked line ups 5. Why didn't the Operator take the time to understand the system and walk it down himself thoroughly to ensure all line ups were correct? In the past this had been done and no incident occurred (Factor B) 5A. (from 4) Why wasn't it clear if a thorough field walk and line up check had been completed? An Operational Readiness Review Checklist (ORRC) and yellow line review of this sub system had not been completed. The Management of Change (MOC) for this sub sytem had also not been signed off in the database 6A. Why was an ORRC and documented yellow line review not completed? Team didn't understand these to be required for subsystem commissioning. The plan was to complete the ORRC as part of the final Pre-S/U Safety Review (PSSR) prior to full project commissioning or turnover. Yellow line reviews are considered a best practice for verifying the integrity of complex systems as part of the final PSSR process 7A. Why are ORRCs and yellow line reviews not required prior to commissioning subsystems? In the past sub systems associated with projects have been commissi
38154	Richmond, CA - Refinery	5/17/2012 8:00:00 AM	Closed	Near Loss	JP8 injection PLC fault, Math overflow error	JP8 injection PLC experienced a fault and would not process. Fault indicators in the processer indicated a math overflow error. Had the potential of delaying cargo load to vessel at the Longwharf.	NL-Business Process - Business Process	(1) Did not discuss this with design contractor. FIVE WHY'S 1. Why did "above " happen? Math overflow in PLC 2. Why did "1" happen? some unidentified value in the PLC dropped out of calculation range. 3. Why did "2" happen? Possibility of division by 0 was not expected or anticipated 8. Why did "7" happen?
38154	Richmond, CA - Refinery	5/17/2012 8:00:00 AM	Closed	Near Loss	JP8 injection PLC fault, Math overflow error	JP8 injection PLC experienced a fault and would not process. Fault indicators in the processer indicated a math overflow error. Had the potential of delaying cargo load to vessel at the Longwharf.	NL-Quality - Additive Injection (Int)	(1) Did not discuss this with design contractor. FIVE WHY'S 1. Why did "above " happen? Math overflow in PLC 2. Why did "1" happen? some unidentified value in the PLC dropped out of calculation range. 3. Why did "2" happen? Possibility of division by 0 was not expected or anticipated 8. Why did "7" happen?
38182	Richmond, CA - Refinery	5/22/2012 2:00:00 PM	Closed	Near Loss	Green Card. Repair handrail. Location: 214 Main Exterior Ramp	Green Card. While using the left handrail and descending the exterior ramp, an installer felt the rail crack under his hand. This rail is unsafe and needs to be replaced. The wood on the entire ramp is spongy and both rails show signs of wood rot. The ramp needs to be repaired before it is safe to use again. Location: 214 Main Exterior Ramp	NL Injury/Illness - Employee Injury	
38188	Richmond, CA - Refinery	5/23/2012 11:45:00 AM	Closed	Near Loss	Seal Injection design concern	Seal Injection for control valves, using Flowserve 400-D Hydraulic Handgun. Design Engineering and Maintenance should review if sealant packing method, using 400-D Sealant Gun, is safe. Sealant gun can pressurize to 11000 psi. Are sealant port fittings rated to 11,000 psi	NL-Lessons Learned	
38206	Richmond, CA - Refinery	5/21/2012 12:00:00 AM	Closed	Near Loss	Radio Communication very unreliable	Communication system got busied up and calls were dropped.	NL-Business Process - Business Interruption	
38206	Richmond, CA - Refinery	5/21/2012 12:00:00 AM	Closed	Near Loss	Radio Communication very unreliable	Communication system got busied up and calls were dropped.	NL-Equipment/Property Damage - General Liability	
38255	Richmond, CA - Refinery	5/23/2012 3:00:00 PM	Fact Gathering	Loss	gasket material not available on site when needed for K-930 cylinder repairs	K-930 was SD on high temperature on #3 cylinder. A large amount of debris was found in K-930 1st stage cylinders. Compressor crew is working around the clock to clean up and replace valves on both #1 and #3 cylinders. During repairs it was found that we do not have head gaskets in stock. This will delay the repair considerable and is costing the refinery $200-250M per day. The gaskets are storehouse stock items and have a low limit level at which they should have been reordered.	Equipment/Property Damage	

38274	Richmond, CA - Refinery	5/23/2012 1:30:00 PM	Closed	Near Loss	A concern was raised about the method being used to raise a steel rebar cage.	The crew was lifting a 300 # rebar cage with a come-along when it became off centered which caused it to slowly roll to the right and rest against a guy wire. The top of the cage was about 3 feet off the ground. Tag lines were in place to help control the lift.	NL-Business Process - Business Interruption	(1) "FIVE WHY" One Page Report Incident Number #38274 Business Unit Blending & Shipping Location Office Hill Facility Name Incident date 5/23/12 Type of Process: Type of Equipment: Team Members: Ron Brikovich, Mike Martin, Greg Goebel Sr. Incident Description: What: The crew was lifting a 300 # rebar cage with a come-along when it became off centered which caused it to slowly roll to the right and rest against a guy wire. The top of the cage was about 3 feet off the ground. Tag lines were in place to help control the lift. Where (location or where in the process): Office Hill When: May 23, 2012 How: The cage became off center because the relationship between a nearby existing utility pole and where we rigged it was off center to the hole. Problem Statement (What is the key issue that needs to be addressed?): Use of a Utility Pole for rigging purposes. FIVE WHY'S 1. Why did "above" happen? Verification The rigging was off center to the hole. 2. Why did "1" happen? This was the location designated by the engineer of record as to where the Homeland Security equipment was to be installed. 3. Why did "2" happen? We couldn't get equipment into the remote location and opted not to use manual labor to set the cage to prevent potential injury to personnel. 4. Why did "3" happen? We couldn't mobilize any equipment because the spot where the cage was to be set was surrounded by utility lines, guy wires and located on a landing pad at the side of Office Hill. 5. Why did "4" happen? We used a nearby utility pole to rig off of. We opted for this technique because previously we were successful performing the task by rigging off a nearby tree. This is a common practice used outside the refinery by Professional Linemen. 6. Why did "5" happen? 7. Why did "6" happen? 8. Why did "7" happen? ROOT CAUSE: What was the Root
38274	Richmond, CA - Refinery	5/23/2012 1:30:00 PM	Closed	Near Loss	A concern was raised about the method being used to raise a steel rebar cage.	The crew was lifting a 300 # rebar cage with a come-along when it became off centered which caused it to slowly roll to the right and rest against a guy wire. The top of the cage was about 3 feet off the ground. Tag lines were in place to help control the lift.	NL-Operational Process/Procedures - Safety Systems	(1) "FIVE WHY" One Page Report Incident Number #38274 Business Unit Blending & Shipping Location Office Hill Facility Name Incident date 5/23/12 Type of Process: Type of Equipment: Team Members: Ron Brikovich, Mike Martin, Greg Goebel Sr. Incident Description: What: The crew was lifting a 300 # rebar cage with a come-along when it became off centered which caused it to slowly roll to the right and rest against a guy wire. The top of the cage was about 3 feet off the ground. Tag lines were in place to help control the lift. . Where (location or where in the process): Office Hill When: May 23, 2012 How: The cage became off center because the relationship between a nearby existing utility pole and where we rigged it was off center to the hole. Problem Statement (What is the key issue that needs to be addressed?): Use of a Utility Pole for rigging purposes. FIVE WHY'S 1. Why did "above" happen? Verification The rigging was off center to the hole. 2 Why did "1" happen? This was the location designated by the engineer of record as to where the Homeland Security equipment was to be installed 3. Why did "2" happen? We couldn't get equipment into the remote location and opted not to use manual labor to set the cage to prevent potential injury to personnel. 4. Why did "3" happen? We couldn't mobilize any equipment because the spot where the cage was to be set was surrounded by utility lines, guy wires and located on a landing pad at the side of Office Hill. 5. Why did "4" happen? We used a nearby utility pole to rig off of. We opted for this technique because previously we were successful performing the task by rigging off a nearby tree. This is a common practice used outside the refinery by Professional Linemen. 6. Why did "5" happen? 7. Why did "6" happen? 8. Why did "7" happen? ROOT CAUSE: What was the Root
38282	Richmond, CA - Refinery	5/24/2012 11:20:00 AM	Closed	Near Loss	Allergy relief of unkown irritation.	Contractor was prepping pipe for paint on the T 3076 Line. At Lunch time a co-worker noticed that the eye brow of subject employee was swollen. So they informed their supervisor and made the call to the Construction Rep and said that they wanted to go to Chevron clinic to be checked out.	NL-Injury/Illness - Contractor Injury	
38282	Richmond, CA - Refinery	5/24/2012 11:20:00 AM	Closed	Near Loss	Allergy relief of unkown irritation.	Contractor was prepping pipe for paint on the T 3076 Line. At Lunch time a co-worker noticed that the eye brow of subject employee was swollen. So they informed their supervisor and made the call to the Construction Rep and said that they wanted to go to Chevron clinic to be checked out.	NL-Lessons Learned	
	Richmond,	5/24/2012				Chevron employee in the Strategy and Long Range Planning group was stung		

38289	CA - Refinery	1:00:00 PM	Closed	Loss	Chevron EE stung by bee on hand	on the left hand by a bee that was on a chair in an office on the 2nd floor of the Admin Building	NL-Injury/Illness - Employee Injury	
38289	Richmond, CA - Refinery	5/24/2012 1:00:00 PM	Closed	Loss	Chevron EE stung by bee on hand	Chevron employee in the Strategy and Long Range Planning group was stung on the left hand by a bee that was on a chair in an office on the 2nd floor of the Admin Building	Injury/Illness	
38329	Richmond, CA - Refinery	5/25/2012 10:00:00 AM	Closed	Near Loss	LOTO box for P-1165 was missing operations key.	LOTO box for P-1165 was missing operations key.	NL-Operational Process/Procedures - Safety Systems	
38360	Richmond, CA - Refinery	4/9/2012 9:00:00 AM	Closed	Loss	A plug was left uninstalled in a pinion bearing during last year's overhaul performed outside repair shop. The plug is installed in a port connected to the pressurized oil gallery on the low speed output side of the gear. This was the cause of the internal leakage and inability to hold pressure in the oil gallery. This a warranty repair.	A plug was left uninstalled in a pinion bearing during last year's overhaul performed outside repair shop. The plug is installed in a port connected to the pressurized oil gallery on the low speed output side of the gear. This was the cause of the internal leakage and inability to hold pressure in the oil gallery. This a warranty repair.	Quality	(1) Lack of Lufkin shop procedure for rebuilt bearings
38636	Richmond, CA - Refinery	5/28/2012 8:07:00 AM	Closed	Near Loss	Unauthorized key holder opened the locked cabinet containing the PMI analyzer guns.	An unauthorized key holder had opened the locked cabinet containing the PMI analyzer gun which are regulated radioactive equipment by the State of California –Department of Public Health; CA code of Regulations, Title 17, Section 30253. INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT.	NL-Regulatory Compliance - Non Compliance - Company Policy	(1) No key control process in place for access to PMI cabinet, (2) The Niton PMI analyzer technicians did not always adhere to the policy to ensure the analyzers were returned to the cabinet immediately after use
38643	Richmond, CA - Refinery	5/30/2012 12:00:00 AM	Closed	Loss	Lost key to LOTO BOX	Lost key to LOTO box	Business Process	(1) Key not put in LOTO box
38680	Richmond, CA - Refinery	5/24/2012 12:00:00 PM	Closed	Near Loss	Contract employee found without SSE sticker on hardhat.	Employee found working without SSE sticker on hardhat.	NL-Lessons Learned	
38682	Richmond, CA - Refinery	5/30/2012 12:30:00 PM	Closed	Loss	EE was hit on the finger by a bolt that was being cleaned on a stationary wire wheel.	EE was cleaning a 1/2" x 1 1/4" bolt with a stationary wire wheel when the bolt spun out of the hands causing the bolt to strike the side of the left index finger within the first two joints. The EE was not wearing gloves due to the nature of rotating equipment. Nomex long sleeves and safety glasses were being used.	NL-Injury/Illness - Employee Injury	(1) EE lost grip while holding a bolt.
38682	Richmond, CA - Refinery	5/30/2012 12:30:00 PM	Closed	Loss	EE was hit on the finger by a bolt that was being cleaned on a stationary wire wheel.	EE was cleaning a 1/2" x 1 1/4" bolt with a stationary wire wheel when the bolt spun out of the hands causing the bolt to strike the side of the left index finger within the first two joints. The EE was not wearing gloves due to the nature of rotating equipment. Nomex long sleeves and safety glasses were being used.	Injury/Illness	(1) EE lost grip while holding a bolt.
38689	Richmond, CA - Refinery	5/30/2012 1:45:00 AM	Closed	Near Loss	Leaking clamp on 8" Office Hill line (<1bbl to secondary containment)	Operations discovered a leaking clamp on the 8" Office Hill line at #1 Pump Station. The leak was due to the line pressure increasing due to heat of the day. The leak was flowing to gunited secondary containment and is estimated to be less than 1 barrel. This segment of line is not protected by PRD's.	NL-Environmental - Operational Leak	(1) Lack of understanding regarding over pressure protection on lines without PRD's.
38700	Richmond, CA - Refinery	5/30/2012 4:08:00 PM	Closed	Loss	Contract EE splashed diluted citri-clean solution into his right eye.	Contract EE working at T-979 as a hole watch was assisting a co-worker who was exiting the tank. The hole watch grabbed a rag soaked in a diluted citri-clean solution to wipe off the face shield of the EE exiting the tank. As he wiped the face shield the end of the rag slung the diluted solution into the air landing behind the EE safety glasses into his right eye. The contract EE immediately flushed his eye with water from the portable safety shower/eye wash at the job site.	Injury/Illness	(1) Solution splashed into the EE eye because required PPE was not designed to protect against liquid splash
38732	Richmond, CA - Refinery	5/29/2012 12:00:00 AM	Closed	Near Loss	T-991 premium gasoline tank off test for octane no communication given to planning.	T-991 premium gasoline tank off test for octane not communicated to planning.	NL-Quality - Product Unavailable	(1) The expectation of or instruction as to which End of Blend Report should be used has not been effectively communicated to operations. Operators do not have a clear (consistent across all four crews) understanding of which report we should be using., (2) Operator did not thoroughly review the End of Blend Report(s) and/or communicate findings to HO.
38754	Richmond, CA - Refinery	5/9/2012 3:00:00 PM	Closed	Near Loss	Green Card - Drain sticking up	10 feet west of V-1052 there is a drain sticking up creating a tripping hazard.	NL-Injury/Illness - Contractor Injury	
38756	Richmond, CA - Refinery	5/15/2012 6:45:00 AM	Closed	Near Loss	Green Card - Steam Leak	10 feet south of F-530 there is an overhead steam leak that needs to be fixed. Hot condensate is dripping onto the walkway underneath the leak. Will need scaffold to reach and will need to remove insulation.	NL-Environmental - Operational Leak	
	Richmond,	5/16/2012			Green Card - Smoke pit at 13pit was releasing an			

38757	CA - Refinery	12:58:00 AM	Closed	Near Loss	Intolerable amount of smoke	Three contract employees recognized that the smoke pit was releasing an intolerable amount of smoke.	NL-Fire/Explosion	
38758	Richmond, CA - Refinery	5/16/2012 7:30:00 AM	Closed	Near Loss	GREEN CARD--Steam Leak	GREEN CARD--Bad overhead steam leak next to F-914 leaking down onto walkway. Leaking condensate is very hot!	NL-Environmental - Operational Leak	
38759	Richmond, CA - Refinery	5/29/2012 7:30:00 AM	Closed	Near Loss	Green Card - Rebar sticking out on walkway between Boiler #3 & #4	A piece of rebar keeps on sticking up in the walkway between boiler #4 & #3. We step on it to put it back down.	NL-Injury/Illness - Contractor Injury	
38760	Richmond, CA - Refinery	5/19/2012 7:40:00 AM	Closed	Near Loss	GREEN CARD--Entry permit with wrong date	gREEN CARD--The entry permit for K-910 was wrong. The operator signed the date as 4/19 instead of 5/19	NL-Quality - Paperwork Incorrect/Not Sent	
38761	Richmond, CA - Refinery	5/16/2012 9:00:00 PM	Closed	Near Loss	GREEN CARD--Steam Leak	GREEN CARD--While walking through the pipe alley in between 11 & 13 plants I slipped, but caught my balance. I could not see the oil substance due to a major steam leak in the area.	NL-Injury/Illness - Contractor Injury	
38764	Richmond, CA - Refinery	5/14/2012 12:00:00 AM	Closed	Near Loss	GREEN CARD-Oily Surfaces in RLOP	GREEN CARD--I have realized that RLOP is notorious for oily surfaces, more than other units. I also realized that we cannot go and put grip tape throughout the entire refinery, but how about if RLOP Plants (11, 12, &13) could have grip tape on the stairs and ladder rungs?	NL-Injury/Illness - Contractor Injury	
38767	Richmond, CA - Refinery	5/30/2012 3:00:00 PM	Closed	Loss	Crew was cutting a squared-hole in bathroom wall to gain access to repair a urinal drain pipe. In doing the cutting of plywood wall, employee cut water line.	Employee was cutting a hole in the wall of main bathroom to gain access for another contractor to repair drain line. While cutting the wall with a sawzall, employee cut a water line that was next to drain pipe. Water line was not shut off causing water to spill throughtout the bathroom and into the hallway.	Equipment/Property Damage	(1) Employee assumed water was shut off, Water line was not identified.
38773	Richmond, CA - Refinery	5/30/2012 12:00:00 AM	Closed	Near Loss	GREEN CARD--Steam Leak	Green Card--While driving by the alley southeast of the D&R control room I saw that there was a major steam leak.	NL-Environmental - Operational Leak	
38774	Richmond, CA - Refinery	5/16/2012 8:40:00 AM	Closed	Near Loss	Green Card--Butane Smell	Green Card--Strong butane smell coming from underneath Reactor #3560	NL-Regulatory Compliance - Non Compliance - Air	
38775	Richmond, CA - Refinery	5/21/2012 4:00:00 PM	Closed	Near Loss	Green Card--Bad Permit	Green Card--Pointed out to the operator that the non flammable permit needed to be updated before the company started buffing.	NL-Quality - Paperwork Incorrect/Not Sent	
38777	Richmond, CA - Refinery	5/16/2012 12:00:00 AM	Closed	Near Loss	Green Card--Steam Leaks	Green Card--While walking throughout 11, 12, &13 plants, I noticed a lot of valves & connections would shoot out steam without any warning. I retrieved caution tape and blocked surrounding area.	NL-Injury/Illness - Contractor Injury	
38778	Richmond, CA - Refinery	5/15/2012 9:30:00 PM	Closed	Near Loss	Green Card--90 degree invisible bump	Green Card-- In the parking lot on the northwest corner of the control room has a steep 90 degree bump that is not visible until you hit it.	NL-Injury/Illness - Contractor Injury	
38793	Richmond, CA - Refinery	5/25/2012 2:00:00 PM	Closed	Near Loss	PD-25 failed to lift at 125% of set for recertification.	The steam drum safety for #3 boiler at the # 1 Power Plant was removed for recertification by Code VR shop, Swan Associates PD-25 was pretested at the shop and failed to lift at 125% of 892 psig set pressure. Chevron was notified for instructions. Disassembly was stopped until the shop was visited by representatives from Engineering, Inspection and Quality Management to witness disassembly.	NL-Operational Process/Procedures - Pressure Relief Devices (PRD)	(1) Normal wear and tear
38820	Richmond, CA - Refinery	5/15/2012 12:00:00 AM	Closed	Near Loss	IL-1822 Initial Pop <90% of Set Pressure	IL-1822 (Thermal protection for the 18 plant recovered oil line to the plant boundary) was removed and serviced for API compliance. During the initial pop test the valve relieved at 85 psig (<90% of CSP). The cold set pressure for this valve is 345 psig.	NL-Operational Process/Procedures - Safety Systems	(1) Normal wear from valve relieving due to blocked in status and sun over pressuring the line.
38832	Richmond, CA - Refinery	5/30/2012 12:00:00 AM	Closed	Near Loss	Late shipment of APS	No APS injection to the FCC overhead system on account that the supply wasn't replenished.	NL-Quality - Late Shipment	(1) The head operator submitted the MR for APS to his STL after 4:30 after the STL had left for his week off. The HO entered he ordered APS on the white board in the control room but did not add MR#. The order was not approved and was still in draft. The other crews did not follow up thinging thr order was in route. All HO were trainded on the corrective action. All MR's will be confirmed as receved by the STL. And the MR# entered in the HO turnover.
	Richmond,	5/31/2012			V-712 Pressure Controller	At approximately 11:30 PM on 5/31 the OWS 4 (TKC Board Operator) recieved a low output alarm on 73PC710 pressure controller on V-712. THe unusual output alerted the OWS-4 to contact the area operator. THe OWS-4 requested the Area operator to verify vessel pressure locally. The area operator reported back that the vessel pressure was 450 lbs and that the PSV(IX7141) was lifting (the PSV is set to 450lbs). Moves were immediaty made on the board to open		(1) Why Did PSV IX7141 on V-712 Lift? The PSV lifted due to and overpressure condition on V-712. Why was there an overpressure condition on V-712? The overpressure condition on V-712 was due to the output on 73PC710 closing off. Why was the output on 73PC-710 closing off? The output on 73PC710 was closing off because the pressure indicator was showing the pressure was decreasing in V-712. Why was the pressure indication decreasing in V-712. Pressure indication was decreasing in V-712 due to Plugging in the pressure

38847	CA - Refinery	11:30:00 PM	Closed	Loss	failed causing PSV to lift. No flaring occured	the PC and reduce the pressure on the vessel. Several minutes later the PSV reset.	Operational Process/Procedures	indicator leads. Why did the pressure indicator leads plug? Process condition may have lead to plugging in the leads
38850	Richmond, CA - Refinery	5/31/2012 5:15:00 PM	Closed	Loss	HNF Bottoms routed off test for 1 hr	While setting P-1655A up for operation after the EBV was repaired, operations slowly began to open the suction valve to introduce product back into the pump . At this time P-1655 began to cavitate and caused level to build in C-1650 causing a column upset. Bottoms was routed off test for 1 hour to recover column stability	Operational Process/Procedures	(1) why Was HNF bottoms product routed off test? Hnf bottoms product was routed off test due to C-1650 column upset. Why was there a C-1650 column upset? There was a column upset due to a high bottoms level. Why was the a high bottoms level in C-1650? C-1650 had a high bottoms level dur to P-1655 cavitaitng Why did P-1655 cavitate? P-1655 cavitated due to Putting P-1655Ain standby.afet asmintenance
38905	Richmond, CA - Refinery	4/6/2012 2:00:00 PM	Closed	Loss	K-300 Seal failure / VOC Leak	While investigating natural gas odors Operations identified natural gas escaping from K-300 gear box and lube oil tank vents. VOC group was notified and determined the concentration to be in excess of the reg 8-18 environmental limits. IMI and operations determined the cause of the leak to be inboard seal failure leading to the contamination of the lube oil system. Reg 8-18 requires the that the leak be minimized in 24 hrs and eliminated within 7 days.	Equipment/Property Damage	(1) The root cause of the failure is the mechanical failure of the seal oil trap as a result of a lack of preventative maintenance and poor trap design. With regular servicing and cleaning this failure may have been avoided, but due to the design there is an inherent risk of failure. (Design is similar to that of a steam trap and unlike the other lube oil/seal oil traps in the refinery), (2) Contributing Factor - Lube/seal oil was found to be ISO-220 opposed to GST-46. This could have been a contributing factor to the seal leak(s) that were repaired in conjunction with this failure. If the seal had not failed, there may not have been enough entrained VOC's in the stream to reach a limit.
38938	Richmond, CA - Refinery	6/3/2012 9:57:00 AM	Closed	Near Loss	K300A shut down due to low lube oil pressure.	K300A shut down due to low lube oil pressure.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) K300A shut down Why – Low lube oil shutdown alarm Why – Turbine lube oil pump tripped off line (1) Why – possibly due to P360 APS check caused bounce in steam system (2) Why - APS motor pump did not start. WR 358061 written to inspect/repair.
38962	Richmond, CA - Refinery	6/2/2012 6:00:00 PM	Investigation In Progress	Near Loss	Shared job responsibilities due to shortage of manpower	On 6/2N - Two crew members had called in sick for the same operating plant. 1 Head Operator and 1 Operator. The first call for sick was done in a reasonable amount of time to allow for phone calls to be made to the available crews for coverage. No volunteer was available. The N-shift S/B was given a courtesy call and used to cover. The 2nd call came in @ 1600hrs, no other volunteers or returned calls were received. The S/B was a qualified H.O. and replaced the first call in. The individual remained in the plant to meet minimum staffing for the plant. The STL assumed the position of the mobile distribution head operator.	NL-Business Process - Business Process	(1) Lack of personel
38982	Richmond, CA - Refinery	5/22/2012 10:30:00 AM	Closed	Near Loss	Green Card--Respirators found with Catridges Attached	Green Card--There are people putting their respirators in the bins at CTR with the cartridges still on them. Cartridges should be removed at the decon area or should be put into an orange/black hazardous waste bin	NL-Equipment/Property Damage - General Liability	
38985	Richmond, CA - Refinery	5/30/2012 8:00:00 AM	Closed	Near Loss	Green Card--Oily surfaces near P601 and P601A	Green Card--Lots of oily surfaces near pumps P601 and P601A creating a slipping hazard.	NL-Injury/Illness - Contractor Injury	
39032	Richmond, CA - Refinery	5/22/2012 8:00:00 AM	Fact Gathering	Near Loss	Incorrect measurement of MEA strength from incoming truck shipment	A shipment of fresh MEA arrived in a truck on 5/22/12 in the morning. Per procedure, the area operator drew a sample and ran an MEA strength test in the field lab. The MEA shipment is supposed to be 99% MEA but the test result came back at around 70%, despite running the test twice. It appeared that the shipment did not meet the specification for what was purchased.	NL-Quality - Additive Injection (Int)	
39033	Richmond, CA - Refinery	5/29/2012 12:00:00 AM	Closed	Near Loss	Inoperative monitor on F-1750 for missed calibration not reported within 24 hr or the next business day.	On May 28, fuel gas was introduced and fires were lit in RLOP furnace F-1750 (stack F-1251) but NOx, CO, and O2 analyzers were not placed in service. F-1251 therefore missed the daily auto-calibration on May 28 through May 31. The missed calibrations were not discovered until daily checks on June 1. Missed calibrations are by definition inoperative monitors, and per the Title V permit, must be reported within 24 hr or the next business day of their occurrence.	NL-Regulatory Compliance - Non Compliance - Air	(1) No communication from operations to the analyzer group of planned fire-in date, so that analyzers could be turned on. , (2) Vulnerability in daily HES checks where data is not cross-checked was not recognized.
39063	Richmond, CA - Refinery	5/30/2012 2:00:00 PM	Closed	Loss	Motor shaft coupling hub may not have been reassembled to the compressor crank shaft coupling hub in the same location as it was found.	There are two separate and independent TDC pickups on the MK-910 motor shaft. One for the Hydrocom system and one for the Windrock monitoring system. Windrock weekly report indicating both mag pickups are no longer looking at TDC. This points to the possibility that the motor shaft coupling hub may not have been reassembled to the compressor crank shaft coupling hub in the same location as it was found.	Quality	(1) What Happened? Motor shaft coupling hub may not have been reassembled to the compressor crank shaft coupling hub in the same location as it was found 1. Why did above happen? Crew did not correctly match mark the coupling and pickups prior to disassembly. 2. Why did above happen? Crew failed to communicate who would complete the match marking of these pickups. 3. Why did above hapen? Poor communication during job preparation ...it needs improvement (pre-job briefing, work package/permit, job walk-thru, etc). Root Cause is lack of communication within the crew to ensure the pick ups were match marks...no one was assigned to do the task and each assumed the other had taken care of it.
	Richmond, CA -	6/5/2012 0:00:00		Near	EE reported having a sore back when he came to		NL-Injury/Illness -	

39067	Refinery	AM	Closed	Loss	work	EE reported having a sore back when he came to work	Employee Injury	
39095	Richmond, CA - Refinery	5/13/2012 12:00:00 AM	Closed	Near Loss	High Nickel at the Bioreactor Outlet	Sudden spikes of Nickel at the bioreactor inlet has generated concern. The typical concentrations at the bioreactor inlet are <0.01-ppm. Recent activity shows the bioreactor inlet Nickel concentration spiking to 0.8-ppm and subsequent spikes in the bioreactor outlet. Currently, the Nickel reporting limit is 1-ppm and the compliance sample point downstream of the bioreactor. Also, high nickel could potentially pose a threat to the upcoming quarterly chronic toxicity testing. The next test could be performed as early as the week of July 1, 2012	NL-Regulatory Compliance - Non Compliance - Water	(1) Catalyst reactor wash water was dropped at an unknown time not anticipated, (2) Reactor wash water ICP metals results were not representative of the water dropped due to particulate metal that could be formed in water >9 pH.
39136	Richmond, CA - Refinery	6/5/2012 12:00:00 AM	Closed	Near Loss	Control Radio failure	Radio #1 is control channel on the main radio system. The radio failed to operate leaving the refinery with one less control radio and one less radio for use.	NL-Business Process - Business Process	
39140	Richmond, CA - Refinery	6/5/2012 7:39:00 AM	Closed	Near Loss	While calibrating 4 Cat feed meter, feed was temporarily chopped.	4 Cat feed meter needed to be calibrated for process balance monitoring. While attempting to zero the "B" feed meter, feed was momentarily chopped.	NL-Operational Process/Procedures - Safety Systems	(1) No trigger to remind Ops and Maint about risk of feed chops when working on feed meters., (2) Ops and maint did not recognize the risk of feed chop.
39144	Richmond, CA - Refinery	6/5/2012 12:00:00 AM	Closed	Near Loss	Didn't approve rounds, sorry I'm human	Did not approve operator rounds, however the issues at R-1410E were handled in a safe manner and everyone went home in the same condition that they showed up for work that day, things could have been different in the plant if stop work authority wasn't used.	NL-Quality - Paperwork Incorrect/Not Sent	
39151	Richmond, CA - Refinery	6/2/2012 12:00:00 AM	Investigation In Progress	Loss	HNC was at reduced feed rates due to nitrogen results being above the max limit of 1.5 ppm (samples sent to QCD every day at 12 AM). A check sample was sent to ETC for HNC 6 S/C Waxy 220 and had a much lower result 0.5 ppm.	HNC feed was below plan due to high 6 S/C Waxy 220 and bottoms Waxy 600 product nitrogen results that were above the high limit of 1.5 ppm since 6/1/12. The LNF was starting the first 220R run on the new catalyst load and due to concerns of high nitrogen feed deactivating the new catalyst, a check sample was pulled on the HNC 6 S/C Waxy 220 stream and sent to ETC. The QCD result at 6/4 12 AM was 2.8 ppm, a check sample to ETC at 6/4 12 PM was 0.47 ppm per ETC (the overall CAT remained within 1 deg F), and the following QCD sample on 6/5 12 AM was 1.5 ppm. The following day on 6/6, the QCD Waxy 220 and Waxy 600 nitrogen results moved in opposite directions althought the HNC reactor CAT slightly increased. The Waxy 220 N2 was 0.8 ppm (decreased from 1.5 ppm) while the Waxy 600 N2 was 2.3 ppm (increased from 1.3 ppm). Due to the high nitrogen results for multiple days, the HNC averaged 0.92 MBPD below plan valued at $122M (the LPO would have been higher but HNC Waxy 220 production was being overboarded to an off-test routing due to limited inventory through 6/3 9 PM).	Quality	
39151	Richmond, CA - Refinery	6/2/2012 12:00:00 AM	Investigation In Progress	Loss	HNC was at reduced feed rates due to nitrogen results being above the max limit of 1.5 ppm (samples sent to QCD every day at 12 AM). A check sample was sent to ETC for HNC 6 S/C Waxy 220 and had a much lower result 0.5 ppm.	HNC feed was below plan due to high 6 S/C Waxy 220 and bottoms Waxy 600 product nitrogen results that were above the high limit of 1.5 ppm since 6/1/12. The LNF was starting the first 220R run on the new catalyst load and due to concerns of high nitrogen feed deactivating the new catalyst, a check sample was pulled on the HNC 6 S/C Waxy 220 stream and sent to ETC. The QCD result at 6/4 12 AM was 2.8 ppm, a check sample to ETC at 6/4 12 PM was 0.47 ppm per ETC (the overall CAT remained within 1 deg F), and the following QCD sample on 6/5 12 AM was 1.5 ppm. The following day on 6/6, the QCD Waxy 220 and Waxy 600 nitrogen results moved in opposite directions althought the HNC reactor CAT slightly increased. The Waxy 220 N2 was 0.8 ppm (decreased from 1.5 ppm) while the Waxy 600 N2 was 2.3 ppm (increased from 1.3 ppm). Due to the high nitrogen results for multiple days, the HNC averaged 0.92 MBPD below plan valued at $122M (the LPO would have been higher but HNC Waxy 220 production was being overboarded to an off-test routing due to limited inventory through 6/3 9 PM).	Business Process	
39158	Richmond, CA - Refinery	6/6/2012 11:00:00 AM	Closed	Near Loss	Chevron employee made unsafe left turn around forklift on Channel St	Contractor driving forklift north on Channel St was stopped and using hand signal to indicate intention to turn left on to Foundation Street while waiting for opposing traffic to clear. Chevron pickup (driven by a Chevron employee - identifiable by his coveralls) came up behind the forklift and passed on the left, driving on the wrong side of the road, before himself making a left turn on to Foundation Street. A contractor driven vehicle coming south on Channel St was forced to come to a stop to avoid a collision. Chevron pickup did not stop.	NL-Transportation - Company	
39159	Richmond, CA - Refinery	6/6/2012 8:15:00 AM	Closed	Near Loss	Personal H2S monitor activated	While performing de-sludging activities at #13 separator, three contract employees personal H2S monitors were activated	NL-Operational Process/Procedures - Safety Systems	
39161	Richmond, CA - Refinery	6/6/2012 3:00:00 PM	Closed	Loss	About 145 lb of Natural was released to the atmosphere when the Natural gas PRD lifted	Due to the type of product that Vessel 65 Roses had on its previous voyage, the vapor recovery needs to be in placed while loading fuel. After loading fuel oil, and after shutting down the vapor recovery in berth # 3, the natural gas pressure went up and caused the PRD to relieve for 9 mins. Further investigation showed that the natural gas pressure control was switched from auto to manual control last June 6 nightshift.	Environmental	(1) The guideline on the pressure control of the natural gas was not consistently implemented., (2) Turnover between the nightshift and dayshift Board Operators was less than adequate and failed to highlight that the natural gas header pressure control was switched to manual mode. , (3) As a result of the PRD lifting to the atmosphere, the following action items will be taken to be in compliance with the requirement of the Air District
						Due to the type of product that Vessel 65 Roses had on its previous voyage,		(1) The guideline on the pressure control of the natural gas was not consistently implemented., (2) Turnover between the nightshift and dayshift Board Operators was less than

39161	Richmond, CA - Refinery	6/6/2012 3:00:00 PM	Closed	Loss	About 146 lb of Natural was released to the atmosphere when the Natural gas PRD lifted	the vapor recovery needs to be in placed while loading fuel. After loading fuel oil, and after shutting down the vapor recovery in berth # 3, the natural gas pressure went up and caused the PRD to relieve for 9 mins. Further investigation showed that the natural gas pressure control was switched from auto to manual control last June 6 nightshift.	Loss of Containment	adequate and failed to highlight that the natural gas header pressure control was switched to manual mode. , (3) As a result of the PRD lifting to the atmosphere, the following action items will be taken to be in compliance with the requirement of the Air District
39193	Richmond, CA - Refinery	6/7/2012 12:00:00 AM	Closed	Loss	Tank 979 Clean up Cost Overrun	Tank 979 over exceded cleaning budget budget due to unanticipated sludge inside the tank	Business Process	(1) Representative sample was not available. Inadequate procedures on running mixers on LCO/Cutter tanks.
39212	Richmond, CA - Refinery	5/24/2012 9:23:00 PM	Fact Gathering	Near Loss	Cracking LCN History Data Gaps	Cracking Operations reported data on the DCS history trends would "disappear/blank out" for about 2 minutes, actually on any trend (group trends, tuning trend, etc) and for any data points. No system alarms were generated during the events. This loss of data occured 12 times causing five seperate DMC trips on select controllers with critical inferentials. Cost: none; No. impacted customers: 2	NL-Business Process - Business Interruption	(1) LCN loading increase
39236	Richmond, CA - Refinery	5/28/2012 1:30:00 PM	Closed	Near Loss	Green Card. An operator should be in cab at all times. Location: Wash Pad	Green Card. Three contractors were trying to seal a plug on the bottom side of a container. It was a gradall with a storage container on the forks. Location: Wash Pad	NL-Injury/Illness - Contractor Injury	
39237	Richmond, CA - Refinery	6/7/2012 10:30:00 AM	Closed	Near Loss	Process sewer line overflowed into 100' channel behid fire drill grounds due to excessive flows/restricted line	While training at the fire drill grounds CFD and fire brigade were flowing copious amounts of water. The high runnoff into the process sewer system that runs to #2 sep was overwhelmed resulting in an overflow of a manhole at the 100' channel. The overflow involved a small amount (< 1 barrel) of recovered oil that was being pumped from the #13 sep lookbox (located just north of the drill grounds) to #2 sep flow splitter using the same sewer line.	NL-Environmental - Spill	(1) The fire water flow into the manhole exceeded the flow capacity of the 10" line exiting the manhole resulting in an overflow. It is believed the 10" line is partially plugged with solids.
39238	Richmond, CA - Refinery	5/28/2012 2:30:00 AM	Closed	Near Loss	Green Card. Big potholes need repair. Location: Ranch North Yard	Green Card. While driving to ranch to retrieve a few pallets, I began to hit some pretty long potholes which I couldn't see even with my high beam lights. Location: Ranch North Yard	NL-Transportation - Contractor	
39240	Richmond, CA - Refinery	5/29/2012 7:30:00 PM	Closed	Near Loss	Green Card. A worker entering fresh air area with barricade tape. Location: RLOP 13 Plant	Green Card. While doing fresh air job, I witnessed a worker entering fresh air area and entering through red barricade tape. Location: RLOP 13 Plant	NL-Injury/Illness - Contractor Injury	
39243	Richmond, CA - Refinery	5/29/2012 6:30:00 PM	Closed	Near Loss	Green Card. Several workers entering fresh air area via red barricade tape. Location: RLOP 13 Plant	Green Card. While bottle watching, I observed several workers enter fresh air area via red barricade tape. They went in to assist/oversee work being done. There was two workers under fresh air while they entered. Location: RLOP 13 Plant	NL-Injury/Illness - Contractor Injury	
39244	Richmond, CA - Refinery	5/30/2012 6:45:00 AM	Closed	Near Loss	Green Card. Small paint particles on the stairs and ramp. Location: Gate 91 Training Bldg	Green Card. I've noticed a lot of small particles of non-skid paint on the stairs, ramp and the porch of the training building at Gate 91. There's a great chance someone will slip and fall. Location: Gate 91 Training Bldg	NL-Injury/Illness - Employee Injury	
39247	Richmond, CA - Refinery	5/31/2012 2:00:00 PM	Closed	Near Loss	Green Card. Tank T-1108 2" Bleeder missing a plug. Location: 4 Cat	Green Card. Tank T-1108 2" Bleeder missing a plug. Location: 4 Cat	NL-Environmental - Operational Leak	
39249	Richmond, CA - Refinery	6/1/2012 8:00:00 AM	Closed	Near Loss	Green Card. A bad steam leak overhead to walkway. Location: D&R P-1148	Green Card. Overhead steam leak to walkway. The leak on 1/2" union. Location: D&R P-1148	NL-Environmental - Operational Leak	
39250	Richmond, CA - Refinery	6/4/2012 9:00:00 AM	Closed	Near Loss	Green Card. Valve steam leak. Location: D&R 30' West of V-1198	Green Card. Steam leak on the valve. Location: D&R 30' West of V-1198	NL-Environmental - Operational Leak	
39251	Richmond, CA - Refinery	6/4/2012 8:00:00 AM	Closed	Near Loss	Green Card. Overhead steam leak. Location: D&R P-1178	Green Card. Overhead steam leak down to pump needs to be fixed. Also need insulation removed and need scaffold to get to the leak. Location: D&R P-1178	NL-Environmental - Operational Leak	
39252	Richmond, CA - Refinery	6/5/2012 8:00:00 AM	Closed	Near Loss	Green Card. Anchor bolt sticking out in the ground. Location: NHT/F-410 West of F-410 Burner #8	Green Card. There's an anchor bolt sticking out in the ground. A tripping hazard. Location: NHT/F-410, West of F-410 Burner #8	NL-Injury/Illness - Contractor Injury	
39253	Richmond, CA - Refinery	6/6/2012 1:00:00 PM	Closed	Near Loss	Green Card. Steam leak on steam trap. Location: SISO/Boundary to N SO, 468 Platform 50' South	Green Card. Steam leak on steam trap continuously, been leaking for a long time. Location: SISO/Boundary to NISO, 468 Platform 50' South	NL-Environmental - Operational Leak	
39254	Richmond, CA - Refinery	6/6/2012 2:30:00 PM	Closed	Near Loss	Green Card. A toeboard came off from weld by the railing. Location: SISO, F-355 C-Cell South by Burner #4	Green Card. A toe board came off from weld by the railing. Location: SISO, F-355 C-Cell, South by Burner #4, Lower deck	NL-Injury/Illness - Employee Injury	
						Technician exited truck to go into Central Maintenance. His assistant remained in the truck to wait. It took the Technician longer than he thought and the		

39259	Richmond, CA - Refinery	6/7/2012 3:30:00 PM	Closed	Near Loss	Vehicle left running and was un occupied	assistant came inside to check and see where he was. The assistant did not shut vehice off before exiting vehicle and left it running in the parking lot. Talked to Technician and assistant. Reviewed the rules regarding vehicles and leaving them running unattended, which is not permitted. I got a commitment from them both to highten their awareness in all of their activities. Safety meeting will be held again on Monday morning discussing the Topic of vehicle safety and the Rules and Regulations in the Refinery.	NL-Transportation - Contractor	
39372	Richmond, CA - Refinery	6/9/2012 11:40:00 AM	Investigation In Progress	Near Loss	Loss of fresh water to loading racks.	A Utility system isolation was required for the maintenance crew to replace a fresh water monitor. This isolation required communication with all customers associated with the isolation according to current area P&ID's. This was completed before isolation started. However, the Truck Loading Facilities outside the refinery had a disruption of fresh water for approx. 2 hours. Without this water, the racks seized operation due to loss of fire protection system.	NL-Business Process - Business Interruption	(1) "FIVE WHY" Incident Number 39372 Business Unit U&E Location Distribution system Facility Name Marketing-Truck loading racks Incident date 6/9/2012 Type of Process: Fresh Water Type of Equipment: Utility System Team Members: D.Zimmerman Stacey Reynolds Incident Description: What: Truck loading racks lost all fresh water for fire protection/drinking water. Where (location or where in the process): Marketing - Richmond When: Occurred on 6/9 Day Shift How: Incorrect P&ID's drawing for this area.. Problem Statement (What is the key issue that needs to be addressed?): Revise P&ID to reflect the customers associated with fresh water on drwg #'s 325126 / 325128-12 FIVE WHY'S 1. Why did "above" happen? Verification Fresh water isolation was performed by Utilities Operations for maintenance. 2. Why did "1" happen? Isolation verification was performed and customers notified as per P&ID #'s 325126/325128 3. Why did "2" happen? Truck Racks was not an indicated customer of this service, therefore not notified 4. Why did "3" happen? The Racks operators notified the U&E ABU that they were with no fresh water to their facilities and needed to S/D operations for 2 hours ROOT CAUSE: What was the Root Cause of your incident? Operations using P&ID's and field verifying required S/D for maintenance with incorrect drwgs. LPS Factor: Factor E: Lack of / Inadequate Operational Procedures or Work Standards Solution: Develop/Amend Procedure Describe specifically the changes to be made to an existing procedure or the procedure to be developed. , (2) "FIVE WHY" Incident Number 39372 Business Unit U&E Location Distribution system Facility Name Marketing-Truck loading racks Incident date 6/9/2012 Type of Process: Fresh Water Type of Equipment: Utility System Team Members: D.Zimmerman Stacey Reynolds Inciden
39394	Richmond, CA - Refinery	5/13/2012 12:00:00 AM	Closed	Loss	MK-910 found to have extensive damage	K-910 was shutdown on 5/13/12 for scheduled 5 year electrical PM work. During the inspection extensive motor damage was discovered. The motor was pulled and sent to Koffler Electrical for inspection and repair. The original repair was scheduled for six days and the entire repair actually took 20 days. The damage is believed to have been caused by excessive heat.	Equipment/Property Damage	(1) Temperature monitoring was not sufficient to reliably determine the actual temperature of the stator. , (2) Cooling flow/capacity was inadequate to keep the motor within its design temperature limits. , (3) Alarms and automatic SD instrumentation is inadequate to protect the motor from overheating. Temperature information is not integrated into the DCS system, inhibiting the troubleshooting and failure finding for Reliability Analysis , (4) Risks of failure were not properly defined and prioritized to manage replacements of equipment.
39395	Richmond, CA - Refinery	5/25/2012 10:00:00 PM	Closed	Loss	K-940 shutdown for packing leak and valve damage	K-940 was seeing elevated temperatures on 2nd stage discharge plus a packing leak was discovered.	Equipment/Property Damage	(1) Why did K-940 #2 cyliner and #4 cylinder experience valve damage. Because the discharge temperatures got hot enough to cause physical damage. Why did the discharge temperatures get hot Exact cause cannot be determined at this time. Maintenance could not determine anything out of the ordinary that specifically caused valve damage.
39445	Richmond, CA - Refinery	6/6/2012 6:00:00 PM	Closed	Near Loss	Green Card - While driving out of the Tech Center parking lot, I noticed someone smoking a cigarette in the parking lot	As I was driving out of the Tech Center parking lot, I noticed someone smoking a cigarette in the parking lot. I pulled back in and parked my car. I asked the person to put the cigarette out, let them know what our policy is and pointed them in the direction of the nearest smoking post. They thanked me for letting them know what our policy is.	NL-Lessons Learned	
39448	Richmond, CA - Refinery	6/6/2012 6:00:00 AM	Closed	Near Loss	Green Card. Security personnel exiting their vehicles while still running to open gates. Location: Gate 91	Green Card. Security personnel have been seen exiting their vehicles and leaving them running while opening gates. This is a violation of Chevron policy because it is a dangerous thing to do and has gotten people injured in the past.	NL-Injury/Illness - Contractor Injury	
								(1) Exhaust System in RM1107 lacks sufficient ventilation to safely perform density analysis, outside of fume hood, particularly, on those samples containing elevated concentrations of H2S. , (2) Communicate to Operators the need to increase their awareness of their exposure to H2S in samples while measuring gravities outside of hood. Samples

39450	Richmond, CA - Refinery	6/7/2012 9:00:00 AM	Investigation In Progress	Near Loss	Lab Operator's Personal H2S Monitor sounded a warning alarm	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT.While preparing a sample for gravity measurement by density meter, a QCD Operator's personal H2S monitor sounded a warning.	NL-Injury/Illness - Employee Injury	known or suspected of having elevated levels of H2S are to be broken down for distribution, under a hood. Any subsequent testing for density is to be done under a hood using the portable hand-held density meter. , (3) "FIVE WHY" One Page Report Incident Number 39450 Business Unit QCD Location Bldg35-1107 Facility Name QCD Incident date 6/7/2012 Type of Process: Routine Lab Testing Type of Equipment: Team Members: Adam Williams Jr. Incident Description: What: While preparing a sample for gravity measurement by density meter, a QCD Operator's personal H2S monitor sounded a warning alarm. Where (location or where in the process): Incident occurred in our Physical Lab (RM1107) in the area where we conduct density (gravity) measurements. When: Incident occurred June 7, 2012 at approx 9am. How: Alarm sounded because a sample of C1200 Naptha contained a concentration of H2S above the trigger limit of 5ppm. Problem Statement (What is the key issue that needs to be addressed?): Recently, there has been an increase of H2S personal monitors sounding alarms in the area of Rm1107 where we measure density of refinery hydrocarbons. FIVE WHY'S 1. Why did "above" happen? Verification The H2S monitors are sounding warning alarms because our density meters are located on a non ventilated bench top in Rm1107. 2. Why did "1" happen? Currently, we have a lack of available hood space in Rm 1107, thus unable to place all of our density meters, under hood, in one area. 3. Why did "2" happen? We have plans to install an additional hood in Rm1107 to contain all our density meters and prev
39450	Richmond, CA - Refinery	6/7/2012 9:00:00 AM	Investigation In Progress	Near Loss	Lab Operator's Personal H2S Monitor sounded a warning alarm	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT.While preparing a sample for gravity measurement by density meter, a QCD Operator's personal H2S monitor sounded a warning.	NL-Operational Process/Procecures - Safe Operating Limit (SOL) Exceeded	(1) Exhaust System in RM1107 lacks sufficient ventilation to safely perform density analysis, outside of fume hood, particularly, on those samples containing elevated concentrations of H2S. , (2) Communicate to Operators the need to increase their awareness of their exposure to H2S in samples while measuring gravities outside of hood. Samples known or suspected of having elevated levels of H2S are to be broken down for distribution, under a hood. Any subsequent testing for density is to be done under a hood using the portable hand-held density meter. , (3) "FIVE WHY" One Page Report Incident Number 39450 Business Unit QCD Location Bldg35-1107 Facility Name QCD Incident date 6/7/2012 Type of Process: Routine Lab Testing Type of Equipment: Team Members: Adam Williams Jr. Incident Description: What: While preparing a sample for gravity measurement by density meter, a QCD Operator's personal H2S monitor sounded a warning alarm. Where (location or where in the process): Incident occurred in our Physical Lab (RM1107) in the area where we conduct density (gravity) measurements. When: Incident occurred June 7, 2012 at approx 9am. How: Alarm sounded because a sample of C1200 Naptha contained a concentration of H2S above the trigger limit of 5ppm. Problem Statement (What is the key issue that needs to be addressed?): Recently, there has been an increase of H2S personal monitors sounding alarms in the area of Rm1107 where we measure density of refinery hydrocarbons. FIVE WHY'S 1. Why did "above" happen? Verification The H2S monitors are sounding warning alarms because our density meters are located on a non ventilated bench top in Rm1107. 2. Why did "1" happen? Currently, we have a lack of available hood space in Rm 1107, thus unable to place all of our density meters, under hood, in one area. 3. Why did "2" happen? We have plans to install an additional hood in Rm1107 to contain all our density meters and prev
								(1) Driver initially failed to assert stop work authority when he felt it was warranted. Upon succesfully asserting SWA the situation was such that extrication from the danger resulted in equipment damage., (2) Why did the vacuum truck driver run into the clearance chain on Ethyl Road? He failed to realize that the change in angle that occurred during backing back out of the area would result in a slight raising of the truck's profile, causing him to contact the chain on the way out despite having cleared it on the way in. Why did he enter into an area where there was a possibility that clearance could be an issue? He succumbed to pressure exerted by plant operators to "try" with assurances that they would spot for

39490	Richmond, CA - Refinery	6/12/2012 8:00:00 AM	Investigation In Progress	Loss	Vacuum truck stack damaged on clearance chain	Vacuum truck driver was directed by Chevron safety operator to attempt to make it under a low clearance area. Driver voiced concern about clearance problem. Operator directed driver to try while he spotted for him. He cleared the chain, but used stop work authority rather than attempt to clear pipe rack. Upon backing up back through the chain the change in angle was enough to raise the truck to where the stack of it came in contact with the chain on the way out, causing the stack to bend forward.	Transportation	him. During the investigation he mentioned that he felt uncomfortable prior to "trying." Why didn't the driver exert stop work authority when he felt uncomfortable attempting to clear an obviously low clearance area? The desire to please the operators he was working with out-weighed his concern over making it under the clearance, besides they were going to spot him in. Why didn't the driver call his supervisor to express his concern about going into a low-clearance area, and possibly get a lower-profile truck assigned to the job? He knew his supervisor was very busy at that time, and felt that since the operators were reassuring him that they would spot him in to the area he would be okay to proceed without involving his supervisor.
39505	Richmond, CA - Refinery	6/11/2012 3:00:00 PM	Closed	Loss	Technician was VOC monitoring at T-3102 and his wrist touch steam tracing.	Technician was VOC monitoring at T-3102. He was underneath a catwalk. Tech reached over to sniff a valve and got burned by steam tracing on his left wrist. Date 6/11/12 Time 3:00 PM.	Injury/Illness	(1) Although Hot surfaces was mentioned in JSA, Steam tracing was not listed. Being more specific when identifying hazards would greatly decrease likely hood of burn.
39524	Richmond, CA - Refinery	5/16/2012 12:00:00 AM	Fact Gathering	Near Loss	Low arsenic in MEA solution, below lower limit of 100ppm	Arsenic in MEA analytical results were not available for 4 weeks due to a broken machine at QCD lab. Operations/PED was not aware of this until they noticed no results were available and inquired with QCD and learned that the machine was out of order and would not be replaced for up to 2 months. The consequence of low arsenic in the MEA is accelerated corrosion in the MEA system, since arsenic is a corrosion inhibitor.	NL-Equipment/Property Damage - Equipment Damage	(1) Process and frequency for checking arsenic results in MEA is not defined. Responsibility for following up on missing or off-test results is unclear., (2) Oxford MDX instrument used for arsenic analysis is out of service. Instrument is at EOL and replacement cost of HVPS is not justifiable. , (3) Increased usage rate of MEA and arsenic depletion at A Train., (4) Operations/PED rely on PI/INDX for results, whereas QCD uses Starlims/Lab equipment database to capture results and comments.
39537	Richmond, CA - Refinery	6/12/2012 8:50:00 AM	Closed	Near Loss	K300A compressor shutdown	1) K300A natural gas compressor shutdown due to loss of MP303A lube oil pump causing low lube oil pressure. 2) Motor pump MP303A is a spare to primary TP303. 3) During the weekend TP-303 shutdown when there was a steam pressure bounce that affected the TP303 lube oil pump. The APS failed to switch over the MP303A. 4) Ops decided to put MP303A as the lead and it shutdown shortly thereafter	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) see atiched Link to the right for 5-why report
39577	Richmond, CA - Refinery	6/13/2012 7:15:00 AM	Closed	Near Loss	Operator uses Stop Work Authority on Welding Job	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. While performing first rounds in the CFO area, I found a contractor welding crew inside (in the plant) of #15 pump station set up and just about to strike an arc to weld a fire pipe line directly adjacent (within 10') to the NHT sour gasoline pump and within 6' of the JHT pump. Neither I nor my H.O. were aware that this crew was doing anything like this. The crew did not have hot work permits, and the permit they did have was inapplicable to the work they were doing. It also seemed like they had not signed in at the B&S Control Room. They did not have the proper equipment and safety gear to contain their sparks, nor was there a Fire Watch with any type of firefighting equipment present. There was no Chevron Safety Operator present, as well.	NL-Business Process - Business Process	(1) Plant boundaries are not clearly defined, (2) Lack of communication of the ownership of the area, (3) RI-341 wording around the 35 ft from plant boundary needs improvement. , (4) Signage on # 6 substation which states no work can be done within 100 ft of the substation has brought some confusion as to what specific work can and cannot be done there
39580	Richmond, CA - Refinery	6/8/2012 5:00:00 AM	Closed	Near Loss	On Deck Security for the Florida Voyager energized personal cell phone on deck while the vessel was loading gasoline.	Master notified PPS security of the violation and critical safety concern regarding cell phone usage, conductivity and energizing uncontrolled non-intrinsically safe source. Master reported incident to CSC Area Operations Coordinator. PPS security officer was using a cell phone to call for their relief who was late or had failed to relief them.	NL-Security - Misconduct by Employee or Third-Party - Policy violations	
39616	Richmond, CA - Refinery	6/12/2012 3:00:00 PM	Closed	Near Loss	Contractor's personal H2S monitor alarmed	Two contractors smelled whiff of H2S odor and one of their H2S monitors alarmed while working near a portable tank containing sulfidic caustic at the 2A Separator. Contractors noticed that a vent hose connecting the sulfidic caustic tank to a pair of vapor carbon drums had a visible hole.	NL-Injury/Illness - Contractor Injury	
39618	Richmond, CA - Refinery	6/11/2012 12:00:00 AM	Closed	Near Loss	Hydrocarbon Found In Air Line	While performing work in FCC near R280 a contract welding crew located an airline and opened it to test for operation prior to connecting their air hose and equipment. Upon opening the valve a small amount of light hydrocarbon liquid came out followed by hydrocarbon vapors. The contractor immediately closed the valve and informed the area OMC. During the contractor WIP audit on Tuesday the contractor shared the incident with the team, upon seeing the two valves with open Thor fittings on the ends and no "Do Not Operate" tags on them the audit team contacted the HO who immediately tagged the valves out of service.	NL-Lessons Learned	(1) Line was not tagged out of service/Do Not Use., (2) Hydrocabon entered plant air service line.
39652	Richmond, CA - Refinery	6/14/2012 5:34:00 AM	Closed	Near Loss	Main Gate - Barrier arm hit an individual on the head	Approximately 0534 an individual were struck by Main Gates barrier arm. Officer at MG instructed driver to drive into the parking lot to park and come back to MG to pick up a parking pass. Individual did what the Officer instructed and walked back to MG after parking their vehicle. Person crossed the street through the no walking zone while the barrier arm was in an up position coming down. Officer did not see it come down on the person but heard the barrier arm bumped the persons head. Person said they were okay and proceeded to work.	NL-Injury/Illness - Employee Injury	
							NL-	

39680	Richmond, CA - Refinery	6/14/2012 12:30:00 PM	Closed	Near Loss	Green Card - Contractor doing repairs RR tracks	Contractor was doing repairs on RR track and was using a chain attached to the vertical structure of the telehandler (Gradall) fork carriage. Contractor must use manufacturer's approved method of lifting loads.	Equipment/Property Damage - Equipment Damage	
39718	Richmond, CA - Refinery	6/14/2012 10:20:00 PM	Closed	Loss	Vehicle made contact with delineator resulting in a dented fender	At approximately 20:20 hrs the patrol officer was driving down Xylene Street traveling from 141 Gate toward 91 Gate. The driver veered to the left and the left front fender made contact with a heavy gauge plastic road delineator. This contact resulted in a scrape and small dent in the patrol vehicles left front fender and left front door. There was no damage to the delineator.	Transportation	(1) Momentarily distracted while driving. Investigation reveals the supervisor was reaching over to adjust the heat in her vehicle, and in so doing, cause the steering wheel to turn left while she was reaching to her right. By the time she immediately realized her judgment error and corrected her steering, the vehicle had come in contact with the "K-Rail" - type plastic delineator that was there as a fence protection device on a work site where there were steel plates across the road, and delineators and caution tape on both sides of the road which also caused the roadway to be narrower than normal at that particular juncture. The driver was able to correct her steering without damaging CVX property and with minor cosmetic damage to the contractor vehicle.
39723	Richmond, CA - Refinery	4/7/2012 12:00:00 AM	Investigation In Progress	Near Loss	Network Switch Failed	Network switch failed, rendering all GIL network services inaccessible at the South Isomax Outside Control Room. The duration the GIL network services for that location were unavailable was approximately 12 hours. The number of people effected were the 2-3 operators on shift at that control house during the failure. Turnovers and IntelaTrac downloads could still be accomplished at the main Hydroprocessing Control Center. Since we had a replacement network switch in our inventory, the cost of the incident was the one network analyst's time to replace the switch, which is $1000.	NL-Business Process - Business Interruption	(1) Why? Cisco Switch that was approximately two years old failed. Why? Initial examination does not reveal a root cause. Power Supply was checked, unit was visually inspected and boards were clean and not dirty or dusty. SFP uplink connection module was checked, in proper working condition. Did online search for issues and it was inconclusive. A different version of operating supervisory image was installed (an older version, newest was already installed) and that did not fix anything. Why? Our investigation into failure root cause has been inconclusive to this point. Possible theories are it has a bad motherboard that fails periodically. Unit has been replaced and new unit has been running fine for past two months. Unit is continuing to be monitored to see if we can determine a root cause and repair it. If not, then we will dispose of the unit. There is no existing service contract on this piece of equipment, it is cheaper to have spares on hand in our inventory. Why? Failure of electronic module used in the Network infrastructure that no root cause has been able to be determined. Unit will be retired if we are not able to correct its current unreliable state.
39728	Richmond, CA - Refinery	6/13/2012 1:00:00 PM	Closed	Near Loss	Green Card. Walkway planks are deteriorated. Location: West end of Poly Plant	Green Card. Walkway planks deteriorated. Has created gaps between planks. Missing hand and midrails. Posts and header shaky. Stairs starting to rot. This is access to 8" twin seal valve with VOC Tag# 0120-00115 attached. 8" insulated pipe marked 130A Line. Location: Pole St across from westend of Poly Plant, behind metal shed with dog house Alky-Poly Maint. x5570 stenciled on door. Next to walkway leading up to Poly Cooling Water Tower.	NL-Injury/Illness - Contractor Injury	
39731	Richmond, CA - Refinery	6/14/2012 3:00:00 PM	Closed	Near Loss	Slight Jet Hydrocarbon Weep T-3185 Fill Line/Dead Leg	Slight Weep T-3185 Dead leg under Standard Rd discovered during reinspection of the 3185 fill line.	NL-Environmental - Operational Leak	
39772	Richmond, CA - Refinery	5/16/2012 12:00:00 AM	Closed	Near Loss	MCO cooler failed leaking MCO into plant water header	MCO Sample cooler failed allowing MCO to back into the plant water header. This water also supplies the deluge system	NL-Environmental - Operational Leak	(1) mechanical failure end of life
39772	Richmond, CA - Refinery	5/16/2012 12:00:00 AM	Closed	Near Loss	MCO cooler failed leaking MCO into plant water header	MCO Sample cooler failed allowing MCO to back into the plant water header. This water also supplies the deluge system	NL-Equipment/Property Damage - Equipment Damage	(1) mechanical failure end of life
39781	Richmond, CA - Refinery	6/15/2012 9:00:00 PM	Closed	Loss	Operator strained muscle in leg	At Approximately 9 PM on 6/15/2012 a Hydroprocessing EE was exiting off their bicycle, when their leg get caught in the rear basket of the bicycle. The EE moved to pull their leg from the basket when they felt a lightening and pain in the back of the leg. The EE informed the HO and STL and Plant protection was called in. The EE was sent to the clinic for further evaluation.	Injury/Illness	(1) Why didOperator injured leg getting off a bicycle? Operator caught leg on rear basket of bicycle. Why did the operatorCatch leg on rear basket of Bicycle? Operator caught his leg on the rear basket of the bicycle because hi stature is such that the basket is a bit higher for him then other operator and he typically has swing his leg a little harder to Clear the rear basketLthis is a known hazard to the operator. Being a known hazard why did operator not swing leg over far enough? Proper LPSA was not performed on this hazard.
39782	Richmond, CA - Refinery	6/17/2012 4:00:00 AM	Investigation In Progress	Loss	Fire in SDA P-126A solvent pump	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. At approximately 4AM 6/17 a low seal pressure alarm energized on the OWS 1 board for P-126A on South Isomax. Minutes later a report of a seal fire on P-126A outboard seal was given and CFD was called. Fire monitors were set up and CFD also put water on the pump seal. In approximately 10 minutes the fire was extinguished and a small amount of vapor continued to wisp from the seal CFD is standing by.	Loss of Containment	(1) There was an outboard seal leak the ignited starting a fire Why was there an out board seal leak? Seal leak due to probable seal failure
						INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. At approximately 4AM 6/17 a low seal pressure		

39782	Richmond, CA - Refinery	6/17/2012 4:00:00 AM	Investigation In Progress	Loss	Fire in SDA P-126A solevent pump	alarm energized on the OWS 1 board for P-126A on South Isomax. Minutes later a report of a seal fire on P-126A outboard seal was given and CFD was called. Fire monitors were set up and CFD also put water on the pump seal. In approximately 10 minutes the fire was extinguished and a small amount of vapor continued to wisp from the seal CFD is standing by.	Fire/Explosion	(1) There was an outboard seal leak the ignited starting a fire. Why was there an out board seal leak? Seal leak due to probable seal failure
39847	Richmond, CA - Refinery	6/18/2012 12:00:00 AM	Closed	Near Loss	Lost key for LOTO Box in1333 installed in 2002	Must have key cut off breakers for T-3182 Mixer	NL-Operational Process/Procedures - Safety Systems	
39864	Richmond, CA - Refinery	6/7/2012 12:00:00 AM	Investigation In Progress	Loss	Customer Cuts - Purchased Product	In June 2012 Richmond Lubricants Plant (RLP) underwent five customer cuts due to unavailable stock. The products that were unavailable are purchased from the Delta Metairie plant (DLDP) and stock transferred to Richmond via intermodal transit. RLP placed an order against DLDP with the expected receipt date of May 31. The order requested eight different products with various quantities to make-up a full truck load. From the eight products, RLP realized five cuts pertaining to three products. The cuts could have been avoided if the shipment would have arrived on the expected receipt date. The cuts were realized between 5/31 and 6/6. The expected arrival date of these products was May 31 although RLP did not receive until June 7. The timeline is as follows: Thurs., 5/31 – Expected receipt date from DLDP to RLP Fri., 6/1 – JB Hunt (carrier) requests re-work to SLI for Chevron approval Fri., 6/1 – SLI requests weight tickets at time of loading Mon. 6/4 – JB Hunt confirms that load was not weighed at time of loading Mon., 6/4 – Rework Approval request sent to Chevron Logistics (Logistics Mangaer and Transportation Specialist) Mon., 6/4 – RLP Follow-up with Schneider to understand delayed arrival of shipment Tues., 6/5 – Chevron team approves re-work Wed., 6/7 – Load arrives RLP at 5:15 am	Business Process	(1) What?: RLP experienced five customer cuts of purchased product from DLDP Why? Expected shipment from DLDP arrived RLP on 6/7 instead of planned ETA of 5/31 and insufficient safety stock to cover customer orders Why? Shipment required rework upon intermodal arrival at carrier (JB Hunt) in California before 5/31 Why? Axel weight on shipment exceed CA DOT weight restrictions Why? Load was not scaled at origin Why? Driver (carrier) did not follow standard protocol of scaling at origin, (2) What? Why did RLP have insufficient safety stock to cover customer orders Why? New product so RLP has yet to understand purchasing pattern and ratable inventory strategy Why? Demand has continuously exceeded RLP supply on these SKUs
39864	Richmond, CA - Refinery	6/7/2012 12:00:00 AM	Investigation In Progress	Loss	Customer Cuts - Purchased Product	In June 2012 Richmond Lubricants Plant (RLP) underwent five customer cuts due to unavailable stock. The products that were unavailable are purchased from the Delta Metairie plant (DLDP) and stock transferred to Richmond via intermodal transit. RLP placed an order against DLDP with the expected receipt date of May 31. The order requested eight different products with various quantities to make-up a full truck load. From the eight products, RLP realized five cuts pertaining to three products. The cuts could have been avoided if the shipment would have arrived on the expected receipt date. The cuts were realized between 5/31 and 6/6. The expected arrival date of these products was May 31 although RLP did not receive until June 7. The timeline is as follows: Thurs., 5/31 – Expected receipt date from DLDP to RLP Fri., 6/1 – JB Hunt (carrier) requests re-work to SLI for Chevron approval Fri., 6/1 – SLI requests weight tickets at time of loading Mon. 6/4 – JB Hunt confirms that load was not weighed at time of loading Mon., 6/4 – Rework Approval request sent to Chevron Logistics (Logistics Mangaer and Transportation Specialist) Mon., 6/4 – RLP Follow-up with Schneider to understand delayed arrival of shipment Tues., 6/5 – Chevron team approves re-work Wed., 6/7 – Load arrives RLP at 5:15 am	Operational Process/Procedures	(1) What?: RLP experienced five customer cuts of purchased product from DLDP Why? Expected shipment from DLDP arrived RLP on 6/7 instead of planned ETA of 5/31 and insufficient safety stock to cover customer orders Why? Shipment required rework upon intermodal arrival at carrier (JB Hunt) in California before 5/31 Why? Axel weight on shipment exceed CA DOT weight restrictions Why? Load was not scaled at origin Why? Driver (carrier) did not follow standard protocol of scaling at origin, (2) What? Why did RLP have insufficient safety stock to cover customer orders Why? New product so RLP has yet to understand purchasing pattern and ratable inventory strategy Why? Demand has continuously exceeded RLP supply on these SKUs
39866	Richmond, CA - Refinery	6/8/2012 1:00:00 PM	Closed	Near Loss	Brief Filemaker Outage	Users were not able to see filemaker data in correct form view while filemaker was being updated. * Why? - Production copy of filmaker was being updated and developer had to change form view to table view to update the data. Why? these changes were required in table view and developer didnt switch back to form view in time	NL-Business Process - Business Interruption	
39867	Richmond, CA - Refinery	6/16/2012 2:00:00 PM	Closed	Loss	Operator reported soreness and swelling of one knee due to a bug bite	The LPG Rax Operator reported to their supervisor soreness and swelling in one knee. The Operator believed it may have been a bug bite.	Injury/Illness	(1) Employee reported discomfort in knee with no triggering event, reported to supervisor as a precaution.
								(1) Did not follow current test method FIVE WHY'S 1. Why did "above " happen? Verification LOSS OF P-553/553A LUBE OIL DISCHARGE PRESSURE TO K-550 K-550 S/D DUE TO LOW L/O PRESSURE 2. Why did "1" happen? BOTH P-553 & 553A BOTH OFF WITHIN AN 8 SECOND TIME FRAME ALARM JOURNAL SEQUENCE OF EVENTS 3. Why did "2" happen? APS P-553/553A TEST METHOD NOT FOLLOWED Discussion with operator on alarm journal SOE. Went over current test method in field. ROOT CAUSE(S): What were the Root Causes of your incident? Add more as needed 1 Not following current test method for P-553(A) APS testing Basic Cause Category: 2 Basic Cause Category: 3 Basic Cause Category: CORRECTIVE ACTION(S): (List actions that will be taken to eliminate the Root Cause of the incident – add more as needed) 1 Discussed with operator the task sequence of his testing steps and review of test method. Due Date: 6/19/12 Completed Owner: Scott Kawahara D&R K-550 S/D due to lube oil pumps P-553-553A 6/18/12 @ 08:47 GUS 4,5&9 operator Dave Wolden attempted an APS test on K-550 recycle compressor lube oil

39868	Richmond, CA - Refinery	6/18/2012 8:47:00 AM	Investigation In Progress	Loss	Loss of K-550 recycle compressor which led to 5 Rhen S/D and H2 issues affecting various units.	Loss of K-550 recycle compressor upon lube oil pump P-553 & 553A APS testing. During the test session, oil discharge pressure was lost which initiated the K-550 S/D. This in turn S/D 5 Rhen. and caused H2 issues which affected other D&R units including JHT,NHT, DHT & 4Rhen. Also including North Yard which freed up H2 to help out.	Operational Process/Procedures	pumps P-553-553A as part of his daily duties for 6/18/12 dayshift. A 3rd Monday of the month task as scheduled per the D&R routine duties calendar schedule. No restrictions or abnormal conditions prior to the pump APS testing. K-550 operating at normal conditions and 5 Rhen. rates @ 23 MBPD ~ 08:45. Starting time on APS pump test is ~ 08:43:00 The L/O pumps were in the following operating status prior to the APS testing: P-553 in "AUTO" for APS testing.(Standby Mode) P-553A in "RUN" status (Operating Mode) Ops. tested P-553 for the APS test via the "Block & Bleed" method to the APS low pressure switch PCL-0558 on discharge of P-553 & APS for P-553A L/O pump which started P-553 on APS as tested with normal discharge pressure @
39868	Richmond, CA - Refinery	6/18/2012 8:47:00 AM	Investigation In Progress	Loss	Loss of K-550 recycle compressor which led to 5 Rhen S/D and H2 issues affecting various units.	Loss of K-550 recycle compressor upon lube oil pump P-553 & 553A APS testing. During the test session, oil discharge pressure was lost which initiated the K-550 S/D. This in turn S/D 5 Rhen. and caused H2 issues which affected other D&R units including JHT,NHT, DHT & 4Rhen. Also including North Yard which freed up H2 to help out.	Business Process	(1) Did not follow current test method FIVE WHY'S 1. Why did "above " happen? Verification LOSS OF P-553/553A LUBE OIL DISCHARGE PRESSURE TO K-550 K-550 S/D DUE TO LOW L/O PRESSURE 2. Why did "1" happen? BOTH P-553 & 553A BOTH OFF WITHIN AN 8 SECOND TIME FRAME ALARM JOURNAL SEQUENCE OF EVENTS 3. Why did "2" happen? APS P-553/553A TEST METHOD NOT FOLLOWED Discussion with operator on alarm journal SOE. Went over current test method in field. ROOT CAUSE(S): What were the Root Causes of your incident? Add more as needed 1 Not following current test method for P-553(A) APS testing Basic Cause Category: 2 Basic Cause Category: 3 Basic Cause Category: CORRECTIVE ACTION(S): (List actions that will be taken to eliminate the Root Cause of the incident -- add more as needed) 1 Discussed with operator the task sequence of his testing steps and review of test method. Due Date: 6/19/12 Completed Owner: Scott Kawahara D&R K-550 S/D due to lube oil pumps P-553-553A 6/18/12 @ 08:47 GUS 4,5&9 operator Dave Wolden attempted an APS test on K-550 recycle compressor lube oil pumps P-553-553A as part of his daily duties for 6/18/12 dayshift. A 3rd Monday of the month task as scheduled per the D&R routine duties calendar schedule. No restrictions or abnormal conditions prior to the pump APS testing. K-550 operating at normal conditions and 5 Rhen. rates @ 23 MBPD ~ 08:45. Starting time on APS pump test is ~ 08:43:00 The L/O pumps were in the following operating status prior to the APS testing: P-553 in "AUTO" for APS testing.(Standby Mode) P-553A in "RUN" status (Operating Mode) Ops. tested P-553 for the APS test via the "Block & Bleed" method to the APS low pressure switch PCL-0558 on discharge of P-553 & APS for P-553A L/O pump which started P-553 on APS as tested with normal discharge pressure @
39870	Richmond, CA - Refinery	6/18/2012 10:00:00 AM	Closed	Loss	While installing P-335, the discharge flange on the pump broke while being tightened.	Mechanics were installing P-335 in SISO. While they were tightening up the discharge flange, the flange broke on the pump.	Equipment/Property Damage	(1) Incident Description: Mechanics were installing P-335 in SISO. While they were tightening up the discharge flange, the flange broke on the pump. FIVE WHY'S 1. Why did "above" happen? Verification Cast iron flange was corroded and weaken over time 2. Why did "1" happen? Flange and pump have flat face gasket surfaces, but had a gap and a pivot point around gasket when being lighten. 3. Why did "2" happen? Wrong gasket (spiral wound) used when bolting up pump. 4. Why did "3" happen? Wrong gasket used in past with no issue, replaced "in kind" 5. Why did "4" happen? Mechanic didn't realize wrong gasket installed. 6. Why did "5" happen? Mechanic didn't pay attention or know it was wrong.
39903	Richmond, CA - Refinery	6/12/2012 9:00:00 AM	Closed	Near Loss	Green Card. A water leak from pipe clamp needs to be fixed. Locaton: FCC - Waterfall North of E-742	Green Card. A water leak out of pipe clamp needs to be fixed. It looks like it has been leaking for a long time and also needs scaffold and a deck to get out to the leak. Location: FCC - Waterfall North of E-742	NL-Environmental - Operational Leak	
39908	Richmond, CA - Refinery	6/19/2012 10:45:00 AM	Closed	Near Loss	Driving in wrong lane by Scale house	While driving into the refinery from 31 gate I was paying more attention to the trucks at the scale house and drove in the wrong lane.	NL-Transportation - Company	(1) Problem Statement (What is the key issue that needs to be addressed?): Driving in the wrong lane/wrong side of the street. FIVE WHY'S 1. Why did "above" happen? Verification Was paying too much attention to the trucks at the scalehouse. 2. Why did "1" happen? Was trying to identify the driver of the truck. 3. Why did "2" happen? Thought the driver was someone I knew. ROOT CAUSE: What was the Root Cause of your incident? Not paying attention to the task at hand---driving the vehicle. LPS Factor: B In the past, has looked to see who the driver is and nothing bad has happened.

39909	Richmond, CA - Refinery	6/19/2012 12:00:00 AM	Closed	Near Loss	Radio 8 went into alarm	Radio transmitter malfunction alarm.	NL-Business Process - Business Process	
39909	Richmond, CA - Refinery	6/19/2012 12:00:00 AM	Closed	Near Loss	Radio 8 went into alarm	Radio transmitter malfunction alarm.	NL-Operational Process/Procedures - Safety Systems	
39914	Richmond, CA - Refinery	6/19/2012 12:00:00 AM	Closed	Near Loss	list of all Radio system alarms not reported since Sept 2011 to present	8-23-11~~~9-13-2011~~~~9-21-2011~~~~10-18-2011~~~~10-20-2011~~~~11-18-2011~~~~12-29-2011~~~~2-23-2012~~~~4-10-2012.. Alarms attended to and repaired but not felt by the customers.	NL-Operational Process/Procedures - Safety Systems	
39919	Richmond, CA - Refinery	6/19/2012 8:15:00 AM	Closed	Loss	Cement Pump Truck MVA Ethyl Road	A Concrete Pump truck was being escorted to tank 634. The truck was onsite to pump cement for new pipe supports. They escorted the pump truck thru lower Ethyl Road . As the Pump truck driver approached the overhead pipeway he "inched" the truck forward in an attempt to clear the pipeway. In doing so one of the pipes was nicked with his boom and the vehicle was immediately stopped. The damage appeared to be a scratch of .003" or less. Inspection also looked at the line and determined it to be satisfactory. The air from the tires of the pump truck was then released so that the truck could back out safely without any further incident.	Transportation	(1) "FIVE WHY" One Page Report Incident Number #39919 Business Unit Blending & Shipping Location Midway & Ethyl Road Facility Name Incident date 6/19/12 Type of Process: Type of Equipment: Team Members: Ron Brikovich, Mike Martin, Shelli Curl, Ivy Iverson Incident Description: What: A sub contractor pump truck brushed against a section of pipe in the pipe rack. Where (location or where in the process): Midway & Ethyl Road When: Tuesday June 19, 2012 How: When the pump truck driver approached the overhead pipe rack he attempted to inch his way under the pipes and consequently came in contact with a pipe at a lower elevation. Problem Statement (What is the key issue that needs to be addressed?): Proper communication and pre-planning of the preferred route. FIVE WHY'S 1. Why did "above" happen? Verification Management company assumed sub contractor being used knew of the low piping hazards and preferred route of travel. 2. Why did "1" happen? Contractor has been working in the area for over 1 week and in the refinery for 15 years. 3. Why did "2" happen? Escort was not aware of the preferred route. 4. Why did "3" happen? In the past he has used the route on Ethyl St. with other cement and pump trucks without incident. 5. Why did "4" happen? 6. Why did "5" happen? 7. Why did "6" happen? 8. Why did "7" happen? ROOT CAUSE: What was the Root Cause of your incident? In the past, did not follow procedures or acceptable practices and no incident occurred. Contributing Factors: • Warning devices and signage were NOT in place at the time of this incident. • Stop work authority was not exercised prior to the incident by the driver. • Escort team did not recognize the hazards associated with the low pipe way. • Lack of communication on the height of the pump truck,
39926	Richmond, CA - Refinery	6/19/2012 8:30:00 AM	Closed	Loss	Small Oil Spill	Our crew was working to get ready to demo about a 15' section of the #2 fuel oil suck-out line. The main 12" header had been drained down with a vacuum truck and the remaining product was to be sucked out of the 3" line. While the crew was relocating with the vacuum hose the line burped and a small amount of oil escaped and landed beyond the containment pool and entered the water.	Environmental	(1) "FIVE WHY" One Page Report Incident Number #39926 Business Unit Blending & Shipping Location Wharf Facility Name Incident date 6/19/12 Type of Process: Type of Equipment: Team Members: Ron Brikovich, Mickey Thompson, Nancy Banuelos Meghan Horton, Earl Young, Steve Hammack, Incident Description: What: Small amount of oily water leaked into the bay Where (location or where in the process): Wharf When: 6/19/12 – approx. 8:25 a.m. How: Line burped out of one of the open ends Problem Statement (What is the key issue that needs to be addressed?): Oil leaked into the bay. FIVE WHY'S 1. Why did "above" happen? Verification Line burped past containment. 2. Why did "1" happen? Unexpected back pressure was created. 3. Why did "2" happen? Vacuum on line was released. 4. Why did "3" happen? Pulled slinger to drain another portion of line. 5. Why did "4" happen? Following procedure to drain suckout line. 6. Why did "5" happen? 7. Why did "6" happen? 8. Why did "7" happen? ROOT CAUSE: What was the Root Cause of your incident? Lack of skill or knowledge. 2-Person was trained, but did not fully understand skill or knowledge. (Instruction needs improvement, practice or repetition needed, testing, etc) LPS Factor:
39928	Richmond, CA - Refinery	6/19/2012 9:00:00 AM	Closed	Near Loss	technician using a frayed extension cord.	Technician plugged in an extension cord. the extension cord was old and frayed. When plugged in the cord produces a spark 5 Why What- defective cord being used Why(1)-only cord in darkroom at the time Why(2)-never notified supervisor cord was bad Why(3)- because it was still in working condition Factor: Previously used cord with no negative consequence	NL-Injury/Illness - Contractor Injury	
					Replacement for 39587 which was deleted: Green	Addressing Alternate Fall Protection Plans. Location: Long Wharf Berths #2, 3 & 9 Green Card. While performing a WIP CHESM Audit with the CSF team, noticed the verbal direction of which fall protection was to be utilized in a specific area. Was not specifically addressed in either the Alternate Fall Protection plan or the completed CVX JHA. A question exists as to whether or		

39929	Richmond, CA - Refinery	6/12/2012 1:00:00 PM	Closed	Near Loss	Card. Addressing Alternate Fall Protection Plans. Long Wharf	not the Alternate Fall Protection plan, as written, pertains to the elevated pipe rack area, and whether or not that area should be considered "over water". Location: Long Wharf Berths #2, #3 and #9	NL-Lessons Learned	
39945	Richmond, CA - Refinery	6/19/2012 1:00:00 PM	Closed	Loss	Truck towing T.O. lost traction went off road, moved #12 mogas line	A Contractor EE Truck towing a Thermal Oxidizer on SP hill road near old Tank 1686 pad lost traction going up the hill and skidded downhill ~ 15 feet before coming to a stop next to the pipe line off the road.	Transportation	(1) Loose Gravel on Road. Equipment Selection.
39948	Richmond, CA - Refinery	6/19/2012 2:00:00 PM	Closed	Near Loss	Bridge #201 grating panel fell off of supports after a Truck passed over it	A grading panel on Bridge #201 fell off of supports immediately after a Truck passed over the bridge. No injuries or damage to truck occurred. Three trucks were unable to leave the area as it was a dead end road with no safe way to exit area until the next day when the Bridge was repaired.	NL-Equipment/Property Damage - Equipment Damage	(1) No Inspection Program, (2) Design less than adequate
39979	Richmond, CA - Refinery	6/20/2012 4:55:00 AM	Closed	Near Loss	Green Card - The boiler shop / machine shop parking lot gate broken and creating a safety hazard.	In the boiler shop / machine shop parking lot the pass gate is non-functional. One arm was removed but this creates a hazard as both travel pathways go through the same side.	NL-Transportation - Company	
39982	Richmond, CA - Refinery	6/22/2012 10:30:00 AM	Closed	Near Loss	GreenCard. Plastic LOTO tubes need replacing	Plastic tubes (LOTO) continually falling apart from sun & bad weather. Paper work gets water soaked or lost because protective tube is no good.	NL-Lessons Learned	
40000	Richmond, CA - Refinery	6/20/2012 7:09:00 AM	Closed	Near Loss	FCC totalyzer tripped when K-1960 shut down on high level. No visible flaring occured.	FCC totalyzer tripped when K-1960 shut down on high level.	NL-Regulatory Compliance - Permit Exceedance	(1) K-1960 was not operating properly causing the discharge of 1st stage To be inadequate to lower level in V-1962. "FIVE WHY" One Page Report Incident Number 40000 Business Unit Hydro Location RLOP Facility Name K-1960 Incident date 6-20-2012 Type of Process: Relief gas Type of Equipment: Flare Gas Recovery compressor Team Members: Incident Description: What:FCC totalyzer tripped when K-1960 shut down on high level. Where (location or where in the process):RLOP K-1960 When: 6-20-2012 07:09 How: Operations were attempting to stabilize suction flow to K-1960. Once line was un-plugged caused liquid to be knocked out on V-1962. Due to the fact K-1960 1st stage discharge pressure was inadaquate, there was not enough pressure to push liquid to V-1909. This caused the level to rise until the machine shutdown on high level. FCC totalyzer tripped when K-1960 shut down on high level. Problem Statemant (What is the key issue that needs to be addressed?): Inadaquate 1st stage discharge pressure on K-1960. FIVE WHY'S 1. Why did "above" happen? Verification Operations using FG to raise the 1st stage discharge pressure. However this was causing the relief system to be overloaded due the the availability of only one FGR machine. 2. Why did "1" happen?FG was required to be opened to suction of K-1960 due the inability to drain liquid in V-1962 to V-1909. 3. Why did "2" happen?FG required due to 1st stage discharge pressure operating at 19# when normal operation is ~30#. ROOT CAUSE: What was the Root Cause of your incident? K-1960 was not operating properly causing the discharge of 1st stage To be inadequate to lower level in V-1962. LPS Factor:
40011	Richmond, CA - Refinery	6/20/2012 1:00:00 PM	Closed	Near Loss	Operator Dizzy	An operator was working in room #1121 GC when he felt dizzy after running a Naptha Sour Sample (D&R) for D-2887.	NL-Injury/Illness - Employee Injury	
40013	Richmond, CA - Refinery	6/20/2012 10:30:00 AM	Closed	Near Loss	Contract EE reported pain and swelling of left cheek.	Contract EE reported pain and swelling of left cheek to Chevron Maintenance Supervisor.	NL-Injury/Illness - Contractor Injury	
40021	Richmond, CA - Refinery	6/20/2012 2:00:00 PM	Closed	Near Loss	Lost communication during equipment isolation	During the blinding process of #5 boiler in preparation for entry, a blind was not installed prior to removing a blowdown valve on the boiler to completely drain it. This blind is located on a common blowdown header that is tied to all other boilers. During the same time, #4 boiler was in the process of being shutdown per procedure and the use of the blowdown valve (normally closed) was necessary to lower drum level. As ops slowly opened B/D valve on 4 blr, steam blowing to atmosphere was immediately heard and op closed valve immediately. Blowdown H20 / steam blew thru an open 1" pipe at grade level coming in contact with nothing.	NL-Injury/Illness - Employee Injury	(1) No established procedure to ensure isolation is performed properley.
	Richmond, CA -	6/20/2012 2:00:00		Near	Lost communication during	During the blinding process of #5 boiler in preparation for entry, a blind was not installed prior to removing a blowdown valve on the boiler to completely drain it. This blind is located on a common blowdown header that is tied to all other boilers. During the same time, #4 boiler was in the process of being shutdown per procedure and the use of the blowdown valve (normally closed) was necessary to lower drum level. As ops slowly opened B/D valve on 4 blr, steam blowing to atmosphere was immediately heard and op closed valve immediately. Blowdown H20 / steam blew thru an open 1" pipe at grade level	NL-Injury/Illness -	(1) No established procedure to ensure isolation is performed

40021	Refinery	PM	Closed	Loss	equipment isolation	coming in contact with nothing.	Contractor Injury	properley.
40021	Richmond, CA - Refinery	6/20/2012 2:00:00 PM	Closed	Near Loss	Lost communication during equipment isolation	During the blinding process of #5 boiler in preparation for entry, a blind was not installed prior to removing a blowdown valve on the boiler to completely drain it. This blind is located on a common blowdown header that is tied to all other boilers. During the same time, #4 boiler was in the process of being shutdown per procedure and the use of the blowdown valve (normally closed) was necessary to lower drum level. As ops slowly opened B/D valve on 4 blr, steam blowing to atmosphere was immediately heard and op closed valve immediately. Blowdown H20 / steam blew thru an open 1" pipe at grade level coming in contact with nothing.	NL-Operational Process/Procedures - Safety Systems	(1) No established procedure to ensure isolation is performed properley.
40026	Richmond, CA - Refinery	6/20/2012 1:30:00 PM	Closed	Near Loss	Irretation to neck/face	Installing conduit for the Homeland Security Enhancement Project. Poison in area. Employee felt stinging sensation around face and neck.	NL-Injury/Illness - Contractor Injury	
40124	Richmond, CA - Refinery	6/21/2012 5:00:00 PM	Closed	Loss	Contractor transport truck was leaving refinery with K-920 Rotor near Mill and Channel Strett when the load shifted. The rotor fell appoximately 8 inches to the bed and damage assesment is unclear until a further inspection is performed by Kottler. Appears to be minor damage. No personnell injuries occured.	Contractor transport truck was leaving refinery with K-920 Rotor near Mill and Channel Strett when the load shifted. The rotor fell appoximately 8 inches to the bed and initial damage assesment is unclear until a further inspection is performed by Kottler. Appears to be minor damage. No personnell injuries occured.	Equipment/Property Damage	(1) Cribbing in bad shape, (2) Conducted stand down to get commitment to take the time to do the right task the right way every time
40231	Richmond, CA - Refinery	6/24/2012 12:40:00 PM	Closed	Loss	Flare gas compressor K-1060 shutdown and wouldn't restart K-1070 would not start	At 12:45 in the Flare gas recovery area, The FGR shutdown crew was attempting to switch from K-1060 to K-1070 in order to replace K-1060 suction block valve. K-1070 would not start so operations began to troubleshoot the issue. The HO noticed K-1060 was on suction pressure shutdown bypass and suggested, because of the new control panels and system, that the issue with K-1070 might be that K-1060 was in Bypass Suction pressure on the temporary Suction Knockout vessel,V-1050 was holding a normal 8 psi. The HO instructed the CBO to take K-1060 out of shutdown bypass at which time K-1060 shutdown and also could not be restarted. Further investigation indicates the two Pressure indicators on the permanent V-1050 66PI1050A and B which are at zero PSI are still in the Shutdown logic and need to be removed prior to taking the FGR Compressors out of low suction pressure bypass.	Regulatory Compliance	(1) The shutdown coordinator assumed the PIs were removed from the shutdown logic as part of the project and did not recognize the risk. , (2) The CST did not remember that the K-1060 and K-1070 required ALL shutdown bypasses to be in normal to start a compressor. Factor B-In the past, did not follow procedures or acceptable practices and no incident occurred. , (3) Although the HO did not activate the bypass safety since the panel is outside, the HO did not note the safety bypass in the turnovers which would have notified the HO on the next shift to fill out a bypass safety form when the one-shift limit for safety bypass was reached.
40232	Richmond, CA - Refinery	6/23/2012 11:00:00 AM	Closed	Near Loss	Operator had discomfort on lip. Seen by Martinez clinic & released. Non industrial	Operator noticed discomfort on lower lip. Teported to HO/STL the following day. Seen By Martinez clinic. classified as non-industrial.	NL-Injury/Illness - Employee Injury	
40317	Richmond, CA - Refinery	6/19/2012 7:00:00 AM	Closed	Near Loss	Green Card. Need a blind bin to prevent blinds from falling. Location: RLOP 14 Plant, E-1413 Fin Fans	Green Card. Up on the south catwalk of E-1413 Fin Fans, observed that 2" 20lb blinds are hanging off the handrails. Could be clipped or knocked off to the ground below causing serious injury or damage. Location: RLOP 14 Plant E-1413 Fin Fans	NL-Injury/Illness - Employee Injury	
40336	Richmond, CA - Refinery	6/21/2012 1:00:00 PM	Closed	Loss	18 plant shutdown due to seal leaks on both P-1831/A pumps.	We lost P-1831A due to a seal leak on day shift, June 21st. The other pump, P-1831, was not available because it was still out of service awaiting maintenance to fix its seal leak. 18 plant was shutdown and sour water washed while P-1831A was being repaired. This is a Level 3A event because it is a repeat clock reset of an similar event that occurred in Feb 2012 (within past 12 months---refer to LI #31749).	Equipment/Property Damage	(1) Repeat event of a February 2012 event investigated under LI #32285, where solutions are pending. Refer to notes in the journal and LI #32285.
40342	Richmond, CA - Refinery	6/25/2012 8:00:00 AM	Closed	Loss	Cracked windshield on Carry Deck Crane	Mechanics were moving a new motor for P-1453A that was attached to a pallet with the Drott. While moving the motor and pallet onto the Drott, the pallet slowly rotated and came into contact with the windshield of the Drott cracking the the lower corner of the windshield.	Equipment/Property Damage	(1) Incident Description: Mechanics were moving a new motor for P-1453A that was attached to a pallet with the Drott. While moving the motor and pallet onto the Drott, the pallet slowly rotated and came into contact with the windshield of the Drott cracking the lower corner of the windshield. FIVE WHY'S 1. Why did "above " happen? Verification Mechanic moved motor with pallet attached 2. Why did "1" happen? Mechanic had done this task before with no issues 3. Why did "2" happen? Mechanic paid closer attention to load when it was on the hook
							NL-	(1) Why did the safety of V-735 continue to lift for over 5 hours. Because the pressure on V-735 was above the designed set pressure of the PSV. Why was the pressure of V-735 too high. Because the plant was in the process of pulling feed and not all the moves to lower the pressure on V-735 were made. Why were not all the available move made to lower the pressure of V-735. Because the crew did not have

40363	Richmond, CA - Refinery	6/25/2012 10:00:00 PM	Closed	Near Loss	IX-7311, V-735 safety lifting	The safety on V-735 started lifting at about 22:00 on 6/25/12. It will seat for a few seconds and the lift again.	Equipment/Property Damage - Equipment Damage	the knowledge about these moves. Why did the crew not know about these moves. Because they lacked the experience and or did not receive the proper training.
40396	Richmond, CA - Refinery	6/13/2012 1:00:00 PM	Closed	Near Loss	Green Card. Retainer pin is sticking out. Location: D&R F-1160 Burner #6	Green Card. While working on a burner, air register handle, I noticed the retainer pin is sticking out. Location: D&R F-1160 Burner #6	NL-Injury/Illness - Employee Injury	
40397	Richmond, CA - Refinery	6/13/2012 7:30:00 AM	Closed	Near Loss	Green Card. Traffic signs fell over in walkway. Location: North Yard #1 Parking Lot	Green Card. Traffic signs fell over in walkway, could cause falls. Location: North Yard #1 Parking Lot	NL-Lessons Learned	
40401	Richmond, CA - Refinery	6/19/2012 10:00:00 AM	Closed	Near Loss	Green Card. No crane tape while doing rigging. Location : S. Isomax	Green Card At Flare Recovery Unit, doing crane lifting pickup and they don't have crane tape while they are doing rigging. Wide open for people to walk right under the rigging.	NL-Injury/Illness - Contractor Injury	
40419	Richmond, CA - Refinery	6/26/2012 11:00:00 AM	Closed	Near Loss	Arm of chair snapped off while attempting to stand from sitting position.	While attempting to stand from a sitting position the right arm of the chair completely snapped off causing the employees arm to jerk downwards.	NL-Injury/Illness - Employee Injury	
40425	Richmond, CA - Refinery	5/19/2012 12:00:00 AM	Closed	Near Loss	CORISO #652 went overdue (due 5/19) – WO 330783	Initial maintenance (clean off studs) work started for this CORISO requirment in July of 2011, however it was not completed on time.	NL-Regulatory Compliance - Non Compliance	(1) Problem: CORISO #652 went overdue (due 5/19) – WO 330783 1. Why? – There was a delay on maintenance planning for additional work scope after the job had civil engineering completed i. Not a fluid process for handing off work that either needs engineering or engineering is done and is ready for maintenance – especially when multiple scope changes are involved, (2) Problem: CORISO #652 went overdue (due 5/19) – WO 330783 2. Why? - Execution was delayed several times due to getting inspector here – did not know there was a 3 day cure time for anchor bolts a. Lack of knowledge in maintenance planning and execution with the process involved with permitting work
40426	Richmond, CA - Refinery	6/26/2012 1:00:00 PM	Closed	Loss	Picker contacted pipe support and thermo well gauge	EE was setting up Picker to help mechanic install serge pot. Front outriggers were lowered first. EE then revved up the engine to lower the back outriggers not realizing that the transmission was still in gear causing the picker to jump forward and contacting the pipe support with the right front outrigger. The pipe support is about 12" off the ground and broke free from its anchor bolts. Front outrigger also made contact with thermo well gauge causing it to break.	Equipment/Property Damage	(1) Driver misjudged how close he was to edge of pavement, (2) Did not follow proper safety practices and take the transmission out gear
40522	Richmond, CA - Refinery	6/26/2012 10:00:00 AM	Closed	Near Loss	WorkPace Settings Modified without user's knowledge	Employee had their work pace computer settings modified without their knowledge. Once settings were modified, settings became locked not allowing the user to reset their settings. Causing that individual to disrupt a meeting that they were scribing for until the workpace break had finished.	NL-Lessons Learned	(1) Incident Number 40522 Business Unit HES/Fitness/Ergo Location Facility Name Incident date 6/26/12 Type of Process: Type of Equipment: Team Members: Allison Beane Robin Jennings Incident Description: Employee had their work pace computer settings modified without their knowledge. Once settings were modified, settings became locked not allowing the user to reset their settings. Causing that individual to disrupt a meeting that they were scribing for until the workpace break had finished. FIVE WHY'S 1. Why did "above " happen? Admin had lack of knowledge of module function 2. Why did "1" happen? Setting changes 24 hour delay not part of the training program 3. Why did "2" happen? Corporate approved online training program offered 2 years previous did not contain this portion
40539	Richmond, CA - Refinery	6/27/2012 9:30:00 AM	Closed	Loss	Contractor work van came in contact with yellow poles	When leaving Cogen control room, Estes work van came in contact with yellow boundary pole on the right side (Blind side) of the van. EE realized that he came in contact with a stationary object and immediately applied the brake. EE's foot slipped off the brake and onto the gas pedal, accelerating the van forward and knocking over 4 yellow poles that were cemented into the ground before he was able to come to a stop. Chevron Fire Department responded quickly and professionally to the accident There were no visible injuries to the EE and enough damage to the van that it was not safe to drive.	Transportation	(1) Driver misjudged how close he was to edge of pavement, (2) Driver went to hit brake and foot slipped and hit the gas.
40542	Richmond, CA - Refinery	6/26/2012 12:00:00 PM	Closed	Near Loss	Green Card. Yellow poles in the area are too short. Location: SISO - 20 Plant	Green Card. While working on 20 Plant, we noticed the yellow poles in the area were too short. Someone can drive over them and have a MVA. Location: SISO 20 Plant	NL-Transportation - Company	
40549	Richmond, CA - Refinery	6/27/2012 2:15:00 PM	Closed	Near Loss	2011 CalARP Audit Finding #364	CalARP Audit recommendation #364, Chevron committed to utilize FireRMS data management system to better track and manage fire compliance data and inspections. Item #364 has a due date of 6/30/2012. Due to medical issues at Zoll Industries, the firm providing the data management system, the formalized training and system implementation is not complete. Zoll's best guess as to when they could possibly provide the necessary training was to be the end of June 2012.	NL-Regulatory Compliance - Non Compliance	
						In the RDC south lot near bay number 5, the injured worker was spotting for a pickup truck that he was directing backwards to hitch up to a compressor trailer. Worker stopped truck and bent down to manuever the trailer tongue so		

40553	Richmond, CA - Refinery	6/27/2012 7:45:00 AM	Closed	Loss	Worker injured (first aid case only) his leg when it was pinched between a compressor and a truck bumper.	a hitch-up could occur. The truck's rear hitch was about 2-3 feet from the tongue of the trailer at this point. As the worker was manually maneuvering the compressor the pickup truck suddenly moved backwards. The worker had slapped between the compressor tongue and the truck bumper. The leg right above the knee was pinched between the tongue and the truck's rear bumper. Worker yelled to the driver and driver pulled forward releasing the leg. Worker had mild pain and UST Safety and Plant Protection were called.	Injury/Illness	(1) Worker put his leg in a pinch point.
40570	Richmond, CA - Refinery	6/24/2012 12:00:00 PM	Closed	Near Loss	While in the process of approving an FCC Import feed tank transfer a discrepancy in the maximum allowable chloride content was discovered.	While in the process of approving an FCC Import feed tank transfer a discrepancy in the maximum allowable chloride content was discovered between the StarLims system maximum and the RI-703 maximum. The StarLims indicates a maximum of 5ppm and the RI indicates a maximum of 10ppm.	NL-Business Process - Business Process	(1) Request to make change in StarLims was made by PED. Correction of the chloride limit had not yet been completed. STL and On shift crew were a were of correct chloride limit and correctly followed RI-703
40654	Richmond, CA - Refinery	6/26/2012 10:00:00 AM	Closed	Near Loss	Green Card. Need a stop sign installed. Location: Intersection of Chevron Way & Center St.	Green Card. At the aforementioned intersection, the cars coming from the Main Gate do not have a stop signwhich could lead to a MVC as the cars coming from the Admin Bldg crossing over to Center St. are not expecting the cars coming from the Main Gate to go through the intersection without stopping. Location: Intersection of Chevron Way and Center St.	NL-Transportation - Company	
40656	Richmond, CA - Refinery	6/19/2012 2:30:00 PM	Closed	Near Loss	Green Card. Found a leak on a greenway valve. Location: RLOP - Butane sample station 19Plant	Green Card. Found a leak on a greenway valve. The valves stem collar had a stripped hex nut making it unattainable. Location: RLOP - Butane sample station 19Plant	NL-Environmental - Operational Leak	
40658	Richmond, CA - Refinery	6/20/2012 10:00:00 AM	Closed	Near Loss	Green Card. No green tag on scaffold. Location: H2B Plant, Northside of F-355A	Green Card. Observed inst. techs about to ascend an unapproved scaffold (no green tag). Reminded the mechanics that the scaffold has not been tagged for work. Location: H2B Plant, Northside of F-355A	NL-Injury/Illness - Contractor Injury	
40660	Richmond, CA - Refinery	6/20/2012 9:00:00 AM	Closed	Near Loss	Green Card. Overhead steam leak. Location: D&R 4 Crude MP-1179	Green Card. I found MP-1179 has an overhead steam leak. Location: D&R 4 Crude MP-1179	NL-Environmental - Operational Leak	
40661	Richmond, CA - Refinery	6/21/2012 7:00:00 AM	Closed	Near Loss	Green Card. Dip in the pavement. Location: Plant 15 under F-1410	Green Card. I noticed a dip in the pavement big enough to roll the ankle of an innocent passerby. Location: Plant 15 under F-1410	NL-Injury/Illness - Employee Injury	
40663	Richmond, CA - Refinery	6/21/2012 7:00:00 AM	Closed	Near Loss	Green Card. Overhead steam leak. Location: D&R 4 Crude Unit, MP-1178	Green Card. Overhead steam leak by MP-1178 on 4 Crude. I noticed it while walking to our job site. Location: D&R 4 Crude Unit, MP-1178	NL-Environmental - Operational Leak	
40665	Richmond, CA - Refinery	6/21/2012 3:00:00 PM	Closed	Near Loss	Green Card. Seen a leak. Location: S.Isomax by F-330 NE side of the furnace	Green Card. Seen a leak by F-330, Northeast side of the furnace. Location: S. Isomax, F-330	NL-Environmental - Operational Leak	
40666	Richmond, CA - Refinery	6/25/2012 9:00:00 AM	Closed	Near Loss	Green Card. Leaking pipe. Location: #5 Power House, #5 Boiler	Green Card. I was cleaning around #5 Boiler and noticed that there was a drip coming down from a pipe. I stopped and asked operations what was coming out of pipe and he said it was just water. Location: #5 Power House, #5 Boiler	NL-Injury/Illness - Contractor Injury	
40667	Richmond, CA - Refinery	6/25/2012 2:30:00 PM	Closed	Near Loss	Green Card. Repair bar guard on ladder. Location: Power House, 3rd deck between Boilers 5 & 6	Green Card. Noticed on 3rd deck between Boilers 5 & 6 while picking up area on the grading, outside the door, the bar guard on the ladder was completely slipped past (catch guard). Too loose. Someone may not notice it and fall through it. I put it back in place where it should be but now I think it should be fixed because a lot of jobs going on and it's possible to fall through if you're busy and don't notice that it slips down. Location: Power House, 3rd deck, between Boilers 5 & 6	NL-Injury/Illness - Contractor Injury	
40668	Richmond, CA - Refinery	6/25/2012 8:30:00 AM	Closed	Near Loss	Green Card. Contractor with no gloves. Location: RLOP 19Plant, 1950A Fin Fan	Green Card. Noticed a contractor going down a ladder with no gloves. Location: RLOP 19Plant, 1950A Fin Fan	NL-Injury/Illness - Contractor Injury	
40669	Richmond, CA - Refinery	6/26/2012 8:00:00 AM	Closed	Near Loss	Green Card. Observed vehicle driver backing up and almost hitting a post. Location: RLOP Control Room, Northside parking spaces	Green Card. Observed a vehicle driver backing up and coming within a few feet of hitting a stationary post. Location: RLOP Control Room, Northside of parking spaces	NL-Transportation - Contractor	
40671	Richmond, CA - Refinery	6/26/2012 1:00:00 PM	Closed	Near Loss	Green Card. Found a box in the road. Location: 19Plant, Isomax St.	Green Card. While driving in RLOP, I found a box in the road. The box was still taped up. Location: 19Plant, Isomax St.	NL-Lessons Learned	
40673	Richmond, CA - Refinery	6/26/2012 10:45:00 AM	Closed	Near Loss	Green Card. Evac system in D&R West was down. Location: D&R West	Green Card. Evac system in D&R West was down. Operator informed Acig. I went to investigate. Noticed water in evac header at P-3592. Drained line. System was still low. Location: D&R West Evac System	NL-Lessons Learned	
	Richmond, CA -	6/26/2012 9:45:00		Near	Green Card. Worker was backing his truck up without a spotter. Location:	Green Card. A worker was backing his truck up without a spotter. Location: #8	NL-Transportation -	

40674	Refinery	AM	Closed	Loss	#8 Warehouse	Warehouse	Contractor	
40683	Richmond, CA - Refinery	6/28/2012 2:30:00 PM	Closed	Near Loss	Backhoe and hand probing in the process of tracing a 12 inch pipe. About a foot down an uncharted 1.5 " fresh water line was inadvertantly touched by the backhoe bucket and broke, causing fresh water to flow from it.	While in the process of tracing a 12 inch pipe per contract, dirt was disturbed in the vacinity of a 1.5" fresh water line, causing water to flow from a previously decayed union. A backhoe and hand-pot holing activity was taking place on this job.	NL-Equipment/Property Damage - General Liability	
40688	Richmond, CA - Refinery	4/19/2012 12:00:00 AM	Closed	Loss	V-1441 Relief Bypass Valve Leak By Resulting In Alky S/D	A high relief gas flow was seen in the refinery North Yard relief system immediately following an Alky plant start up (V-1440 ESP repairs). The source was determined to be coming from the Alky plant. Operations were able to quickly identify the leak source to be coming from V-1441 PRD relief line however were not able to determine if the PRD (AL-1422) and/or the bypass valve were leaking as IR scans were inconclusive. Due to the excessive leak rate and the risk of it getting worse, the ABU made the decision to take the unit down as soon as a new replacement PRD could be obtained. The PRD was replaced but operations discovered that the isolated vessel was still being pressurized by another gas source. The bypass valve around the PRD was pulled and found to be the true source of leak by.	Business Process	(1) FIVE WHY'S 1. Why did "above" happen? The leak occurred to relief as a result of a bypass valve failure. The PRD, AL-1422, was later opened and inspected and found to be in pristine condition with no flaws or defects. 2. Why did "1" happen? The bypass valve failed as a result of corrosion/erosion due to sulfuric acid at high velocity. The seat on the valve was also cracked leading the investigation team to believe that the valve likely had been over tightened at some point causing the valve body seat to crack. 3. Why did "2" happen? The corrosion occurred on the valve as a result of improper material being used in this section of the plant. The vessel trim for V-1441 is AF8 pipe class, or Monel trim, all first valves off of vessels shall be like material or greater per Chevron Engineering standards. This bypass valve was one of the many first valves off the vessel and it was only AF1 with standard 12Cr Trim, a downgrade from AF8. 4. Why did "3" happen? It is unclear as to why the original valve trim material was incorrectly specified and installed. Possible that the project team did not see or anticipate that sulfuric acid would contact this area frequently. ROOT CAUSE(S): What were the Root Causes of your incident? Add more as needed 1 The incorrect valve trim was specified and installed in the 1995 Alkylation Project for the bypass valve on the relief system. Inadequate tools or equipment. , (2) FIVE WHY'S 1. Why did "above" happen? The leak occurred to relief as a result of a bypass valve failure. The PRD, AL-1422, was later opened and inspected and found to be in pristine condition with no flaws or defects. 2. Why did "1" happen? The bypass valve failed as a result of corrosion/erosion due to sulfuric acid at high velocity. The seat on the valve was also cracked leading the investigation team to believe that the valve likely had been over tightened at some point causing the valve body seat to crack. 3. Why did "2" happen? The
40754	Richmond, CA - Refinery	6/29/2012 12:00:00 AM	Closed	Near Loss	Cal ARP finding #364 - Overdue, 6/29/2012, update RI-395 to include changes to FRMS under normal operating conditions.	Cal ARP finding #364 includes an action to document our hours of service limits during normal operating conditions. Chevron Fatigue Risk Management System (FRMS) for Manufacturing is in the final stages of development/ implementation and is due to roll out in the facility in 2012. However, RI-395 update has not been posted to the web, which would satisfy this finding. The RI will be posted pending Mfg. decision on a facility-wide exception process.	NL-Regulatory Compliance - Non Compliance	
40830	Richmond, CA - Refinery	6/30/2012 6:30:00 PM	Closed	Near Loss	Mercury thermometer on Auto VIS broken	While putting samples into the Auto VIS machine, Operator noticed that bath #4 was dark and cloudy. A mercury thermometer broke in the bath.	NL-Equipment/Property Damage - Equipment Damage	(1) Broken thempeter. 'FIVE WHY" One Page Report Incident Number 40830 Business Unit Hydro Location Hydro Lab Facility Name Hydro Incident date 6/30/2012 Type of Process: Mercury Type of Equipment: Auto Vis machine Team Members: Incident Description: What:Operator noticed broken thermometer in Auto vis machine. Had plant protection test the area for Mecury Vapors, none detected. Where (location or where in the process):Hydo Lab When: 6/30/2012 1830. How:Noticed discolored oil in bath. Problem Statement (What is the key issue that needs to be addressed?): Vis machine bath oil needs clean up FIVE WHY'S 1. Why did "above" happen? Verification Theromometer broke inside bath 2. Why did "1" happen? Operator noticed it was broken, no indication of when or how it was broken. 3. Why did "2" happen? Operator running required samples when he noticed it. 4. Why did "3" happen? Part of operator duties. ROOT CAUSE: What was the Root Cause of your incident? Broken thempeter.
						Green Card: On the morning of June 17th SDA had a seal fire on P-126A. This plant normally runs with 2 solvent pumps on. Once the fire started it was decided no! to put the spare pump on until we knew that the EBV's on the "A" pump held and we would not have to shut down the plant. Running the plant		

40868	Richmond, CA - Refinery	6/17/2012 12:00:00 AM	Closed	Near Loss	Green Card: Black Smoke was observed coming out of Furnace F-135 during Auto Calibration.	with only one pump caused the circulation flow to drop because the back pressure controller (PC-126) started to open. At about 4:45 it was determined that P-126A EVB's had closed enough that a plant shutdown was not needed. P-126C was put online. In doing this the solvent flow out of these pumps increased and more load was put on F-135 to maintain C-128 inlet temps. F-135 started to fire up to reach the set point required. Normally this would be no big deal, but at 5:00 a.m. the furnace went into its auto calibration for the day. This left the board operator with no indications as to what the furnace was doing as far as Oxygen and CO were concerned. This calibration mode last for about 15 minutes. During this time the furnace continued to fire up and put itself in a state of danger. When the auto cal. was complete the actual reading in the furnace were .8 O2 and 91 (top of scale) CO. Moves were made before the auto calibration was complete because plant protection noticed black smoke rolling out of the stack of F-135.	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) Why was black smoke emitting from the stack of F-135. Because there was unburned gas inthe furnace. Why was there unburned gas in the furnace. Because the O2 level in the furnace had dropped so low, not all the fuel gas was burning. Why was the O2 level low. Because the furnace was firing up and went into calibation. The board operator did not recognize the potential for a furnace bog during the calibation and left the furnace in auto.
40886	Richmond, CA - Refinery	7/1/2012 12:30:00 PM	Management Review	Loss	Operator sustained a first aid injury which was verified by Plant Protection during the sailing of a ship in berth 4 .	Operator reported he felt a mild twinge in his arm when he was lifting a rope off of a double bollard to sail the Maersk Bering in Berth 3, and then again 30 minutes later when he went help sail the Sirius Voyager in Berth 4.	Injury/Illness	(1) Operator should have got help when needed to protect from getting a 1st aid wrist injury
40888	Richmond, CA - Refinery	6/26/2012 12:00:00 AM	Closed	Near Loss	Channel 4 control channel lost power output	Channel 4 control channel lost power output. Radio system efficency reduced. If in emergency communications slower, but no emergencies happening.	NL-Business Process - Business Process	
40889	Richmond, CA - Refinery	7/1/2012 7:30:00 PM	Closed	Near Loss	Console lost communication	Console not communicating with incoming radio traffic.	NL-Business Process - Business Process	
40893	Richmond, CA - Refinery	7/2/2012 12:00:00 AM	Closed	Near Loss	Key is missing for LOTO box on K-3950	Operator LOTO key missing for K-3950 LOTO Box.	NL-Operational Process/Procedures - Safety Systems	
40911	Richmond, CA - Refinery	7/2/2012 7:30:00 AM	Investigation In Progress	Near Loss	Swell of water in work boat	This morning on 7-2-12, two groupswere sent out to of the boats.Two men per boat were tasked to remove the scaffold (squeeze girts, aluma beams and stringers) from the Dolphin at Berth #1.The site was assessed and the water was relatively calm.At approximately 0730 the water started getting rough. At that point the two men in boat #1 decided it was time to take the boat back and pull it out. They had one squeeze girt close to the front o the boat. As they made their way around the outer South Dolphin a swell came over the bow of the boat. The boat then slowly began to submerge to the gunnel rail. The two men were not injured, but were standing in the boat with water up to their knees. The second work boat in the vicinity then came over to rescue the men in boat #1. They climbed aboard boat #2 and towed it back to the barge at A/B Berth, where it was pumped out and picked out. The two mendimbed aboard the barge and became dry. The two men in boat #2 went back to recover a small amount of debris lost by boat #1 The two men in boat #2 then headed back to the Machine Shop and pulled out the boat.	NL-Lessons Learned	(1) No procedures exist or procedures were not followed. Lack of experience towing in rough conditions.
40967	Richmond, CA - Refinery	7/3/2012 12:00:00 AM	Closed	Near Loss	Ops lost LOTO key for P-1102C	Ops lost LOTO key for P-1102C	NL-Operational Process/Procedures - Safety Systems	
40970	Richmond, CA - Refinery	6/30/2012 1:00:00 PM	Closed	Loss	vehicle rubbed guide wire when leaving dirt parking area	When pulling out of a dirt parking area the safety truck rubbed a telephone guide wire creating a dent on the pickup bed.	Equipment/Property Damage	(1) Driver parked to close to a utility pole guide wire and was not paying attention to his surroundings.
40987	Richmond, CA - Refinery	7/3/2012 5:50:00 PM	Closed	Loss	Company vehicle rear ended in City of Richmond	Company vehicle involved in an MVC on Eastbound Richmond Parkway before San Pablo Avenue. Company vehicle was stopped in traffic and was rear ended by a vehice attempting to change lanes into the Company vehicle's lane (lane 2) from the #3 lane.	Transportation	(1) Information purposes only
41064	Richmond, CA - Refinery	7/1/2012 7:44:00 PM	Closed	Near Loss	Child fell from playground structure	A young child fell from the playground zipline structure at the Rod and Gun Club. This was entered as a near loss because it was a none work related injury.	NL-Lessons Learned	
41073	Richmond, CA - Refinery	7/1/2012 12:00:00 AM	Closed	Near Loss	Communication Link at Dispatch console broke. 3 min downtime	Communication from the dispatch console to the refinery radios had a short disconnect. Dispatchers could not communicate to the radios and alarming functions down.	NL-Business Process - Business Process	
	Richmond, CA -	5/23/2012 12:00:00	Fact	Near	New Cyclinder lube system	When the new cylinder lube was installed, there was no connection for the cylinder lube aux pump. There is a connection for the discharge, but it is not in an easy place to get to. There is NO hook up for the suction of the aux pump. There were no hands on training with the new system. Very few operators know what is going on with the new cylinder lube system. There is no easy way to bleed of the pump or system if the pump gasses up. The operator or maintenance would have to break the lines in order to degas the pump. When using the hand pump to degas or fill the system, there is no check valve or block valve to keep from popping the pin on the pump. This would result in the pump not working. Loss of the cylinder lube would result in the loss of that	NL-Equipment/Property Damage - Equipment	

41079	Refinery	AM	Gathering	Loss	K-910/20	booster compressor.	Damage	
41079	Richmond, CA - Refinery	6/23/2012 12:00:00 AM	Fact Gathering	Near Loss	New Cyclinder lube system K-910/20	When the new cylinder lube was installed, there was no connection for the cylinder lube aux pump. There is a connection for the discharge, but it is not in an easy place to get to. There is NO hook up for the suction of the aux pump. There were no hands on training with the new system. Very few operators know what is going on with the new cylinder lube system. There is no easy way to bleed of the pump or system if the pump gasses up. The operator or maintenance would have to break the lines in order to degas the pump. When using the hand pump to degas or fill the system, there is no check valve or block valve to keep from popping the pin on the pump. This would result in the pump not working. Loss of the cylinder lube would result in the loss of that booster compressor.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
41080	Richmond, CA - Refinery	4/10/2012 12:00:00 AM	Fact Gathering	Near Loss	Loss of Recycle Colmpressor Emergency Procedure may not cover all Hydroprocessing Best Practices.	Loss of Recycle Colmpressor Emergency Procedure may not be aligned with all Hydroprocessing Best Practices. Emergency procedure states to depressure until TIs are stable and not increasing. However, Hydrprocessing BIN leaders emphasize that TI readings are unreliable when there is minimal flow through the reactor. Also, the emergency procedure states that if the recycle compressor is not restarted within 5 minutes, refer to a different emergency procedure (temperature excursion EP), but in the time it takes to pull up that emergency procedure there already could be a temperature excursion.	NL-Equipment/Property Damage - Equipment Damage	
41080	Richmond, CA - Refinery	4/10/2012 12:00:00 AM	Fact Gathering	Near Loss	Loss of Recycle Colmpressor Emergency Procedure may not cover all Hydroprocessing Best Practices.	Loss of Recycle Colmpressor Emergency Procedure may not be aligned with all Hydroprocessing Best Practices. Emergency procedure states to depressure until TIs are stable and not increasing. However, Hydrprocessing BIN leaders emphasize that TI readings are unreliable when there is minimal flow through the reactor. Also, the emergency procedure states that if the recycle compressor is not restarted within 5 minutes, refer to a different emergency procedure (temperature excursion EP), but in the time it takes to pull up that emergency procedure there already could be a temperature excursion.	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	
41086	Richmond, CA - Refinery	7/1/2012 12:00:00 AM	Investigation In Progress	Near Loss	Overdue CAP Tasks	Six (6) CAP Tasks due between June 28th and 30th by ESD personnel were not signed off as complete.	NL-Business Process - Business Process	(1) CFD CAP Tasks are listed under "HES General" instead of CFD. As such, when reviewing upcomming tasks, none were found.
41100	Richmond, CA - Refinery	7/5/2012 2:00:00 PM	Investigation In Progress	Near Loss	High vibration on P-36 at 17 PS has caused damge to its support structure	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT.Concrete foundations for P-36 support legs on the strainer K-36 are partially damaged, and the deadleg support is 3/4 of the way off center.	NL-Equipment/Property Damage - Equipment Damage	
41114	Richmond, CA - Refinery	7/5/2012 12:00:00 AM	Closed	Near Loss	Viscosity bath heater for SDA tar sample, tripping breaker	Manual Viscosity bath for SDA tar sample keeps tripping breaker in new lab.	NL-Quality - Quality MS-Preventive Action Request Log (PAR)	(1) Why is the Manual Visc bath overloading power supply? Awaiting electricians load check of the power supply to vent hood with Manual Visc bath.
41114	Richmond, CA - Refinery	7/5/2012 12:00:00 AM	Closed	Near Loss	Viscosity bath heater for SDA tar sample, tripping breaker	Manual Viscosity bath for SDA tar sample keeps tripping breaker in new lab.	NL-Business Process - Business Interruption	(1) Why is the Manual Visc bath overloading power supply? Awaiting electricians load check of the power supply to vent hood with Manual Visc bath.
41137	Richmond, CA - Refinery	7/6/2012 9:00:00 AM	Closed	Near Loss	Label on Haz Waste drum blank	While walking next to the 13/18 PLT reactor exchangers, I noticed that the green tag on a 55 gallon haz waste drum was not filled out. There is no indication on the green haz waste tag of what is in the barrel. One of the bung holes is missing, and the barrel lid is not secured. There looks to be waxy oil in plastic bags inside.	NL-Lessons Learned	(1) Drum should have been labeled properly and removed once no longer needed "FIVE WHY" One Page Report Incident Number 41137 Business Unit Hydro Location HNF Facility Name RLOP Incident date 7-6-2012 Type of Process: Hazardous Waste Type of Equipment: Drum Team Members: Incident Description: What:Operator noticed 55 gal drum was improperly labeled. Where (location or where in the process):HNF When: 7-6-2012 How:Routine rounds noticed the improper label. Problem Statement (What is the key issue that needs to be addressed?): Drum not removed from plant once not needed anymore. FIVE WHY'S 1. Why did "above" happen? Verification Op/Mx did not have drum removed once no longer needed. 2. Why did "1" happen? Unable to determine due to fact no accumulation date or identifiable contents. 3. Why did "2" happen? Unable to determine when drum was used and for what purpose. 4. Why did "3" happen? Unable to determine therefore operations had drum removed by hazardous waste. ROOT CAUSE: What was the Root Cause of your Incident? . Drum should have been labeled properly and removed once no longer needed
								(1) Drum should have been labeled properly and removed once no longer needed "FIVE WHY" One Page Report Incident Number 41137 Business Unit Hydro Location HNF Facility Name RLOP Incident date 7-6-2012 Type of Process: Hazardous Waste Type of Equipment: Drum Team Members: Incident Description: What:Operator noticed 55 gal drum was improperly labeled. Where (location or where in the

41137	Richmond, CA - Refinery	7/6/2012 9:00:00 AM	Closed	Near Loss	Label on Haz Waste drum blank	While walking next to the 13/16 PLT reactor exchangers, I noticed that the green tag on a 55 gallon haz waste drum was not filled out. There is no indication on the green haz waste tag of what is in the barrel. One of the bung holes is missing, and the barrel lid is not secured. There looks to be waxy oil in plastic bags inside.	NL-Regulatory Compliance - Non Compliance	process):HNF When: 7-6-2012 How:Routine rounds noticed the improper label Problem Statement (What is the key issue that needs to be addressed?): Drum not removed from plant once not needed anymore. FIVE WHY'S 1. Why did "above" happen? Verification Op/Mx did not have drum removed once no longer needed. 2. Why did "1" happen? Unable to determine due to fact no accumulation date or identifiable contents. 3. Why did "2" happen? Unable to determine when drum was used and for what purpose. 4. Why did "3" happen? Unable to determine therefore operations had drum removed by hazardous waste. ROOT CAUSE: What was the Root Cause of your incident? . Drum should have been labeled properly and removed once no longer needed.
41171	Richmond, CA - Refinery	7/8/2012 9:45:00 PM	Investigation In Progress	Loss	V-712 PRD, IX-7141, chattering due to two false pressure indications	IX-7141, one of two PRD's on V-712 was chattering. This was causing increased flow to Flare Gas Recovery.	Operational Process/Procedures	
41204	Richmond, CA - Refinery	7/3/2012 12:00:00 AM	Closed	Near Loss	Green Card. Remove chains to open up parking. Location: West of Gate 91	Green Card. Parking lot West of 91 Gate needs to have all chains removed to open up parking to prevent vehicle accidents. Also need lights a certain time of year. Location: West of Gate 91	NL-Transportation - Contractor	
41205	Richmond, CA - Refinery	7/9/2012 8:00:00 AM	Closed	Near Loss	Green Card. Replace lights in women's showers. Location: Rod&Gun Outdoor Women's Locker Rooms	Green Card. The lights over the women's showers in the outside locker room have been out for a few months. It is a safety issue because you can't see in the shower very well, it's slippery, and there are steps to get into a few of the showers. Location: Rod&Gun Outdoor Women's Locker Rooms	NL-Lessons Learned	
41205	Richmond, CA - Refinery	7/9/2012 8:00:00 AM	Closed	Near Loss	Green Card. Replace lights in women's showers. Location: Rod&Gun Outdoor Women's Locker Rooms	Green Card. The lights over the women's showers in the outside locker room have been out for a few months. It is a safety issue because you can't see in the shower very well, it's slippery, and there are steps to get into a few of the showers. Location: Rod&Gun Outdoor Women's Locker Rooms	NL-Injury/Illness - Employee Injury	
41212	Richmond, CA - Refinery	7/6/2012 10:00:00 AM	Closed	Loss	P-1665 / currently root cause is undetermined as to whether this failure was field or shop related so this LI has been entered to track and subsuquently share the determined cause of installation and subsequent start up failure.	P-1665 / currently root cause is undetermined as to whether this failure was field or shop related so this LI has been entered to track and subsuquently share the determined cause of installation and subsequent start up failure.	Equipment/Property Damage	(1) What happened: Coupling end seal area started to throw out sparks during run-in. 1) Why did this happen? Seal gland came in contact with rotating shaft. 2) Why did the gland contact the shaft? Gland was installed with excessive register clearance and improperly aligned. 3) Why was the gland installed this way? In order to expedite the repair and minimize repair spend due to a future upgrade plan. Also a discussion was held between shop and field mechanics and we all agreed that this method was OK to do. So the Root Cause was the decision to install the gland with bad registers. As mentioned we believed this repair type would be sufficient to get to the equipment to a date in the future where the upgrade would take place.
41213	Richmond, CA - Refinery	7/9/2012 1:30:00 AM	Investigation In Progress	Loss	K-920 Trabon lubicator lost flow	K-920 Trabon lubicator lost flow and alarmed. Operators found o'ring disturbed and rupture disk burst.	NL-Equipment/Property Damage - Equipment Damage	
41295	Richmond, CA - Refinery	7/10/2012 7:30:00 AM	Closed	Near Loss	Sling inspection in the garage was not up-to-date	Slings were found hanging in the garage that were old and should have been taken out of service	NL-Lessons Learned	
					3 STOP WORK pauses during a Nalco Off-Load. Nalco delivery truck came in to off-Load Nalco Product EC2472A.(An emulsifier) for the Crude Unit into Nalco #18166 Tank. Upon arrival @14:00, Nalco driver was setting up to off-load and had issues with his air compressor to start the Nalco's driver Weldon pump to progress the off-load. After shift exchange, nightshift O&R East-Side crew came out & noticed a Non-Approved Ground Clamp being used. FIRST Stop Work Authority was used by Ops. to find an Approved Ground Clamp			

41318	Richmond, CA - Refinery	7/10/2012 6:15:00 PM	Investigation In Progress	Near Loss	to proceed. Ops. found an Approved Ground Clamp for Nalco. SECOND Stop Work came from the Nalco driver as he realized he (NALCO) had his Weldon Pump connected to D&R's off-load manifold incorrectly.(Weldon Pump discharge to Nalco truck Suction & Weldon Pump Suction to D&R's off-load manifold. During this second work stoppage, D&R STL contacted EOD to supply a "KIDDIE" pool & clear-plastic drum liners on site to mitigate uncoupling of the Nalco Weldon Pump cargo hoses as they were hooked up backwards. THIRD Stop Work to bring Nalco Driver chemical gloves to proceed with correct hose manifolding & pump off. Pump was lifted into "KIDDIE" pool and clear liners over Weldon Cam-Lock fittings. With no bleeders to open prior to disconnecting pump hoses, driver carefully opened Cam -Lock fittings with a clear liner over Cam-Lock fittings with no pressure observed from Nalco Truck to Nalco Weldon Pump. Ops. stayed with Nalco during pump off. Immediately following off-load, a meeting with the STL ,Nalco driver, D&R East HO & Operator was held to discuss the 3 Stop Work steps made that happened during Nalco's attempted off-load.	3 Stop/Pause work stops during Nalco off-Load for an off-load of Nalco Product EC2472A.(An emulsifier) @ the Crude Unit into Nalco #18166 Tank. Upon arrival @14:00, Nalco driver was setting up to off-load and had issues with his air compressor to start the Nalco owned Weldon pump to progress the off-load. After shift exchange, nightshift D&R East-Side crew came out & noticed a Non-Approved Ground Clamp being used. FIRST: Stop Work Authority was used by Ops. to find an Approved Ground Clamp to proceed. Ops. found an Approved Ground Clamp for Nalco. SECOND: Stop Work came from the Nalco driver as he realized he (NALCO) had his Weldon Pump connected to D&R's off-load manifold incorrectly.(Weldon Pump discharge to Nalco truck Suction & Weldon Pump Suction to D&R's off-load manifold. During this second work stoppage, D&R STL contacted EOD to supply a "KIDDIE" pool & clear-plastic drum liners on site to mitigate uncoupling of the Nalco Weldon Pump cargo hoses as they were hooked up backwards. THIRD: Pause Work to bring Nalco Driver chemical gloves to proceed with correct hose manifolding & pump off. Pump was lifted into "KIDDIE" pool and clear liners over Weldon Cam-Lock fittings. With no bleeders to open prior to disconnecting pump hoses, driver carefully opened Cam -Lock fittings with a clear liner over Cam-Lock fittings with no pressure observed from Nalco Truck to Nalco Weldon Pump. Ops. stayed with Nalco during pump off. Immediately following off-load, a meeting with the D&R STL, Nalco driver, D&R East HO & Operator was held to discuss the 3 Stop Work steps that happened during Nalco's attempted off-load. This off-load was not immediately needed, but steps worked out to safely off-load chemical. Completed @ 8:00PM.	NL-Injury/Illness - Contractor Injury	
					3 STOP WORK pauses during a Nalco Off-Load. Nalco delivery truck came in to off-Load Nalco Product EC2472A.(An emulsifier) for the Crude Unit into Nalco #18166 Tank. Upon arrival @14:00, Nalco driver was setting up to off-load and had issues with his air compressor to start the Nalco's driver Weldon pump to progress the off-load. After shift exchange, nightshift D&R East-Side crew came out & noticed a Non-Approved Ground Clamp being used. FIRST Stop Work Authority was used by Ops. to find an Approved Ground Clamp to proceed. Ops. found an Approved Ground Clamp for Nalco. SECOND Stop			

41318	Richmond, CA - Refinery	7/10/2012 6:15:00 PM	Investigation In Progress	Near Loss	Work came from the Nalco driver as he realized he (NALCO) had his Weldon Pump connected to D&R's off-load manifold incorrectly.(Weldon Pump discharge to Nalco truck Suction & Weldon Pump Suction to D&R's off-load manifold. During this second work stoppage, D&R STL contacted EOD to supply a "KIDDIE" pool & clear-plastic drum liners on site to mitigate uncoupling of the Nalco Weldon Pump cargo hoses as they were hooked up backwards. THIRD Stop Work to bring Nalco Driver chemical gloves to proceed with correct hose manifolding & pump off. Pump was lifted into "KIDDIE" pool and clear liners over Weldon Cam-Lock fittings. With no bleeders to open prior to disconnecting pump hoses, driver carefully opened Cam -Lock fittings with a clear liner over Cam-Lock fittings with no pressure observed from Nalco Truck to Nalco Weldon Pump. Ops. stayed with Nalco during pump off. Immediately following off-load, a meeting with the STL ,Nalco driver, D&R East HO & Operator was held to discuss the 3 Stop Work steps made that happened during Nalco's attempted off-load.	3 Stop/Pause work steps during Nalco off-Load for an off-load of Nalco Product EC2472A.(An emulsifier) @ the Crude Unit into Nalco #18166 Tank. Upon arrival @14:00, Nalco driver was setting up to off-load and had issues with his air compressor to start the Nalco owned Weldon pump to progress the off-load. After shift exchange, nightshift D&R East-Side crew came out & noticed a Non-Approved Ground Clamp being used. FIRST: Stop Work Authority was used by Ops. to find an Approved Ground Clamp to proceed. Ops. found an Approved Ground Clamp for Nalco. SECOND: Stop Work came from the Nalco driver as he realized he (NALCO) had his Weldon Pump connected to D&R's off-load manifold incorrectly.(Weldon Pump discharge to Nalco truck Suction & Weldon Pump Suction to D&R's off-load manifold. During this second work stoppage, D&R STL contacted EOD to supply a "KIDDIE" pool & clear-plastic drum liners on site to mitigate uncoupling of the Nalco Weldon Pump cargo hoses as they were hooked up backwards. THIRD: Pause Work to bring Nalco Driver chemical gloves to proceed with correct hose manifolding & pump off. Pump was lifted into "KIDDIE" pool and clear liners over Weldon Cam-Lock fittings. With no bleeders to open prior to disconnecting pump hoses, driver carefully opened Cam -Lock fittings with a clear liner over Cam-Lock fittings with no pressure observed from Nalco Truck to Nalco Weldon Pump. Ops. stayed with Nalco during pump off. Immediately following off-load, a meeting with the D&R STL, Nalco driver, D&R East HO & Operator was held to discuss the 3 Stop Work steps that happened during Nalco's attempted off-load. This off-load was not immediately needed, but steps worked out to safely off-load chemical. Completed @ 8.00PM.	NL-Environmental - Spill - 3rd Party	
41341	Richmond, CA - Refinery	7/1/2012 12:00:00 AM	Closed	Near Loss	JHT Effluent Exchanger Blockage and dP	Following the plant startup after the D&R 4Q11 major shutdown, the effluent side differential pressure between the reactor (R-210) and the high pressure separator (V-220) steadily increased. The dP is expected to increase over time, eventually reaching a mechanical pressure limit. When this limit is reached, the JHT will need to pull feed for at least 24 hours to perform a hot strip to alleviate pressure	NL-Operational Process/Procedures - Plant Run Out/Slow Down	(1) A mechanical failure after the shutdown caused something to dislodge and become the blockage and/or an object was left in the line or exchangers during the shutdown.
41341	Richmond, CA - Refinery	7/1/2012 12:00:00 AM	Closed	Near Loss	JHT Effluent Exchanger Blockage and dP	Following the plant startup after the D&R 4Q11 major shutdown, the effluent side differential pressure between the reactor (R-210) and the high pressure separator (V-220) steadily increased. The dP is expected to increase over time, eventually reaching a mechanical pressure limit. When this limit is reached, the JHT will need to pull feed for at least 24 hours to perform a hot strip to alleviate pressure.	NL-Equipment/Property Damage - Equipment Damage	(1) A mechanical failure after the shutdown caused something to dislodge and become the blockage and/or an object was left in the line or exchangers during the shutdown.
41359	Richmond, CA - Refinery	7/9/2012 1:30:00 PM	Closed	Near Loss	Green Card. Unbolting flanges we noticed a vapor escaping. Location: Hydro, SISO, P-126	Green Card. Unbolting flanges on P126. After bolts were removed we noticed a vapor escaping. Called operator and HO. They said not to continue. Location: Hydro SISO P126	NL-Injury/Illness - Employee Injury	
41370	Richmond, CA - Refinery	7/11/2012 11:00:00 AM	Closed	Near Loss	Green Card. No one follows the 10mph speed limit. Location: Center St.	Green Card. No one follows the 10mph speed limit on Center St. In the 0600 start time. Location :Center St.	NL-Transportation - Company	
41371	Richmond, CA - Refinery	7/11/2012 10:00:00 AM	Closed	Near Loss	Green Card. Bridge grading is damaged. Location: By 91Gate-Xylene St.	Green Card. The bridge grating is damaged, can cause flat tires. Location: By Gate 91 - Xylene St.	NL-Transportation - Contractor	
	Richmond,	7/11/2012			Personal H2S monitor alerted during the sludge	While removing sludge from the Diversion Box, a personal H2S monitor alerted on a contract employee that was positioned directly downwind of the work. High pressure fire water is used to stir the sludge into a slurry which allows it to	NL-Operational	

41382	CA - Refinery	2:00:00 PM	Closed	Near Loss	removal process of the Diversion Box	be pumped out. The mixing and agitation of the sludge can liberate small amounts of H2S.	Process/Procedures - Safety Systems	
41443	Richmond, CA - Refinery	7/12/2012 12:05:00 PM	Closed	Near Loss	RLOP GRU liquid feed pump seal failed. Triggered H2S alarm.	RLOP/GRU P-1903A liquid HC pump seal leak which triggered H2S alarm 89AI007. Operation responded promptly.	NL-Equipment/Property Damage - Equipment Damage	(1) Seal ran dry, see 5 why https://collab001-hou.sp.chevron.net/sites/dagmfgoe/LPSOut/RIDocLib/P-1903%205%20Why.docx
41444	Richmond, CA - Refinery	7/12/2012 2:00:00 PM	Fact Gathering	Near Loss	Possible Mercury exposure	Maintenance was installing P-104 lift pump at #1 separator. Once the pump was placed in position, an entry permit was needed because to attach the shroud required breaking the plane. Testing conducted by Plant Protection indicated elevated levels of hydrocarbon plus Mercury.	NL-Injury/Illness - Employee Injury	
41457	Richmond, CA - Refinery	7/12/2012 6:00:00 PM	Fact Gathering	Near Loss	U&E Operator taken to Kaiser by Ambulance	Operator complained of chest pains/heart palpitations and requested Plant Protection to evaluate via plant radio.	NL-Sensitive/Commercial (Must be associated with another subtype)	
41473	Richmond, CA - Refinery	7/11/2012 10:00:00 AM	Closed	Near Loss	Green Card. Fuel trucks are not grounding their truck when dispensing fuel. Location: REFINERY-WIDE	Green Card Fuel trucks are not grounding their truck when dispensing fuel to equipment or tanks. Location: REFINERY-WIDE	NL-Lessons Learned	
41526	Richmond, CA - Refinery	7/14/2012 12:50:00 AM	Closed	Near Loss	#7 Boiler tripped off line	At approximately 00:50, 7/14/12 Boiler # 7 tripped offline. Doing a field assessment on the cause of the shutdown, we determined that the trip throttle on the Woodward governor tripped causing the speed probes to shutdown #7 boiler.	NL-Business Process - Business Process	(1) Root cause is unknown. Ops will monitor closely for unusual behaviors. OST trip will be tested this month of August, 2012 which will confirm OST did or did not malfunction.
41527	Richmond, CA - Refinery	6/4/2012 12:00:00 AM	Management Review	Near Loss	Operator exceeded Cal/OSHA Permissibles Exposure Limit for Benzene while sampling a gasoline tank.	Operator exceeded Cal/OSHA Permissibles Exposure Limit for Benzene while sampling a gasoline tank.	NL-Operational Process/Procedures - Safety Systems	(1) Sample station (box) door is solid steel and does not have a window, does not allow operator to see level in sample bottle.
41527	Richmond, CA - Refinery	6/4/2012 12:00:00 AM	Management Review	Near Loss	Operator exceeded Cal/OSHA Permissibles Exposure Limit for Benzene while sampling a gasoline tank.	Operator exceeded Cal/OSHA Permissibles Exposure Limit for Benzene while sampling a gasoline tank.	NL-Injury/Illness - Employee Injury	(1) Sample station (box) door is solid steel and does not have a window, does not allow operator to see level in sample bottle.
41550	Richmond, CA - Refinery	7/14/2012 5:00:00 PM	Closed	Near Loss	Entry of Intelletrac sign-offs late	Operator breaking in on job had password issues logging onto intelletrac and signing off on rounds at the end of the day. Other operator working the same job was sampling a tank at that time and was unable to sign off on the intelletrac rounds before 17:00. NLI: Operator failed to sign off intelletrac items on-time. Why 1? Operator could not log on. Why 2? Operator had forgotten password.	NL-Business Process - Business Process	
41583	Richmond, CA - Refinery	7/11/2012 7:00:00 PM	Closed	Near Loss	Green Card. Leaking sewer/water line that has caused a sink hole. Location: Rod & Gun	Green Card. There is a leaking sewer/water line that has caused a sink hole, 2ft diameter x 4-5ft deep. There are kids at these softball games (2-4yrs old) and one of them almost went down the hole. Currently there is only (2) traffic cones and a roadside safety barrier. Current setup is unacceptable. Sewer/water line needs to be fixed and sink hole filled or trench plate placed over the sink hole. Location: Rod & Gun, 30ft behind softball field #1 Backstop	NL-Lessons Learned	
41592	Richmond, CA - Refinery	5/8/2012 12:00:00 AM	Fact Gathering	Near Loss	No fit test data for 7 employees on 5-8 and 5-9, 2012. .	Records indicate no data for fit test of 7 employees. Data was checked on all machines and not available. There is a training sheet showing participation by employees and fit test cards were issued	NL-Regulatory Compliance - Non Compliance	
41611	Richmond, CA - Refinery	7/16/2012 11:00:00 AM	Closed	Near Loss	Employee felt eye irratation during the course of work. Employee tried flushing eye but still felt irratation so he reported to his Supervisor	Employee felt eye irratation during the course of work. Employee tried flushing eye but still felt irratation so he reported to his Supervisor	NL-Injury/Illness - Employee Injury	
41642	Richmond, CA - Refinery	7/16/2012 4:30:00 AM	Closed	Near Loss	Completed round not approved	HO did not approve completed SGRU round	NL-Business Process - Business Process	
41684	Richmond, CA - Refinery	6/26/2012 12:00:00 AM	Fact Gathering	Loss	TP-264 Coupling Failure	FOR COMPLETE TOP REPORT SEE LINK ATTACHED. Initial Report: TP-264 coupling failure appears to have been caused by locked gear coupling due to loss of coupling grease.	Equipment/Property Damage	
41695	Richmond CA - Refinery	7/17/2012 10:30:00 AM	Investigation In Progress	Loss	Diesel Leak From BAPL	The Bay Area Pipeline booster pump P-18 developed a Diesel leak on the Suction Line PRD leg post start up around 10:00. All appearances are that a coupling may have backed off due to vibration. The leak was to containment and spotted early into the event by the Refine Head Operator.	Environmental	(1) 3-Person selected to perform this task did not have the right skill or knowledge. Original design spec did not meet modern standards. Past work process failures allowed coupling to be installed up stream on the pressure side of the PRD.
					During routine area audit a LOTO box was discovered			

41728	Richmond, CA - Refinery	7/17/2012 6:00:00 PM	Fact Gathering	Near Loss	locked to a stanlion under the #4 C/U resid filters. No lock could be located to unchain said box.	During routine area audit a LOTO box was discovered locked to a stanlion under the #4 C/U resid filters. No lock could be located to unchain said box.	NL-Operational Process/Procedures - Safety Systems	
41796	Richmond, CA - Refinery	7/18/2012 1:47:00 PM	Closed	Loss	PPS Patrol Officer brushed a fence post at Gate 49 on Western drive while parking the Patrol vehicle after making his rounds on Western Drive. He lightly brushed the fence post at 49 gate with the passenger-side mirror and caused the mirror itself to dislodge from its base and fall to the ground. There was no damage to CVX property and no damage to PPS property. The mirror was re-attached.	PPS Patrol Officer brushed a fence post at Gate 49 on Western drive while parking the Patrol vehicle after making his rounds on Western Drive. He lightly brushed the fence post at Gate 49 and caused the mirror itself to dislodge from its base and fall to the ground. There was no damage to CVX property and no permanent damage to PPS property. The dislodged mirror was re-attached.	Transportation	(1) Inattentive driving. Patrol Officer misjudged distance between fence post and vehicle, causing passenger mirror to strike Gate 49 fence post while attempting to park the patrol vehicle after completing initial rounds on Western Drive.
41856	Richmond, CA - Refinery	7/13/2012 2:00:00 PM	Fact Gathering	Loss	K-1900 Nuisance Alarm Troubleshooting	An active alarm was found on the Multilin protecting MK-1900 at RLOP. The alarm reported that the trip coil of the circuit breaker was not functioning, which would result in the circuit breaker being unable to properly protect the motor. The electical OA, I&E Engineering, and I&E Shop electricians were involved in troubelshooting this alarm. It was found that the Multilin was improperly programmed, the trip coil was healthy, and the alarm could be treated as a false alarm. 5 WHY: Loss: Manhours used to troubleshoot the alarm.Why? The relay displayed a nuisance alarm. Why? The relay programming was not proper (The relay functionality was tested). Why? Engineer did not program the alarm out of the relay. Why? Lack of Skill or Knowledge.	NL-Lessons Learned	(1) 5 WHY: The relay displayed a nuisance alarm. Why? The relay programming was not proper (The relay functionality was tested). Why? Engineer did not program the alarm out of the relay. Why? Lack of Skill or Knowledge.
41856	Richmond, CA - Refinery	7/13/2012 2:00:00 PM	Fact Gathering	Loss	K-1900 Nuisance Alarm Troubleshooting	An active alarm was found on the Multilin protecting MK-1900 at RLOP. The alarm reported that the trip coil of the circuit breaker was not functioning, which would result in the circuit breaker being unable to properly protect the motor. The electical OA, I&E Engineering, and I&E Shop electricians were involved in troubelshooting this alarm. It was found that the Multilin was improperly programmed, the trip coil was healthy, and the alarm could be treated as a false alarm. 5 WHY: Loss: Manhours used to troubleshoot the alarm.Why? The relay displayed a nuisance alarm. Why? The relay programming was not proper (The relay functionality was tested). Why? Engineer did not program the alarm out of the relay. Why? Lack of Skill or Knowledge.	Business Process	(1) 5 WHY: The relay displayed a nuisance alarm. Why? The relay programming was not proper (The relay functionality was tested). Why? Engineer did not program the alarm out of the relay. Why? Lack of Skill or Knowledge.
41858	Richmond, CA - Refinery	6/20/2012 3:00:00 PM	Fact Gathering	Near Loss	The supplier did not meet critical delivery date on purchase order.	Order placed with contract supplier on 06/18 for delivery on 06/20. On the afternoon of expected delivery, contract supplier was contacted by their third party supplier and advised that product would not be available as planned.	NL-Quality - Product Unavailable	
41858	Richmond, CA - Refinery	6/20/2012 3:00:00 PM	Fact Gathering	Near Loss	The supplier did not meet critical delivery date on purchase order.	Order placed with contract supplier on 06/18 for delivery on 06/20. On the afternoon of expected delivery, contract supplier was contacted by their third party supplier and advised that product would not be available as planned.	NL-Lessons Learned	
41858	Richmond, CA - Refinery	6/20/2012 3:00:00 PM	Fact Gathering	Near Loss	The supplier did not meet critical delivery date on purchase order.	Order placed with contract supplier on 06/18 for delivery on 06/20. On the afternoon of expected delivery, contract supplier was contacted by their third party supplier and advised that product would not be available as planned.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
41877	Richmond, CA - Refinery	7/19/2012 1:00:00 PM	Fact Gathering	Near Loss	Sink Hole under ladder at V-1942	As operator was about to use ladder to V-1942, he noticed a sink hole at the base of the ladder. This is at the base of the north side ladder to V-1942. Upon further inspection, sink hole is at least 4 feet deep, and at least 3 feet wide. Surface hole is only a few inches wide.	NL-Lessons Learned	
								(1) "FIVE WHY" One Page Report Incident Number Business Unit Location Facility Name Incident date Type of Process: Type of Equipment: Team Members: Incident Description: What. Employee was sitting in his truck at break wearing his safety glasses. He was feeling tired so he removed his glasses to rub his eyes at which point he felt something in his eye. He attempted to wash it out, but was unsuccessful. Where (location or where in the process): In work truck located at RDC. When: July 17, 2012 How: Rubbed his eyes during break. Problem Statement (What is the key issue that needs to be addressed?): How to protect yourself from miscellaneous particles in the eye. FIVE WHY'S 1. Why did "above" happen? Verification Employee removed safety glasses and rubbed his eyes with his hands. 2. Why did "1" happen? Employee was feeling tired and it was towards the end of the day. 3. Why did "2" happen? This is a common practice when you are feeling tired. 4. Why did "3" happen? 5.

41913	Richmond, CA - Refinery	7/19/2012 2:30:00 PM	Fact Gathering	Loss	Employee felt something in his eye	Employee was sitting in his truck at break wearing his safety glasses. He was feeling tired so he removed his glasses to rub his eyes at which point he felt something in his eye. He attempted to wash it out, but was unsuccessful.	NL-Injury/Illness - Contractor Injury	Why did "4" happen? 6. Why did "5" happen? 7. Why did "6" happen? 8. Why did "7" happen? ROOT CAUSE: What was the Root Cause of your Incident? In the past, did not follow procedures or acceptable practices and no incident occurred. Contributing Factors: LPS Factor:
41913	Richmond, CA - Refinery	7/19/2012 2:30:00 PM	Fact Gathering	Loss	Employee felt something in his eye	Employee was sitting in his truck at break wearing his safety glasses. He was feeling tired so he removed his glasses to rub his eyes at which point he felt something in his eye. He attempted to wash it out, but was unsuccessful.	Injury/Illness	(1) "FIVE WHY" One Page Report Incident Number Business Unit Location Facility Name Incident date Type of Process: Type of Equipment: Team Members: Incident Description: What: Employee was sitting in his truck at break wearing his safety glasses. He was feeling tired so he removed his glasses to rub his eyes at which point he felt something in his eye. He attempted to wash it out, but was unsuccessful. Where (location or where in the process): In work truck located at RDC. When: July 17, 2012 How: Rubbed his eyes during break. Problem Statement (What is the key issue that needs to be addressed?): How to protect yourself from miscellaneous particles in the eye. FIVE WHY'S 1. Why did "above" happen? Verification Employee removed safety glasses and rubbed his eyes with his hands. 2. Why did "1" happen? Employee was feeling tired and it was towards the end of the day. 3. Why did "2" happen? This is a common practice when you are feeling tired. 4. Why did "3" happen? 5. Why did "4" happen? 6. Why did "5" happen? 7. Why did "6" happen? 8. Why did "7" happen? ROOT CAUSE: What was the Root Cause of your Incident? In the past, did not follow procedures or acceptable practices and no incident occurred. Contributing Factors: LPS Factor:
42002	Richmond, CA - Refinery	7/20/2012 4:00:00 PM	Fact Gathering	Loss	600r product routed off test	At approximately 1600 on 7/20/2012 the HNF Atmos. column bottoms Flow dropped off and Tripped F-1650 C-1650 bottoms (currently 600r) was routed off test as a precaution. Operations worked to get the flow reestablished and the plant is currently stabilizing. The P-1635 pumps appeared to gas up.	Operational Process/Procedures	
42010	Richmond, CA - Refinery	7/21/2012 7:10:00 AM	Management Review	Near Loss	Gasoline leaking from tubing to the ground (asphalt).	Gasoline leaking from tubing to the ground (asphalt) from the tail line sample filter at the comparator bldg. Quantity < 10 gal.	NL-Environmental - Operational Leak	(1) Connection (compression fitting) wore out over time due to exposure to the elements, expansion / contraction due temp change, vibration etc.
42018	Richmond, CA - Refinery	7/21/2012 11:56:00 PM	Management Review	Loss	Lost Nox steam flow to the combustor on Cogen 2000 Train causing a Nox accidence.	At approx 23:56 hrs. on 7/21/12, the Cogen Board Operator received an alarm for a high level in the 2000 Train medium pressure drum and then a Nox alarm. Nox steam flow to the combustor was lost for an unknown reason. All control valves on the DCS where in the normal position. The Cogen Turbine Operator was dispatched to the field and found that the Nox steam control valve (92ZL920) had closed for unknown reasons while indications inside still show the valve as open.	Environmental	(1) At this time troubleshooting is complete from the controls, ops and the I&E end. We have come to a conclusion the problem may exist mechanically internal to the valve actuator and/or valve itself. This list of action items are placed on the upcoming "B" inspection worklist for March, 2013 to remove/replace and check all valve components are thoroughly inspected.
42077	Richmond, CA - Refinery	7/19/2012 4:30:00 PM	Closed	Near Loss	Green Card. Excessive speed in parking lot area. Location: North Contractor Parking Lot	Green Card. At the very end of the North parking lot, a small group park their cars and trucks. I was pulling out of my parking spot. I looked both ways, it was clear, but no sooner had I pulled out and a white Dodge 4x4 pickup was right on my bumper. There is a lot of excessive speed coming from that end of the parking lot. It's an accident waiting to happen. Location: North Contractor Parking Lot	NL-Transportation - Contractor	
42092	Richmond, CA - Refinery	7/17/2012 8:00:00 AM	Fact Gathering	Loss	Tied into incorrect line (condensate instead of 150# stm). Also, project was completed prior to MOC Stage 1 completion	A steam driven reciprocating pump (a.k.a. Big Bertha) was being used to verify that the circulating nozzles on T-3182 were clear/unplugged for upcoming S/D. EWO specified that tie-in for steam supply of pump was to be on 2" line which turned out to be the condensate header. Attempt to operate reciprocating pump was unsuccessful. Engineer was called to help troubleshoot. Upon arrival at site it was recognized that wrong line was tied into. Secondly, the work to clear these nozzles, which included operation of steam driven pump, was completed prior to completion of Stage 1 of MOC#25122. There was no PSSR done prior to energizing pump.	Business Process	
42092	Richmond, CA - Refinery	7/17/2012 8:00:00 AM	Fact Gathering	Loss	Tied into incorrect line (condensate instead of 150# stm). Also, project was completed prior to MOC Stage 1 completion	A steam driven reciprocating pump (a.k.a. Big Bertha) was being used to verify that the circulating nozzles on T-3182 were clear/unplugged for upcoming S/D. EWO specified that tie-in for steam supply of pump was to be on 2" line which turned out to be the condensate header. Attempt to operate reciprocating pump was unsuccessful. Engineer was called to help troubleshoot. Upon arrival at site it was recognized that wrong line was tied into. Secondly, the work to clear these nozzles, which included operation of steam driven pump, was completed prior to completion of Stage 1 of MOC#25122. There was no PSSR done prior to energizing pump.	Process Safety Management (PSM)	
42097	Richmond, CA - Refinery	7/17/2012 9:00:00 AM	Closed	Near Loss	Green Card. Missing railing above validation tank #2. Location: B&S 17 Pump Station	Green Card. Wooden railing above validation tank #2 is missing causing a safety hazard. Location: B&S #17 Pump Station	NL-Injury/Illness - Employee Injury	
						T-1504 (recovered oil) draws water levels down by a system where the		

42099	Richmond, CA - Refinery	7/19/2012 12:00:00 AM	Investigation In Progress	Loss	T-1504 Carbon Filters: V-2 ruptured disc due to overpressure	potentially sour water is passed through a series of carbon filters, then down to the look box which transfers the water on to EOD. The system is protected by two 75 lb rupture discs. One disc was ruptured on V-2, which caused issues with drawing down the water level in T-1504 (Recovered Oil Tank). V-1 was unable to be used for drawing down the water due to the need for carbon filter replacement. Near Loss: Unable to draw down the level in T-1504 Recovered Oil Tank. Why #1: Unable to safely draw down the sour water from the tank. Why #2: V-1 carbon filter was spent, and V-2 had a ruptured disc. Why #3. 2 possible scenarios for a ruptured disc- (1) Valves closed on the filters when drawing down T-1504. (2) Hammering of the lines b/c a valve was opened too quickly. Why #4: Further investigation needed.	Operational Process/Procedures	
42179	Richmond, CA - Refinery	7/18/2012 12:00:00 AM	Closed	Near Loss	High Silica level in both LP & HP boiler feed water	Silica had been high in both LP and HP boiler feed water and in the boilers for a couple of days. The concern – High silica can carry-over into the steam and deposit out onto turbine blades. And cause severe damage. (i.e. wet gas compressor)	NL-Operational Process/Procedures - Safe Operating Limit (SOL) Exceeded	(1) 1. No notification to the FCC after isolating the condensate line to T-2520 from the FCC. 2.No Procedure or Bakelite tag in valve area. 3. No check valve in the FCC to protect the FCC BFW system.
42181	Richmond, CA - Refinery	7/24/2012 8:00:00 AM	Closed	Near Loss	EE was not feeling well and was seen at the clinic	EE was not feeling well and was seen at the clinic. He was then sent the see his own HCP. Non-work related	NL-Injury/Illness - Employee Injury	
42183	Richmond, CA - Refinery	7/23/2012 5:00:00 PM	Closed	Near Loss	Vehicle seen speeding on Petrolite Street near the D&R Control House.	While driving on Standard Road passing the D&R ABU Offices I observed a van traveling north on Petrolite Street at a high rate of speed. As I approached the intersection of Petrolite Street I could see the electronic speedometer sign located north of the two bridges connecting the roadway with D&R. The electronic speedometer sign was flashing 34 mph. The posted speed limit on Petrolite Street is 20mph. I watched the van make a left turn and go across the northernmost bridge into the D&R parking area. I observed that the back of the van was orange and green. As I continued to travel north on Petrolite Street I passed the D&R control house and saw that the van was parked, facing east, next to the curb on the north side of the control house. All of the van doors were open and the driver and several passengers were walking from the van into the control house. I was unable to see who was driving the van, but because the driver's door was open I could see that the driver had exited the vehicle. Since I was driving with a more experienced employee I stopped the car at the D&R turn off and we discussed if any immediate corrective action could be taken. Since the van was already stopped and the driver had left we decided that submitting a green card would be the most appropriate solution. We observed that the van had a one of the heat shrink safety decals on it and "D&R WEST" printed on the side. The back of the van was orange with a green triangle and the word "POWER" printed on it.	NL-Transportation - Company	
42200	Richmond, CA - Refinery	7/24/2012 12:00:00 AM	Management Review	Near Loss	C6-36 failed to pop within 125% of cold set pressure.	C6-36 was removed from service for recertification. The set pressure was 100 psi. The valve popped @ 129.16 above the 125% limit per the RI.	NL-Equipment/Property Damage - Equipment Damage	(1) Believe that valve has lifted or previously leaked by allowing moisture to collect in outlet cavity causing CS components to corrode. This caused the disc holder to seize in the guide.
42203	Richmond, CA - Refinery	6/20/2012 12:15:00 PM	Closed	Near Loss	Green Card. Panels broke off and water spilling out. Location: FGR, Westside of Cooling Tower	Green Card. Westside of the Cooling Tower there's panels broke off and water is spilling out. Location: FGR - Westside of the Cooling Tower	NL-Environmental - Operational Leak	
42204	Richmond, CA - Refinery	6/24/2012 6:00:00 AM	Closed	Near Loss	Green Card. A faded stop sign. Location: Redwood's office	Green Card. Driving from Redwood's office, there is a stop sign that is so faded it can't be seen. Location: Redwood's office	NL-Transportation - Company	
42207	Richmond, CA - Refinery	6/27/2012 2:35:00 PM	Closed	Near Loss	Green Card. EE walking with shoe laces untied and hands full. Location: SISO - F135	Green Card. I noticed an employee walking with his hands full while one of his shoelaces was untied. Location: S. Isomax - F135	NL-Injury/Illness - Contractor Injury	
42209	Richmond, CA - Refinery	6/26/2012 9:30:00 AM	Closed	Near Loss	Green Card. A valve leaking from valve stem. Location: D&R next to safety shower	Green Card. There's 2 8" 900 valves leaking from the valve stem next to the safety shower 43FSH130. There's also a 1" valve that's leaking in the same area. Location: D&R GHT Plant	NL-Environmental - Operational Leak	
42211	Richmond, CA - Refinery	6/28/2012 10:30:00 AM	Closed	Near Loss	Green Card. A loose manifold needs adjusting. Location: FGR	Green Card. More often than not when we use supplied fresh air to do our work safely, the manifold is always loose and needs adjusting a few turns or more. We are not certified to adjust this equipment. Location: FGR	NL-Equipment/Property Damage - Equipment Damage	
42213	Richmond, CA - Refinery	7/5/2012 3:30:00 PM	Closed	Near Loss	Green Card. Ground is covered in oil. Location: SISO - K920	Green Card. While working near K920, I notice that the ground is covered in oil. Everywhere you look, there's oil. Location: SISO - K920	NL-Injury/Illness - Contractor Injury	
42219	Richmond, CA - Refinery	7/11/2012 2:45:00 PM	Closed	Near Loss	Green Card. No flange tags when opening manways. Location: Refinery	Green Card. When opening manways there are never any flange tags.	NL-Equipment/Property Damage - General Liability	

42221	Richmond, CA - Refinery	9/15/2010 12:00:00 AM	Fact Gathering	Near Loss	ACD Process not completed for AL-1468 to AL-1472 conversion.	705A submitted to change AL-1468 to AL-1472 was not completed Making valve blind to PM activities.	NL-Operational Process/Procedures - Pressure Relief Devices (PRD)	
42300	Richmond, CA - Refinery	7/12/2012 8:30:00 AM	Closed	Near Loss	Green Card. Large amount of algae on ground. Location: FCC P107	Green Card. While I was working on the VOC evac system, I noticed a large amount of algae on the ground. So I got a washdown hose and sprayed it all down so no one would slip and hurt themselves. Location: FCC - P107	NL-Injury/Illness - Contractor Injury	
42301	Richmond, CA - Refinery	7/12/2012 11:00:00 AM	Closed	Near Loss	Green Card. People tripping over parking lot bumpers. Location: Gate 91 parking lot	Green Card. I noticed a few people tripping over the parking lot bumpers at Gate 91 in front of the porch. The reason people don't see the bumpers is because the paint has worn out and camouflages with the ground. Also the handrails need to be fixed and the boards on the porch are loose. Location: Gate 91	NL-Injury/Illness - Contractor Injury	
42302	Richmond, CA - Refinery	7/25/2012 12:00:00 AM	Closed	Near Loss	IX-7346 popped at less than 90% of authorized set pressure.	During initial test IX-7346 relieved at 237.91 psi. This is below 90% of the authorized set pressure of 285 psi.	NL-Operational Process/Procedures - Pressure Relief Devices (PRD)	(1) Product found in seat reason unknown.
42304	Richmond, CA - Refinery	7/13/2012 10:30:00 AM	Closed	Near Loss	Green Card. An I-Beam is missing 3 bolts. Location: Boiler #3 on entry north #5 on a pipe station	Green Card. By Boiler 3 on entry north #5 on a pipe station just across from the deck is an unconnected I-Beam missing 3 bolts (not concerned). The pipeway is empty (no weight on it), but in an earthquake it could be an extreme hazard. Check it out, it might not be nothing, but it should be addressed by Chevron safety (unconnected weakens the entire structure horizontally and vertically). It needs a small tack weld only. Location: Boiler House	NL-Equipment/Property Damage - Equipment Damage	
42313	Richmond, CA - Refinery	7/17/2012 8:30:00 AM	Fact Gathering	Near Loss	Green Card. Need Safety attendant cards for training cert. Location: Power House	Green Card. Need Safety Attendant Cards for training cert. Need cards to be given once test has been graded, before getting an audit by safety.	NL-Business Process - Business Interruption	
42315	Richmond, CA - Refinery	7/20/2012 11:20:00 AM	Closed	Near Loss	Green Card. #5 Boiler, 2nd deck on the outside rail is rusted. Location: #1 Power House	Green Card. #5 Boiler, second deck on the outside rail is rusted and in need of repair. Anyone leaning against it can seriously get hurt. Location: #1 Power House	NL-Injury/Illness - Contractor Injury	
42316	Richmond, CA - Refinery	7/20/2012 9:00:00 AM	Closed	Near Loss	Green Card. #3 Boiler scaffold bar is sticking out. Location: #1 Power Plant	Green Card. #3 Boiler: Observed a scaffold bar is sticking out. Location: #1 Power Plant	NL-Injury/Illness - Contractor Injury	
42317	Richmond, CA - Refinery	7/20/2012 9:00:00 AM	Closed	Near Loss	Green Card. Vehicle going over speed limit. Location: Power House	Green Card. Vehicle was going over the speed limit and didn't come to a complete stop at stop sign. Location Power House	NL-Transportation - Company	
42318	Richmond, CA - Refinery	7/20/2012 9:30:00 AM	Closed	Near Loss	Green Card. Noticed bracket holes on skin and on angles. Location: #3 Boiler House	Green Card. Contractor working inside hole tacking on brackets, I noticed while tacking there was various holes on skin and on the angles. Location: #3 Boiler House	NL-Equipment/Property Damage - Equipment Damage	
42325	Richmond, CA - Refinery	7/25/2012 9:15:00 AM	Closed	Near Loss	Damage to underground poly air line	At the 260' channel at Homeland Security Enhancement camera base #230 a ground rod was being driven next to the camera base. About 4 feet down the rod hit a 2" poly air line that was not picked up by USA.	NL-Lessons Learned	
42343	Richmond, CA - Refinery	7/25/2012 12:00:00 AM	Closed	Near Loss	RLOP flare Totalizer tripped while blowing down K-1400 case drain	While blowing down K-1400 case drain, the handwheel fell off of the stem after the valve was opened. During the time it took isolate the case drain from an alternate location, the case gassed through to relief causing the totalizer to trip. There was no visible flaring (Confirmed by RSL via flare cam).	NL-Environmental - Release	
42388	Richmond, CA - Refinery	7/24/2012 1:00:00 PM	Investigation In Progress	Near Loss	Toilet tissue dispenser broken causing it to fall very close to the face of any person using the restroom. High potential for an injury.	A contract employee was using the women's handicapped restroom stall in central maintenance. Upon pulling on the toilet tissue paper roll, the face place of the dispenser came down forward into her lap very close to her face.	NL-Equipment/Property Damage - General Liability	(1) Repair broken toilet tissue dispenser
42396	Richmond, CA - Refinery	6/18/2012 10:30:00 AM	Closed	Near Loss	Green Card. No barricade tape up. Location: Hydro - FGR	Green Card. While working at the FGR unit, I saw a crane make a pick and there was no barricade up. Location: Hydro - FGR	NL-Injury/Illness - Contractor Injury	
42400	Richmond, CA - Refinery	7/15/2012 10:00:00 AM	Closed	Near Loss	Green Card. Welder didn't see elec cord while welding. Location: #1 Power Plant #3 Boiler Ash Hopper	Green Card. (Blind Spot) Welder didn't see electrical cord opposite side of steel plate while cutting with torch. Location: #1 Power Plant #3 Boiler Ash Hopper	NL-Lessons Learned	
42400	Richmond, CA - Refinery	7/15/2012 10:00:00 AM	Closed	Near Loss	Green Card. Welder didn't see elec cord while welding. Location: #1 Power Plant #3 Boiler Ash Hopper	Green Card. (Blind Spot) Welder didn't see electrical cord opposite side of steel plate while cutting with torch. Location: #1 Power Plant #3 Boiler Ash Hopper	NL-Fire/Explosion	

42403	Richmond, CA - Refinery	7/17/2012 1:00:00 PM	Closed	Near Loss	Green Card. Contractor climbing ladder with tools in hand. Location: #3 Power House	Green Card. Contractor climbing ladder with tools in hand Location: #3 Power House	NL-Injury/Illness - Contractor Injury	
42404	Richmond, CA - Refinery	7/18/2012 3:30:00 PM	Closed	Near Loss	Green Card. Trees blocking visiblity. Location: B&S - Quarry Rd adjacent to TK-957	Green Card. Single lane corner, trees blocking visibility, trucks parked on both sides, confusing in mirror, honk at corner, too late. Location: B&S - Quarry Rd adjacent to TK-957	NL-Transportation - Contractor	
42406	Richmond, CA - Refinery	7/19/2012 8:30:00 AM	Closed	Near Loss	Green Card. Contractor in Power House wearing dark glasses.	Green Card. Contractor in Power House wearing dark glasses.	NL-Injury/Illness - Contractor Injury	
42409	Richmond, CA - Refinery	7/19/2012 10:00:00 AM	Closed	Near Loss	Green Card. Contractor not using barricade tape. Location: #5 Powerhouse	Green Card. Contractor lowering down header from steam drum without any barricade tapes to let others know what's going on. Location: #5 Powerhouse	NL-Lessons Learned	
42409	Richmond, CA - Refinery	7/19/2012 10 00:00 AM	Closed	Near Loss	Green Card. Contractor not using barricade tape. Location: #5 Powerhouse	Green Card. Contractor lowering down header from steam drum without any barricade tapes to let others know what's going on. Location: #5 Powerhouse	NL-Injury/Illness - Contractor Injury	
42411	Richmond, CA - Refinery	7/19/2012 10 00:00 AM	Closed	Near Loss	Green Card. Contractor rudely throwing materials off rolling cart. Location: #5 Powerhouse	Green Card. Contractor rudely throwing materials off of rolling cart to get his job done, realizing he didn't need it and didn't bother to pick up materials, leaving tripping hazards/fire hazards. Location: #5 Powerhouse	NL-Injury/Illness - Contractor Injury	
42413	Richmond, CA - Refinery	7/19/2012 1:00:00 PM	Closed	Near Loss	Green Card. Welder grinding without a face shield. Location: #3 Power Plant #3 Boiler	Green Card. Welder grinding without a face shield. Location: #3 Power Plant #3 Boiler	NL-Injury/Illness - Contractor Injury	
424'3	Richmond, CA - Refinery	7/19/2012 1:00:00 PM	Closed	Near Loss	Green Card. Welder grinding without a face shield. Location: #3 Power Plant #3 Boiler	Green Card. Welder grinding without a face shield. Location: #3 Power Plant #3 Boiler	NL-Lessons Learned	
42415	Richmond, CA - Refinery	7/19/2012 1:00:00 PM	Closed	Near Loss	Green Card. Sheet of metal with sharp edges. Location: Power House	Green Card. On Boiler #3, I noticed a sheet of skin metal laying on a table with 4 sharp edges and if you walk past, you could get hurt or cut. Location: Power House, Boiler #3	NL-Injury/Illness - Contractor Injury	
42415	Richmond, CA - Refinery	7/19/2012 1:00:00 PM	Closed	Near Loss	Green Card. Sheet of metal with sharp edges. Location: Power House	Green Card. On Boiler #3, I noticed a sheet of skin metal laying on a table with 4 sharp edges and if you walk past, you could get hurt or cut. Location: Power House, Boiler #3	NL-Lessons Learned	
42416	Richmond, CA - Refinery	7/20/2012 2:00:00 PM	Closed	Near Loss	Green Card. Welders welding inside confined space without respirators. Location: Power Plant	Green Card. Welders welding inside a confined space without respirators. Location: Power Plant	NL-Lessons Learned	
42416	Richmond, CA - Refinery	7/20/2012 2:00:00 PM	Closed	Near Loss	Green Card. Welders welding inside confined space without respirators. Location: Power Plant	Green Card. Welders welding inside a confined space without respirators. Location: Power Plant	NL-Injury/Illness - Contractor Injury	
42453	Richmond, CA - Refinery	7/25/2012 7:00:00 AM	Closed	Near Loss	Green Card. Dirty windows on vehicles creates poor visibility. Location: Refinery	Green Card. Many cars and trucks with dirty windows. This makes for poor visibility. Location: Refinery	NL-Transportation - Company	
42518	Richmond, CA - Refinery	7/26/2012 8:00:00 AM	Fact Gathering	Loss	Mis-manifolding of Naphtha into T-397	T-3222 was transferred to T-397 from the water draw via 182 line. Prior to the transfer, the water draw valve on T-3197 was checked, and it did not move, so it was assumed that the valve was closed. T-3222 level transferred reached zero at approximately 20:00 on 07/25. P-11 (water draw transfer pump) was not shutdown because suction was still being pulled. Dayshift discovered the issue when it was seen that T-3222 level was reading zero and T-397 tank was still rising. It was discovered that the water draw valve on T-3197 had been left open. A secondary block valve was closed to prevent further transfer out of T-3197. RSL & planners notified.	Environmental
42518	Richmond, CA - Refinery	7/26/2012 8:00:00 AM	Fact Gathering	Loss	Mis-manifolding of Naphtha into T-397	T-3222 was transferred to T-397 from the water draw via 182 line. Prior to the transfer, the water draw valve on T-3197 was checked, and it did not move, so it was assumed that the valve was closed. T-3222 level transferred reached zero at approximately 20:00 on 07/25. P-11 (water draw transfer pump) was not shutdown because suction was still being pulled. Dayshift discovered the issue when it was seen that T-3222 level was reading zero and T-397 tank was still rising. It was discovered that the water draw valve on T-3197 had been left open. A secondary block valve was closed to prevent further transfer out of T-3197. RSL & planners notified.	Operational Process/Procedures
42519	Richmond, CA - Refinery	7/25/2012 12:00:00 AM	Fact Gathering	Loss	Drive failure on RIC841ntg3db3	Experienced two drive failure on SQL Database server, ric841ntg3db3.	Business Process	

42544	Richmond, CA - Refinery	7/28/2012 7:00:00 AM	Fact Gathering	Near Loss	Rlop B-Crew worked understaffed below minimum crew.	Rlop B Crew went below Minimum Crew level. Minimum Crew is 7 people. Rlop worked with only 5 people for 7.5 hours. During the weekend of July 27 - 29, four of eight crew members were off crew. The off crew members list consisted of two planned vacancy's (1 vacation, 1 AB109) and two unplanned (2 off sick). The standby person was called to cover a job, this still left one job vacant. Between the HO and STL, 10 phone (Home & Cell) calls were made to C, D and E crew to back fill this vacancy. Of the 10 calls/messages made no one bothered to answer or return a single call. One possible remedy to help avoid or mitigate this situation from happening again is to have two person standby lists, in this section of Hydro	NL-Regulatory Compliance - Non Compliance	
42603	Richmond, CA - Refinery	7/26/2012 12:00:00 AM	Closed	Near Loss	IL-3318 (PRD) for V-3337 Instrument Air Knockout Pot was pulled for PM replacement of the PRD. The spare PRD brought by maintenance did not fit.	This vessel is connected to V-3336 Instrument Air receiver which is protected by PRD's (IL-3303 and IL-3306) both set at 150 psig.	NL-Operational Process/Procedures - Pressure Relief Devices (PRD)	(1) Incident – wrong size PRD 1. Why – ordered wrong size PRD 2. Why – Job walk in 2011 verified information on 705 and 707 form saying 1.5" 300# flange required, when in the field in is actually 1.5" 150# flange 3. Why – 2011 job walks for PRDs were completed by various chevron mechanics (i.e. there wasn't a consistent level of knowledge). 2012 job walks are using the same personnel for all of the 2013 PRDs 4. Why – Lack of consistency on walking PRD jobs for the PRDs due for compliance in the following year
42615	Richmond, CA - Refinery	7/26/2012 10:00:00 AM	Closed	Near Loss	AC Unit is at eye level & has a sharp edge on the bottom.	AC Unit is at eye level & has a sharp edge on the bottom. A few others have noticed this.	NL-Injury/Illness - Contractor Injury	
42692	Richmond, CA - Refinery	6/28/2012 12:00:00 PM	Closed	Loss	Missing Samples for 5Rhen Low Octane Test Run	Oils Planning requested a full set of samples on #5 Rhenformer for improving Petro model at 92 RON. PED scheduled the test run for June 26th, 2012 with Oils Planning/Operations Coordination. PED followed Refinery Sampling JLA, updated STARLIMS sample schedule for a Test Run with QCD's approval, and sent a detailed operating instruction for grabbing required samples on Tuesday, June 26th. As of 11 AM on Thursday, July 5th, the recycle H2, V-590 off-gas, C-4410 bottoms, and C-590 bottoms for GC-DHA were missing. By not having all the samples, an accurate mass balance/PETRO model update cannot be performed. The result is a delay in the PETRO model update. This resulted in a real loss of $800 (CRTC charges $400 for each GC-DHA test) in addition to hours spent coordinating sampling, tracking down samples, and investigation.	Business Process	(1) Test run procedure did not specify who was responsible for pulling each sample because in the past did not include and no incident occurred. , (2) PED did not include a step in the test run communication to notify PED when all samples collected because not in JLA.
42790	Richmond, CA - Refinery	7/31/2012 8:30:00 AM	Fact Gathering	Near Loss	Earlier this week at the Cracking and Hydro Operator Safety Meeting a discussion took place about a fatality on a cement / mortar mixer. When the Field Safety Coordinator was riding their bike by the SISO Flare K-1070 repair job he saw a cement / mortar mixer. He noticed that it did not have a properly functioning kill switch and the guarding was suspect. FSO talked to the crew working on the job about the non functional start / stop kill switch. The site foreman removed the equipment out of service and a NLI was entered.	Earlier this week at the Cracking and Hydro Operator Safety Meeting a discussion took place about a fatality on a cement / mortar mixer. When the Field Safety Coordinator was riding their bike by the SISO Flare K-1070 repair job he saw a cement / mortar mixer. He noticed that it did not have a properly functioning kill switch and the guarding was suspect.	NL-Operational Process/Procedures - Safety Systems	(1) What happened? At the SISO Flare Compressor K-1070 repair job cement / mortar mixer did not have a properly functioning kill switch and the guarding was suspect. Why did the above happen? 1. Because millwright mechanics were not instructed thru their training to visually inspect or test this kill switch prior to using the equipment. Why did the above happen? 2. Because a written procedure or standard was never created to inspect the equipment prior to use. Side note for the guard being suspect on the machine: it was not in use and the guarding was temporarily removed. The incident mentioned where a fatality occurred happened while the machine was running. This machine was not in use and so the guard being off or removed was not a safety hazard.
					Earlier this week at the Cracking and Hydro Operator Safety Meeting a discussion took place about a fatality on a cement / mortar mixer. When the Field Safety Coordinator was riding their bike by the SISO Flare K-1070 repair job he saw a cement / mortar mixer. He noticed that it did not have a properly functioning kill switch and the guarding was suspect. FSO talked to the crew			(1) What happened? At the SISO Flare Compressor K-1070 repair job cement / mortar mixer did not have a properly functioning kill switch and the guarding was suspect. Why did the above happen? 1. Because millwright mechanics were not instructed thru their training to visually inspect or test this kill switch prior to using the equipment. Why did the above happen? 2. Because a written procedure or standard was

42790	Richmond, CA - Refinery	7/31/2012 8:30:00 AM	Fact Gathering	Near Loss	working on the job about the non functional start / stop kill switch. The site foreman removed the equipment out of service and a NLI was entered.	Earlier this week at the Cracking and Hydro Operator Safety Meeting a discussion tock place about a fatality on a cement / mortar mixer. When the Field Safety Coordinator was riding their bike by the SISO Flare K-1070 repair job he saw a cement / mortar mixer. He noticed that it did not have a properly functioning kill switch and the guarding was suspect.	NL-Injury/Illness - Employee Injury	never created to inspect the equipment prior to use. Side note for the guard being suspect on the machine: It was not in use and the guarding was temporarily removed. The incident mentioned where a fatality occurred happened while the machine was running. This machine was not in use and so the guard being off or removed was not a safety hazard.
42793	Richmond, CA - Refinery	7/23/2012 7:00:00 AM	Closed	Near Loss	Green Card. Bad steam leak. Location: RLOP V-1120	Green Card. Bad steam leak out to walkways and it's hard to see when working near the leak. Location: RLOP V-1120	NL-Injury/Illness - Contractor Injury	
42795	Richmond, CA - Refinery	7/23/2012 9:00:00 AM	Closed	Near Loss	Green Card. Steam leak overhead on 3/8 copper tubing needs to be fixed because hot condensate falling to walkways. Location: RLOP 10' N of LV11456	Green Card. Overhead steam leak on 3/8 copper tubing needs to be fixed because hot condensate falling to walkways. Location: RLOP 10' North of LV11456	NL-Injury/Illness - Employee Injury	
42796	Richmond, CA - Refinery	7/24/2012 10:30:00 AM	Closed	Near Loss	Green Card. Fuel leak on burner. Location: D&R F550/560	Green Card. While working on F-550 2nd deck on southside, we smelled a fuel gas leak. We called Operator Steve and snooped burners on F-560 and found leak on burner No. 8, South tip #2, due to broken weld. Location: D&R F-550/560	NL-Environmental - Operational Leak	
42803	Richmond, CA - Refinery	7/27/2012 1:45:00 PM	Closed	Near Loss	Green Card. Seen a contractor remove tools from other contractors equipment. Location: Powerhouse	Green Card. I seen a contractor remove tools from other contractors equipment which would cause these contractors delay from doing their job. Location: Powerhouse	NL-Business Process - Business Interruption	
42805	Richmond, CA - Refinery	7/27/2012 3:00:00 PM	Closed	Near Loss	Green Card. Uneven walking surface, tripping hazard. Location: Powerhouse	Green Card. Uneven walking surface. Tripping hazard. Location: Powerhouse	NL-Injury/Illness - Contractor Injury	
42806	Richmond, CA - Refinery	7/27/2012 9:00:00 AM	Closed	Near Loss	Green Card. Found hoses and cords in front of ladder. Location: #1 Powerhouse/#3 Boiler	Green Card. Found hoses and cords in front of ladder. Location: #1 Powerhouse/#3 Boiler	NL-Injury/Illness - Employee Injury	
42808	Richmond, CA - Refinery	7/26/2012 7:30:00 AM	Closed	Near Loss	Green Card. Release of air, air leak. Location: Inside CTR bldg	Green Card. There is a release of air or some kind inside the front of CTR that operates all day. I have walked the area, but cannot pinpoint it. Location: CTR	NL-Injury/Illness - Contractor Injury	
42829	Richmond, CA - Refinery	8/1/2012 10:00:00 AM	Fact Gathering	Loss	K-1060 trip	At 09:30 am the OWS-2 board operator received the High level alarm on V-1051 the inter stage knockout on the Flare Gas compressors. The area operator was sent out to investigate the high level. Normal level control was not working, operations was in the process of bypassing the V-1051 level control into V-1052 when level in V-1051 spiked and caused a Shutdown of K-1060. K-1060 restart was attempted twice but did not start due to the High level shutdown still in alarm. Level control was bypassed from V1051 to V-1052 and Level dropped immediately. K-1060 multi-lin controller would not allow a compressor restart for 1 hour after the 2 unsuccessful restart attempts. RLOP,ALKY,FCC,SISO,NISO Flares all tripped their totalizers and pulled a sample. A Title V report was initiated and all 5 flare samples were sent to QCD. HES was informed.	Environmental	(1) Why did North yard flares trip totalizers and sample? North yard flares trippedtotalizers and sampled due to K-1060 Shutdown. Why did K-1060 shutdown? K-1060 shutdown due to High level in V-1051. Why did a high level in V-1051 occur? High level was building and spiked High to trip level of 70%. Why was level building in V-1051? Appears at this time that the discharge line from P-1C51 is plugged. Why Did V-1051 Skipe to high level trip of 70%? ndetermined at this time.
42843	Richmond, CA - Refinery	8/1/2012 3:30:00 PM	Fact Gathering	Loss	Contract employee twisted ankle.	Employee twisted ankle while walking in area where rock crushing equipment was be being shut down for the day.	Injury/Illness	(1) 1. Why - Didn't recognize uneven Surface. 2. Why - Employee was multi-tasking, not focused and jogging not walking!. 3, Why - Complacency - Hazard and the risk of jogging not recognized. 4. Why - Didn't have eyes on the task and had acted the same way in the past without impact or injury
42866	Richmond, CA - Refinery	7/31/2012 9:00:00 PM	Fact Gathering	Near Loss	Elevated ammonia reading in Hydro 60' sewer	On Tuesday (31 July) night Utility operator sampling Bio Inlet found High NH3 present. Moving upstream to 13 separators' East & West out fall sump the NH3 reading was above 80 PPM. All contributors (FCC/Alky, SRU and RLOP) were asked to check their system (sewer flowing to 13 Sep) for possible product containing NH3.	NL-Operational Process/Procedures - Plant Run Out/Slow Down	
42908	Richmond, CA - Refinery	8/2/2012 9:00:00 AM	Closed	Near Loss	H2S Monitor Activation	While cleaning up the area near K-500, which had a leaking flange, workers H2S monitor activated.	NL-Injury/Illness - Contractor Injury	
								(1) Incident Description: On July 23rd operations received a MK-3 Multilin common trouble alarm (95XA302) on Honeywell, the operator investigated and found the display was not working on the protective relay. A work order was written to repair the display function on Monday July 23rd; on the morning of July 24th the work order was reviewed during

42910	Richmond, CA - Refinery	7/23/2012 12:00:00 AM	Fact Gathering	Near Loss	Loss of Protective Relay on MK-3	On July 23rd operations received a MK-3 Multilin common trouble alarm (95XA302) on Honeywell, the operator investigated and found the display was not working on the protective relay.	NL-Equipment/Property Damage - Equipment Damage	the Maintenance/Operation morning meeting. The lack of display was identified as a possible condition of loss of the protective relay to the motor and transformer. An investigation determined that the relay had failed, the motor was shutdown and a spare relay was installed. MK-3 ran for approximately 18 hours without protection to the motor. This motor has a single protective relay that is programmed to alarm due to failure, not to trip. FIVE WHY'S 1. Why did motor run for 18 hours without protection A.The Multilin Relay Display failed B.Ops were not a aware of loss of motor protection due to a loss of the Multilin screen 2. Why did "1" happen? A.Multilin failed due to loss of internal power supply failing B. The COD table Probable Causes did not identify that the Multilin Common trouble alarm could be a R6 Service Alarm or the complete failure of the relay. 3. Why did "2" happen? A. The repair strategy is reactive and a spare was not available. B. The COD table for this relay point was vague or incomplete 4. Why did "3" happen? A. the spare relay had been used a few weeks prior and the replacement relay had not been delivered. ROOT CAUSE(S): A. The Equipment was determined to be non critical, and area used spare strategy and stock replacement philosophy for relay. 2 COD table provided insufficient information to direct operator in their troubleshooting of the alarms
42973	Richmond, CA - Refinery	8/1/2012 12:00:00 PM	Closed	Near Loss	Almost took a penalty for late payment to CUPA	Payment on invoices due for ISO Permit Year 2011/12 and Unannounced Inspections Fee for Permit Year 2011/12 were delayed and could have resulted in a penalty.	NL-Business Process - Business Process	(1) . There wasn't any followup of invoices for approval to assure prompt payment. , (2) No detailed process set for the processing and tracking of invoices.. , (3) Previous Safety Analyst did not see value for this item to be in desk manual or covering it in turnover., (4) Followed a process that did not have adiquate tracking of the invoice.
43000	Richmond, CA - Refinery	8/3/2012 12:00:00 AM	Fact Gathering	Loss	F-305 (B Cell) Pig Tail leak in vicinity of Tube B43 / 155	During 1st rounds the S. Iso A03 Operator discovered what appeared to be a pig tail leak on F-305 (B Cell). Inspections was called and confirmed a pig tail leak in the vicinity of burner B43 / 155. The recommendation was made to pull natural gas feed on B cell and make preparations to pinch whichever tube/s are determined to be leaking.	Equipment/Property Damage	
43000	Richmond, CA - Refinery	8/3/2012 12:00:00 AM	Fact Gathering	Loss	F-305 (B Cell) Pig Tail leak in vicinity of Tube B43 / 155	During 1st rounds the S. Iso A03 Operator discovered what appeared to be a pig tail leak on F-305 (B Cell). Inspections was called and confirmed a pig tail leak in the vicinity of burner B43 / 155. The recommendation was made to pull natural gas feed on B cell and make preparations to pinch whichever tube/s are determined to be leaking.	Operational Process/Procedures	
43087	Richmond, CA - Refinery	8/6/2012 6:37:00 AM	Fact Gathering	Loss	Visible Flaring from FCC Flare	Early before shift change on 8/6/12, the FGR system began to build pressure and high flow was experienced at 6:37 a.m. The FCC totalizer tripped and visible flaring was detected from the FCC flare. Upon further investigation, the source appears to be coming from 8 plant and source testing and PED are involved with locating the source. Further initial action also show a high DP in V-1050, thus indicating a plugged or faulty demister pad.	Environmental	
43087	Richmond, CA - Refinery	8/6/2012 6:37:00 AM	Fact Gathering	Loss	Visible Flaring from FCC Flare	Early before shift change on 8/6/12, the FGR system began to build pressure and high flow was experienced at 6:37 a.m. The FCC totalizer tripped and visible flaring was detected from the FCC flare. Upon further investigation, the source appears to be coming from 8 plant and source testing and PED are involved with locating the source. Further initial action also show a high DP in V-1050, thus indicating a plugged or faulty demister pad	NL-Environmental - Release	
43094	Richmond, CA - Refinery	8/6/2012 5:30:00 PM	Fact Gathering	Loss	4 Side Cut suction line piping leak	The suction line to P-1149 had a leak on the line, the leak caught fire	Fire/Explosion	
43094	Richmond, CA - Refinery	8/6/2012 5:30:00 PM	Fact Gathering	Loss	4 Side Cut suction line piping leak	The suction line to P-1149 had a leak on the line, the leak caught fire	Loss of Containment	
43094	Richmond, CA - Refinery	8/6/2012 5:30:00 PM	Fact Gathering	Loss	4 Side Cut suction line piping leak	The suction line to P-1149 had a leak on the line, the leak caught fire	Equipment/Property Damage	
43094	Richmond, CA - Refinery	8/6/2012 5:30:00 PM	Fact Gathering	Loss	4 Side Cut suction line piping leak	The suction line to P-1149 had a leak on the line, the leak caught fire	Injury/Illness	
43099	Richmond, CA - Refinery	8/6/2012 0:35:00 PM	Fact Gathering	Loss	Relief flow to FCC flare during Plant rate reductions in response to 4 CU shutdown.	While rapidly posturing units due to loss of feed from 4 Crude unit there was flow to relief which tripped the following flare compliance samplers; FCC flare, RLOP Flare and N. Isomax flares.	Environmental	
	Richmond,	7/25/2012			Green Card. Water leak in			

43143	CA - Refinery	7:00:00 AM	Closed	Near Loss	pipe rack above P-105B. Location: FCC	Green Card. Water leak in pipe rack above P-105B is creating slip hazard (algae on floor). Almost slipped carrying material. Location: FCC	NL-Injury/Illness - Contractor Injury	
43143	Richmond, CA - Refinery	7/25/2012 7:00:00 AM	Closed	Near Loss	Green Card. Water leak in pipe rack above P-105B. Location: FCC	Green Card. Water leak in pipe rack above P-105B is creating slip hazard (algae on floor). Almost slipped carrying material. Location: FCC	NL-Injury/Illness - Employee Injury	
43143	Richmond, CA - Refinery	7/25/2012 7:00:00 AM	Closed	Near Loss	Green Card. Water leak in pipe rack above P-105B. Location: FCC	Green Card. Water leak in pipe rack above P-105B is creating slip hazard (algae on floor). Almost slipped carrying material. Location: FCC	NL-Lessons Learned	
43146	Richmond, CA - Refinery	8/4/2012 3:00:00 PM	Closed	Near Loss	Green Card. LPG railcard wheel is off the track. Location: R&G Gate	Green Card. LPG railcar was parked up on top of chock, one of the wheels is off the track. Location: Railroad by the Rod and Gun Gate	NL-Lessons Learned	
43167	Richmond, CA - Refinery	8/7/2012 2:30:00 PM	Investigation In Progress	Loss	PINCHED FINGER	INITIAL DESCRIPTION: SEE LINK ATTACHED IN INVESTIGATION FOR COMPLETE TOP REPORT. ON 8/7/2012, HERE AT THE RICHMOND REFINERY, D&R WASH PAD SITE, A CONTRACTOR MACHINIST WAS PREPARING TO UNLOAD A TANK MIXER GEARBOX WHICH WAS LOADED IN THE BACK BED OF THE MECHANICS TRUCK. APPARENTLY THE GEARBOX HAD ROLLED AGAINST THE BACK DOOR OF THE TRUCKS BED AND SO WHEN THE MECHANIC OPENED THE DOORS OF THE TRUCK, THE GEARBOX ROLLED OUT. THE MECHANIC INADVER~ENTLY REACHED OUT TO STOP THE GEARBOX FROM FALLING, CAUGHT HIS HAND BETWEEN THE BACK BUMPER OF THE TRUCK AND THE GEARBOX, PINCHING HIS MIDDLE FINGER AND CREATING A GASH NEAR THE TOP FOLD OF HIS FINGER. THE CUT REQUIRED NO STITCHES AND IS CLASSIFIED AS A FIRST AID.	Injury/Illness	
43186	Richmond, CA - Refinery	8/7/2012 5:52:00 PM	Closed	Near Loss	Cogen Line 2 isolated from SOSS due to faulty relay.	Breakers 115-732 and 115-832 @ SOSS tripped open due to failure of Relay. Cogen Line 2 was was isolated from SOSS. The Faulty relay was identified as the 87L2-P LCB 2 relay.	NL-Business Process - Business Interruption	
43191	Richmond, CA - Refinery	8/7/2012 11:00:00 PM	Closed	Near Loss	unauthorized transfer to a feed tank	Started moving TKN without complete lab results to a feed tank..	NL-Quality - Product Quality (Int)	
43206	Richmond, CA - Refinery	7/20/2012 4:40:00 PM	Closed	Near Loss	Green Card. Person driving too fast in parking lot. Location: 91 Gate	Green Card. Person driving too fast in parking lot. Location: 91 Gate	NL-Lessons Learned	
43207	Richmond, CA - Refinery	7/24/2012 11:00:00 AM	Closed	Near Loss	Green Card. Found aerosol can in garbage. Location: B&S 95 Tank Pad	Green Card. Found aerosol can in garbage. Location: B&S 95 Tank Pad	NL-Lessons Learned	
43209	Richmond, CA - Refinery	7/26/2012 1:30:00 PM	Closed	Near Loss	Green Card. Contractor lost his earplug. Location: Nisco/CWT	Green Card. Contractor lost his earplug. Location. Nisco/CWT	NL-Lessons Learned	
43212	Richmond, CA - Refinery	7/30/2012 4:30:00 PM	Closed	Near Loss	Green Card. A driver using cell phone while driving. Location: 91 Gate parking lot	Green Card. A driver was on a cell phone while driving. Location: 91 Gate parking lot	NL-Lessons Learned	
43214	Richmond, CA - Refinery	7/30/2012 12:40:00 PM	Closed	Near Loss	Green Card. Leak of hot steam water. Location: Powerhouse, #1 Boiler	Green Card. As i was walking the Powerhouse for hazards after lunch, I noticed a leak of hot steam water coming from above at Boiler #1. Location: Powerhouse, #1 Boiler	NL-Lessons Learned	
43215	Richmond, CA - Refinery	7/31/2012 9:20:00 AM	Closed	Near Loss	Green Card. Contractor wanted to take measurements in tank. Location: B&S TK1687	Green Card. Contractor engineer wanted to take measurements in tank that other contractor sandblasted. Location: B&S TK1687	NL-Lessons Learned	
43216	Richmond, CA - Refinery	7/31/2012 2:00:00 PM	Closed	Near Loss	Green Card. Driver in a vehicle talking on cell phone. Location: Channel St.	Green Card. Driver in a vehicle talking on a cell phone. Location: Channel St.	NL-Lessons Learned	
43219	Richmond, CA - Refinery	7/31/2012 11:30:00 AM	Closed	Near Loss	Green Card. Trailer with tailgate always open. Location: Xylene Rd.	Green Card. At the contractors yard there's a trailer across from SS storage area with the tailgate always open with no cones or barricade warning others of the hazards. Location: Contractors yard of Xylene St.	NL-Lessons Learned	
43221	Richmond, CA - Refinery	8/1/2012 12:30:00 PM	Fact Gathering	Near Loss	Green Card. Need good housecleaning in area. Location: NISO P-501	Green Card. Me and the crew have been doing good housecleaning around P-501 but we don't have a lot of time to clean all the pumps in the area. We need a labor crew to help clean the area. Location: N. Isomax P-501	NL-Lessons Learned	
43226	Richmond, CA - Refinery	8/2/2012 5:00:00 AM	Fact Gathering	Near Loss	Green Card. RSL turnover did not adequately describe flange leak incident. Location: Hydro (K-400 in TKC)	Green Card. End-of-shift RSL turnover did not adequately describe flange leak incident that shut down K-400 requiring pulling feed from TKC. All that's evident from the turnover is that the feed rate and recovered oil rates were at zero - no explanation of why. Location: Hydroprocessing (K-400 in TKC)	NL-Lessons Learned	

43227	Richmond, CA - Refinery	8/7/2012 1:30:00 PM	Fact Gathering	Near Loss	Green Card. Slippery surfaces on deck. Location: 9 Plant, K-900 Deck	Green Card. Slippery surfaces on deck. Location: 9 Plant, K-900 Deck	NL-Lessons Learned	
43228	Richmond, CA - Refinery	8/7/2012 2:30:00 PM	Fact Gathering	Near Loss	Green Card. Tons of debris on deck. Location: 9 Plant K-900 Top Deck	Green Card. Tons of debris on deck. Could have slipped or tripped. Location: 9 Plant K-900 Top Deck	NL-Lessons Learned	
43230	Richmond, CA - Refinery	8/7/2012 2:00:00 PM	Fact Gathering	Near Loss	Green Card. Steam tracing line is not insulated. Location: 9 Plant K-900 Deck	Green Card. Steam tracing line is not insulated. Almost got burned. Location: 9 Plant K-900 Deck	NL-Lessons Learned	

Print Close

IPS LI/NLI Search for Dates 7/1/2009 to 10/31/2010

LI/NLI Chosen: LI - Abnormal Freight, LI - Abnormal Supply Occurrence, LI - Business Interruption, LI - Business Interruption/EVR-ISD, LI - Business Loss, LI - Business Process, LI - Community Inquiry, LI - Contractor Days Away From Work Case, LI - Contractor First Aid, LI - Contractor Medical w/o lost time, LI - Criminal Activity, LI - Days Away From Work Case, LI - Employee Theft (Merchandise), LI - Equipment Damage, LI - Equipment Failure, LI - Equipment/Unit Trip, LI - Fire/Explosion, LI - First Aid, LI - First Aid with Medical Referral, LI - General Liability, LI - Inadvertent Release of Hazardous Vapor (IRHV), LI - Incorrect Product, LI - Incorrect Volume, LI - Loss of Containment (LOC) Corp Reportable, LI - Loss of Containment (LOC) Tier 1, LI - Loss of Containment (LOC) Tier 2, LI - MVC - Company, LI - MVC - Contractor, LI - MVC - Personal Use, LI - Medical w/o Lost Time, LI - NOV - Air, LI - NOV - Price Scanning, LI - NOV - Water , LI - NSR Consent Decree, LI - Non-Compliance Company Policy, LI - Non-Compliance Government Requirement, LI - Non-Industrial, LI - Notice of Violation, LI - Operational Leak, LI - Paperwork Incorrect/not sent, LI - Permit Exceedance, LI - Plant Run-Out/Slow Down , LI - Preferred Contractor - MVC, LI - Preferred Contractor - Spill, LI - Product Contamination (Ext), LI - Product Contamination (Int), LI - Product Mis-Delivery, LI - Product Quality (Ext), LI - Product Quality (Int), LI - Product Unavailable, LI - Quality Management System, LI - Release, LI - Safe Operating Limit (SOL) Exceeded, LI - Safety

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	LEVEL6
1984185	7/15/2010	LI	LI - Criminal Activity	Level 1	Level 1	Loss of non-GIL Laptop computer form the I&E Training Center, bldg 520 Hensley Facility. Last seen	Richmond Refinery	Development Department Facility (Rich)				
1826453	1/20/2010	LI	LI - Criminal Activity	Level 1	Level 1	Projector INFocus IN2102 ordered from "Projector People" January 13, 2010. Delivered to Lancaster L	Richmond Refinery	Development Department Facility (Rich)				
1673476	10/14/2009	LI	LI - Contractor First Aid	Level 1	Level 1	Employee was experiencing discomfort in his right wrist while at his computer work station.	Richmond Refinery	Development Department Facility (Rich)				
1541615	7/7/2009	LI	LI - Contractor Medical w/o lost time	Level 2	Level 2	Worker was assisting in loading a piping manifold in to the back of a Matrix pickup truck the load	Richmond Refinery	Development Department Facility (Rich)				
1859237	10/1/2009	LI	LI - Non-Industrial	Level 1	Level 2	Employee complained of non-work related medical problem. Plant Protection responded, and employee w	Richmond Refinery	Development Department Facility (Rich)				
1983987	7/15/2010	LI	LI - Non-Industrial	Level 1	Level 1	Fitness Center member pinched finger between a dumbbell and the dumbbell rack - which resulted in br	Richmond Refinery	Health Quest/Fitness Ctr/Conference Ctr Area				
1819726	12/10/2009	LI	LI - Criminal Activity	Level 1	Level 1	Laptop that the Fitness Center Staff used for Health and Wellness Lecture delivery was taken out of	Richmond Refinery	Health Quest/Fitness Ctr/Conference Ctr Area				
1594724	8/18/2009	LI	LI - Criminal Activity	Level 1	Level 1	Safety On-Call bag stolen from car located at 1444 Cloudview Drive, Pleasant Hill, CA. Bag contained	Richmond Refinery	Offsite				
1861987	3/11/2010	LI	LI - Contractor First Aid	Level 1	Level 2	While EE was delivering equipment to Benicia Fab he exited his vehicle he rolled his ankle	Richmond Refinery	Offsite				
1879471	3/25/2010	LI	LI - Business Process	Level 1	Level 1	Business Plan Roll Out Feb 11 & 25, 2010	Richmond Refinery	Offsite				
2007367	8/18/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Railserve locomotive 201 derailed 2 axles (4 wheels) at approximately 2:30PM. The derailment occ	Richmond Refinery	Offsite				
1958045	6/21/2010	LI	LI - Equipment Damage	Level 1	Level 1	RTD Driver went Benicia Fabricating company to pick up two exchanger bundles, while in transport the	Richmond Refinery	Offsite				
1939457	5/28/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Railserve locomotive 202 was shoving 4 empty cars down the runaround lead in the railcar storage yar	Richmond Refinery	Offsite				
1588510	8/12/2009	LI	LI - Business Interruption	Level 1	Level 1	Nall truck driver had a white powder substance in small quantity come out of a magazine and got on h	Richmond Refinery	Purchasing & Materials Management				
1642990	9/22/2009	LI	LI - Release	Level 1	Level 1	Empty propane odorant cylinder at the # 8 wharehouse was found to be leaking from the treads between	Richmond Refinery	Purchasing & Materials Management				
1715679	11/11/2009	LI	LI - Contractor First Aid	Level 1	Level 1	Particle in Eye - On Wednesday 11/11 at about 3:30pm worker was over at the 8 Warehouse spare parts	Richmond Refinery	Purchasing & Materials Management				
1938851	5/26/2010	LI	LI - Equipment Damage	Level 1	Level 1	Chevron Engery Solutions (subcontractor) installing a metrological Wind Tower hit the ground as it	Richmond Refinery	Reclamation				
1722830	10/22/2009	NLI	NLI - Non Compliance	No Level Selected	Level 1	Dumpster bins of excavated soil were stored temporarily on Refinery land leased to others without pr	Richmond Refinery	Reclamation				
1862812	3/12/2010	LI	LI - Spill	Level 1	Level 1	An estimated 20 - 25 gal. of transformer oil spilled to soil in the reclamation yard. The transform	Richmond Refinery	Reclamation				
1707919	11/7/2009	LI	LI - Equipment Damage	Level 1	Level 2	At approximately 9:15 am while excavating for the installation of a new 18" & 6" HDPE line at gate 1	Richmond Refinery	Reclamation				
1971604	6/30/2010	LI	LI - Equipment Damage	Level 1	Level 1	While loading into the EOD van at 53 Gate prior to the beginning of their shift, Operators noticed d	Richmond Refinery	Refinery General				
1851042	3/2/2010	LI	LI - MVC - Contractor	Level 1	Level 1	The loss type of MVC-Contractor was selected, however, the person involved is a city of Richmond emp	Richmond Refinery	Refinery General				
1619730	8/25/2009	LI	LI - Product Quality (Int)	Level 1	Level 2	TOP INVESTIGATION--H2S IN DIESEL--Samples from tank T-3195 were sent to the Quality Control Dept.for	Richmond Refinery	Refinery General				
1559412	7/21/2009	LI	LI - Non-Industrial	Level 1	Level 2	Employee indicated that he has had weak knees over the last few months. He was taken to Concentra M	Richmond Refinery	Refinery General				
1590009	8/12/2009	LI	LI - Equipment Damage	Level 1	Level 1	Goebel Paving was moving bin # 251017 at Xylene and Ammonia Streets using back hoe and accidentally	Richmond Refinery	Refinery General				
1967102	6/28/2010	LI	LI - Security Incident	Level 1	Level 1	Loss/Near Loss and Root Causes/Solutions information is considered security sensitive information an	Richmond Refinery	Refinery General				
1967102	6/28/2010	LI	LI - General Liability	Level 1	Level 1	Loss/Near Loss and Root Causes/Solutions information is considered security sensitive information an	Richmond Refinery	Refinery General				
1598322	8/10/2009	LI	LI - First Aid	Level 1	Level 2	Record keeping purpose only, no injury at this time - Heating shift.	Richmond Refinery	Refinery General				
1589377	8/13/2009	LI	LI - Safety Systems and Relief Devices	Level 1	Level 2	TOP INVESTIGATION--LOSS OF RADIO COMMUNICATION	Richmond Refinery	Refinery General				
1589377	8/13/2009	LI	LI - Equipment Failure	Level 1	Level 2	TOP INVESTIGATION--LOSS OF RADIO COMMUNICATION	Richmond Refinery	Refinery General				
1856394	3/8/2010	LI	LI - Spill	Level 1	Level 1	5 Gallons of oil had spilled to the ground after a roll off truck driver had scraped the oil pan on	Richmond Refinery	Refinery General				
1592073	8/14/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 1	Upon discovering an air leak on his truck, the employee pulled into the Goebel Paving Compound to in	Richmond Refinery	Refinery General				
1982893	7/10/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	Problems with the on-call system and gaps in guidance -- there was some confusion and a delay in gett	Richmond Refinery	Refinery General				
1741659	11/24/2009	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	Newly ordered fuel gas drum H2S calibration gases arrived late than expected. A spare cylinder calib	Richmond Refinery	Refinery General				
1719333	9/16/2009	NLI	NLI - PSM/OSHA	No Level Selected	Level 1	In Sept 2009, the PSM team identified 15 PHA and City of Richmond Industrial Safety Ordinance (COR I	Richmond Refinery	Refinery General				
1916550	5/3/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Driver of vehicle accelerated and ran a stop sign while making a right turn. This occured at the int	Richmond Refinery	Refinery General				
1916550	5/3/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	Driver of vehicle accelerated and ran a stop sign while making a right turn. This occured at the int	Richmond Refinery	Refinery General				
1854511	3/4/2010	NLI	NLI - MVC - Contractor	No Level Selected	Level 1	Minor MVC at scale house with a contractor truck driver who struck a yellow pole - this incident occ	Richmond Refinery	Refinery General				
1868186	3/16/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	A Contra Costa County Health Services Department's Audit finding :	Richmond Refinery	Refinery General				
1868265	3/16/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	Contra Costa County Health Services Department's Audit findings for:	Richmond Refinery	Refinery General				
1895123	4/12/2010	NLI	NLI - Business Interruption	No Level Selected	Level 1	State officials from the Bay Area Quality Management District called around 09:20 to announce a rout	Richmond Refinery	Refinery General				
1895123	4/12/2010	NLI	NLI - Business Process	No Level Selected	Level 1	State officials from the Bay Area Quality Management District called around 09:20 to announce a rout	Richmond Refinery	Refinery General				
1942831	6/1/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 3a	This NLI is entered to allow Richmond Refinery to track corrective actions as a result of the Manufa	Richmond Refinery	Refinery General				
1879460	3/25/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Incident Description:	Richmond Refinery	Refinery General				
1868227	3/16/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	Contra Costa County Health Services Department's Audit findings for Underground Storage Tank Act	Richmond Refinery	Refinery General				
1928743	5/17/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 2	NLI - Title V requires a minimum seven day notifications to the BAAQMD prior to conducting Relative	Richmond Refinery	Refinery General				
1884177	3/29/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 3b	This incident was reviewed as part of the Global Manufacturing Lessons Learned process. It was decid	Richmond Refinery	Refinery General				
1884177	3/29/2010	NLI	NLI - Employee Injury	No Level Selected	Level 3b	This incident was reviewed as part of the Global Manufacturing Lessons Learned process. It was decid	Richmond Refinery	Refinery General				
1922397	4/15/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	On April 15th an exceedance of the Cogen NOx limit occurred. HES needed to know the amount of excess	Richmond Refinery	Refinery General				
1619369	8/3/2009	LI	LI - Business Process	Level 1	Level 1	Less than 1 month prior to the Richmond RLOP turnaround, the expected turnaround duration was reduce	Richmond Refinery	Refinery General				
1555512	7/20/2009	LI	LI - Equipment Damage	Level 1	Level 2	At 8:30AM on Monday morning, July 20, a delivery truck driver was delivering two columns to the Rene	Richmond Refinery	Refinery General				
1595411	8/17/2009	LI	LI - Business Interruption	Level 1	Level 1	Rhenformer feed was reduced sooner than it needed to be to cut back H2 export for HNF catalyst redu	Richmond Refinery	Refinery General				
1814741	7/16/2009	LI	LI - NSR Consent Decree	Level 1	Level 1	As required by the CD, a 3rd party audit on the refinery's LDAR program was conducted in July 2009.	Richmond Refinery	Refinery General				
1556109	7/7/2009	LI	LI - MVC - Contractor	Level 1	Level 1	Contract EE driving a Chevron vehicle badged at 137 Gate the gate opened, the EE drove forward and t	Richmond Refinery	Refinery General				
1990059	7/27/2010	LI	LI - Spill	Level 1	Level 1	Clean Harbors' roll-off truck spills approximately 3 gallons of diesel to asphalt covered soil at BS	Richmond Refinery	Refinery General				
1990059	7/27/2010	LI	LI - Equipment Damage	Level 1	Level 1	Clean Harbors' roll-off truck spills approximately 3 gallons of diesel to asphalt covered soil at BS	Richmond Refinery	Refinery General				
1537862	7/3/2009	LI	LI - Spill	Level 1	Level 1	TOP INVEST-GATION--DIESEL GAS ONTO STREET--CTR (Central Tool Room) was notified that a 100KW generat	Richmond Refinery	Refinery General				
1856894	3/8/2010	LI	LI - MVC - Contractor	Level 1	Level 1	TOP INVEST-GATION--CONTRACTOR HIT POLE--While leaving the Project Trailer parking lot in their work	Richmond Refinery	Refinery General				
1688676	10/26/2009	LI	LI - MVC - Company	Level 1	Level 1	RTD driver was attempting to badge out of the Rod and Gun into the refinery. Upon the first attempt	Richmond Refinery	Rod & Gun Club				
1590602	6/12/2009	LI	LI - First Aid	Level 1	Level 1	Employee experienced shoulder discomfort.	Richmond Refinery	Technical Center / Cafeteria				
1786052	1/13/2010	LI	LI - First Aid	Level 1	Level 1	Employee's hand hit wall & edge of notice board while taking an organized stretch break. Slight cut	Richmond Refinery	Technical Center / Cafeteria				
1879359	3/24/2010	LI	LI - First Aid	Level 1	Level 1	employee was washing a small steak knife his hand in the kitchen with a wash scrub. He was distracte	Richmond Refinery	Technical Center / Cafeteria				
1916494	5/3/2010	LI	LI - Contractor First Aid	Level 1	Level 2	Contractor engineer lost his footing and fell walking in the cafeteria parking lot. Plant protection	Richmond Refinery	Technical Center / Cafeteria				
1995598	7/29/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	Missed drain inspections - During review of the semi-annual report due to the EPA for New Source Per	Richmond Refinery	Technical Center / Cafeteria				
2039201	9/23/2010	NLI	NLI - Business Process	No Level Selected	Level 1	Safety on-call bag was turned over by leaving the on-call bag in an office of a team member that was	Richmond Refinery	Technical Center / Cafeteria				
1595355	8/18/2009	LI	LI - Non-Industrial	Level 1	Level 1	EE felt light headed while in the Tech Center. EE went to the clinic to be evaluated and it was det	Richmond Refinery	Technical Center / Cafeteria				
1546759	7/10/2009	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Vehicle driven wrong way (one way street) on road behind Cafeteria.	Richmond Refinery	Technical Center / Cafeteria				
1602612	8/24/2009	NLI	NLI - Business Interruption	No Level Selected	Level 1	On the morning of August 24, a contract employee was attempting to toast a bagel using a convection	Richmond Refinery	Technical Center / Cafeteria				
1631228	10/27/2009	NLI	NLI - Employee Injury	No Level Selected	Level 1	Caught my foot in in the cord attached to a USB flash drive. No injury or damage to the GIL comput	Richmond Refinery	Technical Center / Cafeteria				
1631228	10/27/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Caught my foot in in the cord attached to a USB flash drive. No injury or damage to the GIL comput	Richmond Refinery	Technical Center / Cafeteria				
1667409	9/22/2009	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Trade Secret Protection Omitted - A report was filed with an Agency without the proper labelling for	Richmond Refinery	Technical Center / Cafeteria				
1678536	10/8/2009	NLI	NLI - Business Interruption	No Level Selected	Level 1	Unable to review archived DVD's of Flare Video/Images. During an urgent review of the flare DVD's i	Richmond Refinery	Technical Center / Cafeteria				
1921251	5/5/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	LI Description:	Richmond Refinery	Technical Center / Cafeteria				
1670188	10/8/2009	NLI	NLI - Air	No Level Selected	Level 1	FMP update - omission of information. The annual update of the Flare Minimization Plan was submitted	Richmond Refinery	Technical Center / Cafeteria				
1935849	8/3/2010	NLI	NLI - Business Process	No Level Selected	Level 1	HES OE metric reporting for 2Q 2010 was submitted after the noon deadline on Aug. 2, 2010. Final en	Richmond Refinery	Technical Center / Cafeteria				
1959496	6/28/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	Compliance plans have been developed for most Air Quality regulatory areas, but not all plans are co	Richmond Refinery	Technical Center / Cafeteria				
2000749	8/9/2010	NLI	NLI - Paperwork Incorrect/Not Sent	No Level Selected	Level 1	The action to correct the North Isomax N2 holder size in the Hazardous Material Business Plan / Chem	Richmond Refinery	Technical Center / Cafeteria				
2000749	8/9/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	The action to correct the North Isomax N2 holder size in the Hazardous Material Business Plan / Chem	Richmond Refinery	Technical Center / Cafeteria				
2057299	10/28/2010	LI	LI - MVC - Contractor	Level 1	Level 1	IMPACT Rekey Loss ID 1275	Richmond Refinery	Admin Building				
1865443	2/28/2010	NLI	NLI - Business Interruption	No Level Selected	Level 2	When the TKN/4Rhen/4H2S/H2B Train cluster shut down on 2/28/2010, there was not enough H2 available	Richmond Refinery	Admin Building				
2008927	8/1/2010	NLI	NLI - Incorrect Volume	No Level Selected	Level 1	A preliminary stock balance is created on the first work day of each month to help calculate estimat	Richmond Refinery	Admin Building				
1869719	2/12/2010	LI	LI - First Aid	Level 1	Level 1	Record keeping purpose only, no injury at this time - Worker Compensation request	Richmond Refinery	Admin Building				
2008927	8/1/2010	NLI	NLI - Business Process	No Level Selected	Level 1	A preliminary stock balance is created on the first work day of each month to help calculate estimat	Richmond Refinery	Admin Building				
1657380	9/30/2009	LI	LI - First Aid	Level 1	Level 2	Employee missed last step when descending stairs and fell resulting in a minor ankle sprain to left	Richmond Refinery	Admin Building				
1697869	10/30/2009	NLI	NLI - Spill	No Level Selected	Level 3a	This entry is a Near Loss to allow for tracking of the Buncefield tank incident lessons learned acti	Richmond Refinery	Blending & Shipping (Rich)	B&S General (Rich)	B&S Admin Office		
1766358	12/20/2009	LI	LI - First Aid	Level 1	Level 1	EE had a spasm in his lower back while leaning over the water cooler. EE has pre-existing condition	Richmond Refinery	Blending & Shipping (Rich)	B&S General (Rich)	B&S Control House		
1925271	5/13/2010	NLI	NLI - General Liability	No Level Selected	Level 1	Contractor was lifting 50 lbs sacks of Soda Ash up a ladder to be emptied into a Poly Tank. The empl	Richmond Refinery	Blending & Shipping (Rich)	B&S General (Rich)	B&S Control House		
1858480	4/5/2010	NLI	NLI - Business Interruption	No Level Selected	Level 1	Work to replace/reface kitchen cabinetry in the B&S control room commenced before CSR was created or	Richmond Refinery	Blending & Shipping (Rich)	B&S General (Rich)	B&S Control House		
1780893	1/5/2010	LI	LI - Equipment Damage	Level 1	Level 1	While lowering a manift, the manift came in contact with a parked truck. No one was in the parked	Richmond Refinery	Blending & Shipping (Rich)	B&S General (Rich)	B&S Control House		
1725834	11/19/2009	LI	LI - MVC - Company	Level 1	Level 1	While backing a company truck up in Bertheff inorder to pull forward and leave the area, another comp	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 1		
1577380	8/3/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 1	While working off of an approx 4' X4' wooden work platform that was hung off the front of the wharf	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 2		
1770636	12/23/2009	NLI	NLI - Spill	No Level Selected	Level 2	Colorado Voyager crew members reported irredescent bubbles near the stern of the vessel. The bubble	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 2		
1950776	6/11/2010	LI	LI - Equipment Failure	Level 1	Level 1	TOP INVESTIGATION--On June 11,2010 at 19:30, the Wharf Head Operator (HO) notified the Shift Team L	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 3		
1919471	5/6/2010	LI	LI - Operational Leak	Level 2	Level 2	At 08:45 operator doing his hourly round.The Operator adjusted the vapor crane. He noticed the Hydra	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 3		
2047665	10/20/2010	LI	LI - Spill	Level 2	Level 2	REKEY IMPACT ID 688.	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 3		

IPS LI/NLI Search for Dates 7/1/2009 to 10/31/2010

Chevron

LI/NLI Chosen: LI - Abnormal Freight, LI - Abnormal Supply Occurrence, LI - Business Interruption, LI - Business Interruption/EVR-ISD, LI - Business Loss, LI - Business Process, LI - Community Inquiry, LI - Contractor Days Away From Work Case, LI - Contractor First Aid, LI - Contractor Medical w/o lost time, LI - Criminal Activity, LI - Days Away From Work Case, LI - Employee Theft (Merchandise), LI - Equipment Damage, LI - Equipment Failure, LI - Equipment/Unit Trip, LI - Fire/Explosion, LI - First Aid, LI - First Aid with Medical Referral, LI - General Liability, LI - Inadvertent Release of Hazardous Vapor (IRHV), LI - Incorrect Product, LI - Incorrect Volume, LI - Loss of Containment (LOC) Corp Reportable, LI - Loss of Containment (LOC) Tier 1, LI - Loss of Containment (LOC) Tier 2, LI - MVC - Company, LI - MVC - Contractor, LI - MVC - Personal Use, LI - Medical w/o Lost Time, LI - NOV - Air, LI - NOV - Price Scanning, LI - NOV - Water , LI - NSR Consent Decree, LI - Non-Compliance Company Policy, LI - Non-Compliance Government Requirement, LI - Non-Industrial, LI - Notice of Violation, LI - Operational Leak, LI - Paperwork Incorrect/not sent, LI - Permit Exceedance, LI - Plant Run-Out/Slow Down , LI - Preferred Contractor - MVC, LI - Preferred Contractor - Spill, LI - Product Contamination (Ext), LI - Product Contamination (Int), LI - Product Mis-Delivery, LI - Product Quality (Ext), LI - Product Quality (Int), LI - Product Unavailable, LI - Quality Management System, LI - Release, LI - Safe Operating Limit (SOL) Exceeded, LI - Safety

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	LEVEL6
1984185	7/15/2010	LI	LI - Criminal Activity	Level 1	Level 1	Loss of non-GIL Laptop computer form the I&E Training Center, bldg 520 Hensley Facility. Last seen	Richmond Refinery	Development Department Facility (Rich)				
1826653	1/20/2010	LI	LI - Criminal Activity	Level 1	Level 1	Projector INFocus IN2102 ordered from "Projector People" January 13, 2010. Delivered to Lancaster L	Richmond Refinery	Development Department Facility (Rich)				
1673676	10/14/2009	LI	LI - Contractor First Aid	Level 1	Level 1	Employee was experiencing discomfort in his right wrist while at his computer work station.	Richmond Refinery	Development Department Facility (Rich)				
1541615	7/7/2009	LI	LI - Contractor Medical w/o lost time	Level 2	Level 2	Worker was assisting in loading a piping manifold in to the back of a Matrix pickup truck the load	Richmond Refinery	Development Department Facility (Rich)				
1859237	10/1/2009	LI	LI - Non-Industrial	Level 1	Level 2	Employee complained of non-work related medical problem. Plant Protection responded, and employee w	Richmond Refinery	Development Department Facility (Rich)				
1983987	7/15/2010	LI	LI - Non-Industrial	Level 1	Level 1	Fitness Center member pinched finger between a dumbbell and the dumbbell rack - which resulted in br	Richmond Refinery	Health Quest/Fitness Ctr/Conference Ctr Area				
1819726	12/10/2009	LI	LI - Criminal Activity	Level 1	Level 1	Laptop that the Fitness Center Staff used for Health and Wellness Lecture delivery was taken out of	Richmond Refinery	Health Quest/Fitness Ctr/Conference Ctr Area				
1594724	8/18/2009	LI	LI - Criminal Activity	Level 1	Level 1	Safety On-Call bag stolen from car located at 1444 Cloudview Drive, Pleasant Hill, CA. Bag contained	Richmond Refinery	Offsite				
1861587	3/11/2010	LI	LI - Contractor First Aid	Level 1	Level 2	While EE was delivering equipment to Benicia Fab he exited his vehicle he rolled his ankle	Richmond Refinery	Offsite				
1879471	3/25/2010	LI	LI - Business Process	Level 1	Level 1	Business Plan Roll Out Feb 11 & 25, 2010	Richmond Refinery	Offsite				
2007367	8/18/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Railserve locomotive 201 derailed 2 axles (4 wheels) at approximately 2:30PM. The derailment occ	Richmond Refinery	Offsite				
1958045	8/21/2010	LI	LI - Equipment Damage	Level 1	Level 1	RTO Driver went Benicia Fabricating company to pick up two exchanger bundles, while in transport the	Richmond Refinery	Offsite				
1939457	5/29/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Railserve locomotive 202 was shoving 4 empty cars down the runaround lead in the railcar storage yar	Richmond Refinery	Offsite				
1588510	8/12/2009	LI	LI - Business Interruption	Level 1	Level 1	Nall truck driver had a white powder substance in small quantity come out of a magazine and got on h	Richmond Refinery	Purchasing & Materials Management				
1642990	9/22/2009	LI	LI - Release	Level 1	Level 1	Empty propane odorant cylinder at the # 8 wharehouse was found to be leaking from the treads between	Richmond Refinery	Purchasing & Materials Management				
1715679	11/11/2009	LI	LI - Contractor First Aid	Level 1	Level 1	Particle in Eye - On Wednesday 11/11 at about 3:30pm worker was over at the 8 Warehouse spare parts	Richmond Refinery	Purchasing & Materials Management				
1938851	5/26/2010	LI	LI - Equipment Damage	Level 1	Level 1	Chevron Engery Solutions (subcontractor) installing a metrological Wind Tower hit the ground as it	Richmond Refinery	Reclamation				
1722830	10/22/2009	NLI	NLI - Non Compliance	No Level Selected	Level 1	Dumpster bins of excavated soil were stored temporarily on Refinery land leased to others without pr	Richmond Refinery	Reclamation				
1862812	3/12/2010	LI	LI - Spill	Level 1	Level 1	An estimated 20 - 25 gal. of transformer oil spilled to soil in the reclamation yard. The transform	Richmond Refinery	Reclamation				
1707919	11/7/2009	LI	LI - Equipment Damage	Level 1	Level 2	At approximately 9:15 am while excavating for the installation of a new 18" & 6" HDPE line at gate 1	Richmond Refinery	Reclamation				
1971004	6/30/2010	LI	LI - Equipment Damage	Level 1	Level 1	While loading into the EOO van at 53 Gate prior to the beginning of their shift, Operators noticed d	Richmond Refinery	Refinery General				
1851042	3/2/2010	LI	LI - MVC - Contractor	Level 1	Level 1	The loss type of MVC-Contractor was selected, however, the person involved is a city of Richmond emp	Richmond Refinery	Refinery General				
1619730	8/25/2009	LI	LI - Product Quality (Int)	Level 1	Level 2	TOP INVESTIGATION--H2S IN DIESEL--Samples from tank T-3195 were sent to the Quality Control Dept.for	Richmond Refinery	Refinery General				
1559412	7/21/2009	LI	LI - Non-Industrial	Level 1	Level 2	Employee indicated that he has had weak knees over the last few months. He was taken to Concentra M	Richmond Refinery	Refinery General				
1590009	8/12/2009	LI	LI - Equipment Damage	Level 1	Level 1	Goebel Paving was moving bin # 251017 at Xylene and Ammonia Streets using back hoe and accidentally	Richmond Refinery	Refinery General				
1967102	8/28/2010	LI	LI - Security Incident	Level 1	Level 1	Loss/Near Loss and Root Causes/Solutions information is considered security sensitive information an	Richmond Refinery	Refinery General				
1967102	8/28/2010	LI	LI - General Liability	Level 1	Level 1	Loss/Near Loss and Root Causes/Solutions information is considered security sensitive information an	Richmond Refinery	Refinery General				
1598322	8/10/2009	LI	LI - First Aid	Level 1	Level 2	Record keeping purpose only, no injury at this time - Hearing shift.	Richmond Refinery	Refinery General				
1589377	8/13/2009	LI	LI - Safety Systems and Relief Devices	Level 1	Level 2	TOP INVESTIGATION--LOSS OF RADIO COMMUNICATION	Richmond Refinery	Refinery General				
1589377	8/13/2009	LI	LI - Equipment Failure	Level 1	Level 2	TOP INVESTIGATION--LOSS OF RADIO COMMUNICATION	Richmond Refinery	Refinery General				
1856394	3/8/2010	LI	LI - Spill	Level 1	Level 1	5 Gallons of oil had spilled to the ground after a roll off truck driver had scraped the oil pan on	Richmond Refinery	Refinery General				
1592073	8/14/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 1	Upon discovering an air leak on his truck, the employee pulled into the Goebel Paving Compound to in	Richmond Refinery	Refinery General				
1982893	7/10/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	Problems with the on-call system and gaps in guidance -- there was some confusion and a delay in gett	Richmond Refinery	Refinery General				
1741659	11/24/2009	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	Newly ordered fuel gas drum H2S calibration gases arrived late than expected. A spare cylinder calib	Richmond Refinery	Refinery General				
1719333	9/16/2009	NLI	NLI - PSM/OSHA	No Level Selected	Level 1	In Sept 2009, the PSM team identified 15 PHA and City of Richmond Industrial Safety Ordinance (COR I	Richmond Refinery	Refinery General				
1916550	5/3/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Driver of vehicle accelerated and ran a stop sign while making a right turn. This occured at the int	Richmond Refinery	Refinery General				
1916550	5/3/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	Driver of vehicle accelerated and ran a stop sign while making a right turn. This occured at the int	Richmond Refinery	Refinery General				
1854511	3/4/2010	NLI	NLI - MVC - Contractor	No Level Selected	Level 1	Minor MVC at scale house with a contractor truck driver who struck a yellow pole - this incident occ	Richmond Refinery	Refinery General				
1868186	3/16/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	A Contra Costa County Health Services Department's Audit finding :	Richmond Refinery	Refinery General				
1868265	3/16/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	Contra Costa County Health Services Department s Audit findings for:	Richmond Refinery	Refinery General				
1895123	4/12/2010	NLI	NLI - Business Interruption	No Level Selected	Level 1	State officials from the Bay Area Quality Management District called around 09:20 to announce a rout	Richmond Refinery	Refinery General				
1895123	4/12/2010	NLI	NLI - Business Process	No Level Selected	Level 1	State officials from the Bay Area Quality Management District called around 09:20 to announce a rout	Richmond Refinery	Refinery General				
1942831	6/1/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 3a	This NLI is entered to allow Richmond Refinery to track corrective actions as a result of the Manufa	Richmond Refinery	Refinery General				
1879460	3/25/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Incident Description:	Richmond Refinery	Refinery General				
1868227	3/16/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	Contra Costa County Health Services Department s Audit findings for Underground Storage Tank Act	Richmond Refinery	Refinery General				
1928743	5/17/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 2	NLI - Title V requires a minimum seven day notifications to the BAAQMD prior to conducting Relative	Richmond Refinery	Refinery General				
1884177	3/29/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 3b	This incident was reviewed as part of the Global Manufacturing Lessons Learned process. It was decid	Richmond Refinery	Refinery General				
1884177	3/29/2010	NLI	NLI - Employee Injury	No Level Selected	Level 3b	This incident was reviewed as part of the Global Manufacturing Lessons Learned process. It was decid	Richmond Refinery	Refinery General				
1922997	4/15/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	On April 15th an exceedance of the Cogen NOx limit occurred. HES needed to know the amount of exces	Richmond Refinery	Refinery General				
1619369	8/8/2009	LI	LI - Business Process	Level 1	Level 1	Less than 1 month prior to the Richmond RLOP turnaround, the expected turnaround duration was reduce	Richmond Refinery	Refinery General				
1555112	7/20/2009	LI	LI - Equipment Damage	Level 1	Level 2	At 8:30AM on Monday morning, July 20, a delivery truck driver was delivering two columns to the Rene	Richmond Refinery	Refinery General				
1595411	8/17/2009	LI	LI - Business Interruption	Level 1	Level 1	Rhenformer feed was reduced sooner than it needed to be to cut back H2 export for HNF catalyst redu	Richmond Refinery	Refinery General				
1614741	7/16/2009	LI	LI - NSR Consent Decree	Level 1	Level 1	As required by the CD, a 3rd party audit on the refinery's LDAR program was conducted in July 2009.	Richmond Refinery	Refinery General				
1556309	7/7/2009	LI	LI - MVC - Contractor	Level 1	Level 1	Contract EE driving a Chevron vehicle badged at 137 Gate the gate opened, the EE drove forward and t	Richmond Refinery	Refinery General				
1990059	7/27/2010	LI	LI - Spill	Level 1	Level 1	Clean Harbors' roll-off truck spills approximately 3 gallons of diesel to asphalt covered soil at B6	Richmond Refinery	Refinery General				
1990059	7/27/2010	LI	LI - Equipment Damage	Level 1	Level 1	Clean Harbors' roll-off truck spills approximately 3 gallons of diesel to asphalt covered soil at B5	Richmond Refinery	Refinery General				
1537862	7/3/2009	LI	LI - Spill	Level 1	Level 1	TOP INVEST-GATION--DIESEL GAS ONTO STREET--CTR (Central Tool Room) was notified that a 100KW generat	Richmond Refinery	Refinery General				
1856894	3/8/2010	LI	LI - MVC - Contractor	Level 1	Level 1	TOP INVEST-GATION--CONTRACTOR HIT POLE--While leaving the Project Trailer parking lot in their work	Richmond Refinery	Refinery General				
1688676	10/26/2009	LI	LI - MVC - Company	Level 1	Level 1	RTD driver was attempting to badge out of the Red and Gun into the refinery. Upon the first attempt	Richmond Refinery	Red & Gun Club				
1590602	8/12/2009	LI	LI - First Aid	Level 1	Level 1	Employee experienced shoulder discomfort.	Richmond Refinery	Technical Center / Cafeteria				
1786052	1/13/2010	LI	LI - First Aid	Level 1	Level 1	Employee's hand hit wall & edge of notice board while taking an organized stretch break. Slight cut	Richmond Refinery	Technical Center / Cafeteria				
1879359	3/24/2010	LI	LI - First Aid	Level 1	Level 1	employee was washing a small steak knife his hand in the kitchen with a wash scrub. He was distracte	Richmond Refinery	Technical Center / Cafeteria				
1916494	5/3/2010	LI	LI - Contractor First Aid	Level 1	Level 2	Contractor engineer lost his footing and fell walking in the cafeteria parking lot. Plant protection	Richmond Refinery	Technical Center / Cafeteria				
1935558	7/29/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	Missed drain inspections - During review of the semi-annual report due to the EPA for New Source Par	Richmond Refinery	Technical Center / Cafeteria				
2039201	9/23/2010	NLI	NLI - Business Process	No Level Selected	Level 1	Safety on-call bag was turned over by leaving the on-call bag in an office of a team member that was	Richmond Refinery	Technical Center / Cafeteria				
1595255	8/18/2009	LI	LI - Non-Industrial	Level 1	Level 1	EE felt light headed while in the Tech Center. EE went to the clinic to be evaluated and it was det	Richmond Refinery	Technical Center / Cafeteria				
1546759	7/10/2009	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Vehicle driven wrong way (one way street) on road behind Cafeteria.	Richmond Refinery	Technical Center / Cafeteria				
1692612	8/24/2009	NLI	NLI - Business Interruption	No Level Selected	Level 1	On the morning of August 24, a contract employee was attempting to toast a bagel using a convection	Richmond Refinery	Technical Center / Cafeteria				
1691228	10/27/2009	NLI	NLI - Employee Injury	No Level Selected	Level 1	Caught my foot in in the cord attached to a USB flash drive. No injury or damage to the GIL comput	Richmond Refinery	Technical Center / Cafeteria				
1691228	10/27/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Caught my foot in in the cord attached to a USB flash drive. No injury or damage to the GIL comput	Richmond Refinery	Technical Center / Cafeteria				
1667409	9/22/2009	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Trade Secret Protection Omitted - A report was filed with an Agency without the proper labelling for	Richmond Refinery	Technical Center / Cafeteria				
1678536	10/8/2009	NLI	NLI - Business Interruption	No Level Selected	Level 1	Unable to review archived DVD's of Flare Video/Images. During an urgent review of the flare DVD's i	Richmond Refinery	Technical Center / Cafeteria				
1921251	5/5/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	LI Description:	Richmond Refinery	Technical Center / Cafeteria				
1670188	10/8/2009	NLI	NLI - Air	No Level Selected	Level 1	FMP update - omission of information. The annual update of the Flare Minimization Plan was submitted	Richmond Refinery	Technical Center / Cafeteria				
1936349	8/3/2010	NLI	NLI - Business Process	No Level Selected	Level 1	HES OE metric reporting for 2Q 2010 was submitted after the noon deadline on Aug. 2, 2010. Final en	Richmond Refinery	Technical Center / Cafeteria				
1959496	6/28/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	Compliance plans have been developed for most Air Quality regulatory areas, but not all plans are co	Richmond Refinery	Technical Center / Cafeteria				
2000749	8/9/2010	NLI	NLI - Paperwork Incorrect/Not Sent	No Level Selected	Level 1	The action to correct the North Isomax N2 holder size in the Hazardous Material Business Plan / Chem	Richmond Refinery	Technical Center / Cafeteria				
2000749	8/9/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	The action to correct the North Isomax N2 holder size in the Hazardous Material Business Plan / Chem	Richmond Refinery	Technical Center / Cafeteria				
2057299	10/28/2010	LI	LI - MVC - Contractor	Level 1	Level 1	IMPACT Rekey Loss ID 1275	Richmond Refinery	Admin Building				
1868443	2/28/2010	NLI	NLI - Business Interruption	No Level Selected	Level 2	When the TKN4/Rhen/4H2S/H2B Train cluster shut down on 2/28/2010, there was not enough H2 available	Richmond Refinery	Admin Building				
2068327	8/1/2010	NLI	NLI - Incorrect Volume	No Level Selected	Level 1	A preliminary stock balance is created on the first work day of each month to help calculate estimat	Richmond Refinery	Admin Building				
1869719	2/12/2010	LI	LI - First Aid	Level 1	Level 1	Record keeping purpose only, no injury at this time - Worker Compensation request	Richmond Refinery	Admin Building				
2068327	8/1/2010	NLI	NLI - Business Process	No Level Selected	Level 1	A preliminary stock balance is created on the first work day of each month to help calculate estimat	Richmond Refinery	Admin Building				
1657980	9/30/2009	LI	LI - First Aid	Level 1	Level 2	Employee missed last step when descending stairs and fell resulting in a minor ankle sprain to left	Richmond Refinery	Admin Building				
1697866	10/30/2009	NLI	NLI - Spill	No Level Selected	Level 3a	This entry is a Near Loss :q allow for tracking of the Buncefield tank incident lessons learned acti	Richmond Refinery	Blending & Shipping (Rich)	B&S General (Rich)	B&S Admin Office		
1746358	12/20/2009	LI	LI - First Aid	Level 1	Level 1	EE had a spasm in his lower back while leaning over the water cooler. EE has pre-existing condition	Richmond Refinery	Blending & Shipping (Rich)	B&S General (Rich)	B&S Control House		
1925271	6/13/2010	NLI	NLI - General Liability	No Level Selected	Level 1	Contractor was lifting 50 lbs sacks of Soda Ash up a ladder to be emptied into a Poly Tank. The empl	Richmond Refinery	Blending & Shipping (Rich)	B&S General (Rich)	B&S Control House		
1858480	4/5/2010	NLI	NLI - Business Interruption	No Level Selected	Level 1	Work to replace/reface kitchen cabinetry in the B&S control room commenced before CSR was created or	Richmond Refinery	Blending & Shipping (Rich)	B&S General (Rich)	B&S Control House		
1780893	1/5/2010	LI	LI - Equipment Damage	Level 1	Level 1	While lowering a manift, the manift came in contact with a parked truck. No one was in the parked	Richmond Refinery	Blending & Shipping (Rich)	B&S General (Rich)	B&S Control House		
1725834	11/19/2009	LI	LI - MVC - Company	Level 1	Level 1	While backing a company truck up in Berth#1 inorder to pull forward and leave the area, another comp	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 1		
1577380	8/3/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 1	While working off of an approx 4' X4' wooden work platform that was hung off the front of the wharf	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 2		
1770435	12/23/2009	NLI	NLI - Spill	No Level Selected	Level 2	Colorado Voyager crew members reported irredescent bubbles near the stern of the vessel. The bubble	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 2		
1950776	6/11/2010	LI	LI - Equipment Failure	Level 1	Level 1	TOP INVESTIGATION--On June 11,2010 at 19:30, the Wharf Head Operator (HO) notified the Shift Team L	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 3		
1919471	5/6/2010	LI	LI - Operational Leak	Level 2	Level 2	At 08:45 operator doing his hourly round.The Operator adjusted the vapor crane. He noticed the Hydra	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 3		
2047666	10/20/2010	LI	LI - Spill	Level 2	Level 2	REKEY IMPACT ID 688.	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 3		

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	LEVEL6
1812605	2/2/2010	LI	LI - Non-Industrial	Level 1	Level 1	Illness: Security officer berth 3 illness none industrial.	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 3		
1788761	11/15/2010	LI	LI - Equipment Failure	Level 1	Level 1	At about 1425 hours on 1/15 the Mississippi Voy, docked at Berth #3 had a flame out on their (ned	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 3		
1988501	7/25/2010	LI	LI - Days Away From Work Case	Level 2	Level 2	The long wharf crew moored the Polar Adventure at Berth#4 at 8:45 PM July 25th. Both bow and stern h	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 4		
1525669	9/10/2009	LI	LI - Days Away From Work Case	Level 2	Level 3b	TAFROOT While towing oil spill boom with 25ft line schalle that was connected to the boom failed and	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 4		
1931586	5/20/2010	NLI	NLI - Release	No Level Selected	Level 1	Color detected off of the stern of the Orion Voyager in berth #4. Product discharge shut down and Cha	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 4		
1973145	7/6/2010	LI	LI - Paperwork incorrect/not sent	Level 1	Level 1	Ship arrived in Berth 4 without its pre-arrival information Form #1301 unaware once on site the carg	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 4		
1973145	7/6/2010	LI	LI - Business Interruption	Level 1	Level 1	Ship arrived in Berth 4 without its pre-arrival information Form #1301 unaware once on site the carg	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 4		
2020970	9/27/2010	LI	LI - First Aid	Level 1	Level 1	The mechanic and co worker stated working on the berth 4 hydraulic cylinder install about 8 AM. Th	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth 4		
1557716	9/30/2009	LI	LI - Operational Leak	Level 1	Level 3a	While using P-1 at the lab, to suck out the 1-8 gas line for maintenance a 3/4 " threaded line spru	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
1588629	10/26/2009	LI	LI - Contractor First Aid	Level 1	Level 2	While mixing a 3 part coating for rebar (Armatech) some of mix A splashed up and hit worker in the	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
1577664	7/30/2009	LI	LI - First Aid	Level 1	Level 1	A Company Electricians was given a work order to remove old conduit from the side of the causeway at	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
1815127	2/4/2010	LI	LI - Equipment Damage	Level 1	Level 1	DELIVERING RENTAL EQUIPMENT TO THE WHARF. DELIVERY TRUCK DID NOT HAVE A PUCK. TRUCK WAS	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
1647403	9/25/2009	LI	LI - First Aid	Level 1	Level 1	While preparing for lunch a contract employee removed her goggles and hardhat. She noticed an irrit	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
1917281	4/28/2010	LI	LI - Equipment Damage	Level 1	Level 1	While maneuvering along the causeway to facilitate the electricians (Newton) to access the condui	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
1908056	4/25/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	Work boat capsized while (2) contractors were returning to the extraction point due to choppy water	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
2039806	9/28/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Contract employee was performing traffic control duties on the Long Wharf causeway and was stung by	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
1803681	1/24/2010	LI	LI - Equipment Failure	Level 1	Level 1	ERD was up and running to temperature but it wasn't sending data to Honeywell, so after awhile of no	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
1888537	3/17/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Foundation anchor bolts for Jib crane were bent during installation	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
1818198	2/8/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Employee was using tin snipes to cut a piece of sheet metal, when small piece stuck him on the lower	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
1700815	11/2/2009	LI	LI - Spill	Level 1	Level 1	09:00hrs-Contractor working at Wharf Lab pad area notified Wharf Safety Operator of hydrocarbon odor	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
1723174	11/18/2009	LI	LI - MVC - Contractor	Level 1	Level 1	When backing and turning out of a diagonal parking space next to the Wharf machine shop there was a	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Berth, other berths		
2002813	8/6/2010	LI	LI - Product Unavailable	Level 1	Level 1	The gasoil delivered on the Energy Champion had considerably higher chlorides (as high as 30 ppm as	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Shore Tanks		
1900635	4/19/2010	NLI	NLI - Business Process	No Level Selected	Level 1	-While one contract company was lifting (with rope by hand) a bundle of clamps, elbows and misc pipe	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Shore Tanks		
2002813	8/6/2010	LI	LI - Product Quality (Ext)	Level 1	Level 1	The gasoil delivered on the Energy Champion had considerably higher chlorides (as high as 30 ppm as	Richmond Refinery	Blending & Shipping (Rich)	Long Wharf (Rich)	Shore Tanks		
1916085	5/3/2010	LI	LI - Spill	Level 1	Level 1	Vacuum truck spilled cutter out of its exhaust hose onto the asphalt at #1 pumpstation while working	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#1 Pump Station		
1576291	8/2/2009	LI	LI - Operational Leak	Level 1	Level 1	While the GDA was flushing cutter down the 10 Tar line, operators found the mechanical seal on P-2 h	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#1 Pump Station		
1991370	7/28/2010	LI	LI - Contractor First Aid	Level 1	Level 2	Vacuum truck driver was climbing into the passenger side of the vacuum truck when his foot slipped o	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#1 Pump Station		
1563520	7/26/2009	LI	LI - Operational Leak	Level 2	Level 3a	During 4 Crude S/D transition to 5 Tar line, the line was overpressured and blew a gasket at #1 pump	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#1 Pump Station		
1659678	10/1/2009	LI	LI - Operational Leak	Level 1	Level 1	CPS operator noticed a flange leak on the 10-2 line at #1 pump station during his rounds. A block v	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#1 Pump Station		
1576291	8/2/2009	LI	LI - Equipment Failure	Level 1	Level 1	While the GDA was flushing cutter down the 10 Tar line, operators found the mechanical seal on P-2 h	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#1 Pump Station		
1922813	5/11/2010	LI	LI - First Aid	Level 1	Level 1	The 3072 drop line was being taken out of service for replacement of a spool required by an inspecti	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#17 Pump Station		
1659638	10/1/2009	LI	LI - Release	Level 1	Level 3a	On October 1, an A priority work order was written to clean the two screens on the Butane 111 line.	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#17 Pump Station		
1902330	4/20/2010	LI	LI - Equipment Damage	Level 1	Level 2	The machinist was throwing wood into the back of his truck to take it to a dumpster. One of the pele	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#21 Pump Station		
1648233	9/27/2009	LI	LI - First Aid	Level 1	Level 1	T&B Operator experienced minor discomfort between shoulder blades while opening a 4" Gate valve at 2	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#21 Pump Station		
1963873	6/25/2010	LI	LI - Operational Leak	Level 1	Level 1	TOP INVESTIGATION--21 PUMP STATION BAPL PSV LIFTED--T-3169 (RUL-Regular Unleaded Gasoline) was sent	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#21 Pump Station		
1540398	7/7/2009	LI	LI - Equipment Failure	Level 1	Level 2	TOP INVESTIGATION--P-2 TRANSFER INCIDENT--Toluene for an aviation gas blend was being pumped from T-	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#21 Pump Station		
1540398	7/7/2009	LI	LI - Operational Leak	Level 1	Level 2	TOP INVESTIGATION--P-2 TRANSFER INCIDENT--Toluene for an aviation gas blend was being pumped from T-	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#21 Pump Station		
1540398	7/7/2009	LI	LI - First Aid	Level 1	Level 2	TOP INVESTIGATION--P-2 TRANSFER INCIDENT--Toluene for an aviation gas blend was being pumped from T-	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#21 Pump Station		
2034390	9/22/2010	NLI	NLI - Spill	No Level Selected	Level 1	Leak coming out of the ground at P-2 discharge at 21 P/S. Leaking out of a crack in the concrete ist	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#21 Pump Station		
1889062	4/1/2010	LI	LI - Incorrect Product	Level 1	Level 1	Operator incorrectly set RUL on KM 1(PUL) which should have been put on KM 2. Investigation reveale	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#21A Pump Station		
1916503	5/3/2010	LI	LI - First Aid	Level 1	Level 2	Two mechanics were installing a control valve at 24 pump station. One of the mechanics felt a sharp	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#24 Pump Station		
1618678	9/2/2009	LI	LI - Operational Leak	Level 1	Level 1	OIL SPILL FROM LEAKING FLANGE	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#7 Pump Station		
1618678	9/2/2009	LI	LI - Equipment Failure	Level 1	Level 1	OIL SPILL FROM LEAKING FLANGE	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#7 Pump Station		
1823583	2/12/2010	LI	LI - Business Process	Level 1	Level 1	MISMANIFOLD OF SHIPS DISCHARGE AT BOOSTER PUMP SPLITS TKN IMPORT TO TKC TANK	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#7 Pump Station		
1892458	4/6/2010	LI	LI - Spill	Level 1	Level 1	TOP INVESTIGATION--TK 1454 CONDUCTIVITY IMPROVER ISSUES--On April 6th, 2010, TK-1454 Conductivity Im	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#7 Pump Station		
2034241	9/22/2010	LI	LI - MVC - Contractor	Level 1	Level 1	The second concrete truck of the day had gone through Gate 91 and was waiting outside the first TWIC	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#7 Pump Station		
1650815	9/28/2009	LI	LI - Release	Level 1	Level 1	TOP INVESTIGATION--LINE LEAK AT 7 PUMP STATION	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#7 Pump Station		
1596358	8/18/2009	LI	LI - First Aid	Level 1	Level 1	TOP INVESTIGATION--Employee Sustains Second Degree Burns--Three employees were commissioning a newly	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#7 Pump Station		
1595472	8/18/2009	LI	LI - Operational Leak	Level 1	Level 1	Employee while making rounds found a bad leak on 1506 tank mixer. Employee was able to shutdown mix	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#7 Pump Station		
1595472	8/18/2009	LI	LI - Equipment Failure	Level 1	Level 1	Employee while making rounds found a bad leak on 1506 tank mixer. Employee was able to shutdown mix	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#7 Pump Station		
1658655	9/2/2009	LI	LI - First Aid	Level 1	Level 1	While performing operating task at 7 pump station employee was stung by a bee. He immediately report	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#7 Pump Station		
1562412	7/23/2009	LI	LI - Contractor First Aid	Level 1	Level 1	Contract employee finished his job and was carrying his tool bag down a flight of stairs. When he go	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#8 Pump Station		
1568437	7/28/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 2	Crew was in the process of removing an old electrical switch gear from the 8 pump station area. The	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#8 Pump Station		
1568437	7/28/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 2	Crew was in the process of removing an old electrical switch gear from the 8 pump station area. The	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#8 Pump Station		
1591059	8/14/2009	LI	LI - First Aid	Level 1	Level 1	A new sampling system is being installed at the crude injection pumps at 8 pump station. When the op	Richmond Refinery	Blending & Shipping (Rich)	Pump Stations (Rich)	#8 Pump Station		
1999964	8/6/2010	LI	LI - Operational Leak	Level 1	Level 1	At 0600 a flange leak was found on the discharge line from the RUL gasoline tank T-5 to the truck ra	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Loading Racks		
1810760	1/28/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	A bolt was not tight on a flange just upstream of the pump P-2801. The line was in service for a yea	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Loading Racks		
1893063	4/8/2010	LI	LI - Operational Leak	Level 1	Level 1	TOP INVESTIGATION-PRESSURE RELIEF DEVICE PT-113 FAILURE--Pressure Relief Device, PRD TT-113, failed	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Loading Racks		
2014062	4/1/2010	LI	LI - Equipment Failure	Level 2	Level 2	P-5 is a water draw pump for T-3071, T-1687, T-1688, T-990, T-991, and T-992 that pumps to slop oil	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1681050	10/10/2009	NLI	NLI - Lessons Learned	No Level Selected	Level 2	T-3213 roof was reported to be cocked 5" to one side. Subsequent inspection showed water in the pon	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1707560	11/5/2009	LI	LI - Plant Run Out/Slow Down	Level 1	Level 1	T-3214 AVGAS PRODUCT UNAVAILABLE TO THE TRUCK RACKS.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1666679	10/7/2009	LI	LI - Equipment Failure	Level 1	Level 1	Leak on fresh water line which supplies the poly tank that feeds the compandor motors. This fresh w	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1861221	2/25/2010	LI	LI - Contractor First Aid	Level 1	Level 1	2 contractors where cleaning fire breaks for welding on 9 locations in main Tank Field, this area is	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1752416	12/8/2009	LI	LI - Equipment Damage	Level 1	Level 1	Roof beam was bent when operator of crane applied excessive tension on beam	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1625211	9/9/2009	LI	LI - First Aid	Level 1	Level 1	EE stung by bee or yellow jacket while working at T-3134. Was seen by Clinic and returned to work w	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1965880	6/26/2010	LI	LI - Product Quality (Int)	Level 2	Level 2	T-3185 finaled off-test with the end point on the bottom at 575 F verse the maximum specification of	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1816289	2/5/2010	LI	LI - Fire/Explosion	Level 1	Level 2	TOP INVESTIGATION--T3074 FOAM SEAL FIRE--On February 5th, 2010, at tank T-3074, an "incident" stage	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
2011452	8/23/2010	LI	LI - Product Quality (Int)	Level 1	Level 1	Jet production was inadvertently switched "Off-Test" to T-1518 @ 2235Hrs.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1594499	8/18/2009	LI	LI - Equipment Damage	Level 1	Level 1	A Sturgeon employee was transporting four empty 55 gallon drums from T3105 using a pickup truck, one	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1785128	1/16/2010	LI	LI - Spill	Level 2	Level 2	AVGAS SPILL TO LAND - On Monday, January 11th, work to modify the existing Avgas water draw line beg	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1831718	2/19/2010	LI	LI - First Aid	Level 1	Level 1	Employee felt a sharp pain in the upper back while closing a valve at 3214 tank. Empolyee reported	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1634348	9/16/2009	LI	LI - Equipment Failure	Level 3a	Level 3a	UNSCHEDULED SHUTDOWN OF T1481 DUE TO LEAKS.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1922957	5/11/2010	LI	LI - First Aid	Level 1	Level 2	Company employee injured left index finger while sliding a pin into the counterweight of a 100 ton c	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1593447	8/24/2009	LI	LI - Operational Leak	Level 1	Level 1	HYDROCARBON LEAK DUE TO EXTERNAL CORRSION.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1816286	2/5/2010	LI	LI - MVC - Company	Level 1	Level 1	While leaving the T3076 parking area, the operator was performing a three point turn and backed into	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1543559	9/23/2009	NLI	NLI - Operational Leak	No Level Selected	Level 1	HYDROCARBON LEAK DUE TO EXTERNAL CORROSION	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1826371	2/11/2010	NLI	NLI - Water	No Level Selected	Level 1	TOP INVESTIGATION--Wrong Dye Put In T-3074--Chevron Tank Engineer sent an email to a Contract Tank I	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1670756	10/12/2009	NLI	NLI - MVC - Contractor	No Level Selected	Level 1	While delivering tank cleaning gear to Tank 3074 jobsite, the rear passenger side bumper of a contra	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1707560	11/5/2009	LI	LI - Product Unavailable	Level 1	Level 1	T-3214 AVGAS PRODUCT UNAVAILABLE TO THE TRUCK RACKS.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Main Tank Field		
1839458	2/22/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Surveyor was exposed to poison oak on Ridge road when he was staking fence line. Surveyor was seen -	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1541285	7/7/2009	LI	LI - Equipment Failure	Level 1	Level 1	The 8" Petrolite Line from 8 PS Clean Water Sump & 7 Basin developed a leak near old T-225 (ons) ale	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1717790	11/14/2009	LI	LI - Plant Run Out/Slow Down	Level 1	Level 1	Planned feed rate of 500 bph from T-3186 to RLOP is not being met.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1750929	12/7/2009	LI	LI - Abnormal Supply Occurrence	Level 1	Level 1	On the week of 11/23/2009, the Oils Planning Group was advertising the Fuel Oil production at Richmo	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1788674	1/15/2010	LI	LI - Release	Level 1	Level 1	During the initial fill of the blue dye tote at the new Avgas loading rack, a flange leak was discov	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1788674	1/15/2010	LI	LI - Preferred Contractor - Spill	Level 1	Level 1	During the initial fill of the blue dye tote at the new Avgas loading rack, a flange leak was discov	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1674124	10/13/2009	LI	LI - Equipment Failure	Level 1	Level 1	Comec engine was scheduled two days down time to carbon blast. Started Monday Oct 12th and supposed	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
2010577	8/23/2010	LI	LI - Preferred Contractor - MVC	Level 1	Level 1	An operator driving a pickup truck and a contractor driving a pickup truck collided. Chevron Emergen	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1807365	1/27/2010	LI	LI - Business Interruption	Level 1	Level 1	TOP INVESTIGATION--TEL/AVGAS SYSTEM SUCTION PROBLEMS--At the Ethyl Plant, lead (TEL B Aviation Mix)	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1846330	2/26/2010	LI	LI - Contractor First Aid	Level 1	Level 1	During the T-3074 TA the air compressor at the site stopped working. RSC was called to replace the co	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1539716	7/5/2009	LI	LI - Spill	Level 1	Level 1	12-3 WHF Line leak to secondary containment.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1539716	7/5/2009	LI	LI - Business Loss	Level 1	Level 1	12-3 WHF Line leak to secondary containment.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
2024899	9/9/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	While offloading TEL at the TEL injection facility the operator noticed that the flexible hose which	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
2029296	9/16/2010	NLI	NLI - Spill	No Level Selected	Level 1	TOP REPORT--PIPE LEAK ONTO GROUND--A pipeline that had been Out of Service (abandoned) for approxima	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1709458	11/9/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 2	Crew set up to measure, cut and weld parts at the Av Gas TEL Facility. One of the welders started gr	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1709458	11/9/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 2	Crew set up to measure, cut and weld parts at the Av Gas TEL Facility. One of the welders started gr	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1709458	11/9/2009	NLI	NLI - Fire/Explosion	No Level Selected	Level 2	Crew set up to measure, cut and weld parts at the Av Gas TEL Facility. One of the welders started gr	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Other (T&B)		
1948705	6/9/2010	LI	LI - Spill	Level 1	Level 1	TOP INVESTIGATION--T-679 SAMPLE BOX OVERFLOW--On 6/8/10 an operator pulled samples from tank TK-679	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Petrolite Hill		
1670278	10/9/2009	NLI	NLI - Safe Operating Limit (SOL) Exceeded	No Level Selected	Level 1	TOP INVESTIGATION--TK-3159 LOW TEMPERATURE--T-3159 is the Richmond Lube Oil Plant (RLOP) Heavy Neutr	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Petrolite Hill		
1797221	1/24/2010	LI	LI - Product Unavailable	Level 1	Level 1	T-3218 (HCO production tank) almost reached safe oil height because the 172 line was plugged. T-32	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Petrolite Hill		
1609568	8/27/2009	LI	LI - Spill	Level 1	Level 1	RECURRING LEAK ON ABONDONED HYDROCARBON PIPELINES.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Petrolite Hill		
1951086	6/13/2010	NLI	NLI - Business Interruption	No Level Selected	Level 2	T-3190 (Jet) was being sold on the BAPL. The 15 minute line sample revealed a 1% difference from th	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Pipeline (BAPL, SPPL)		
1946614	6/4/2010	LI	LI - Product Unavailable	Level 1	Level 1	T3133 had issues with conditions S/Haze. Ran out of reg carbob to sale and had to shut down Pipelin	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Pipeline (BAPL, SPPL)		

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
1648004	9/27/2009	LI	LI - Spill	Level 1	Level 1	P-10 in 15 pump station blew a seal while getting ready to flush the pump casing with lighter stock	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Pole Yard Tank Field		
1648004	9/27/2009	LI	LI - Equipment Failure	Level 1	Level 1	P-10 in 15 pump station blew a seal while getting ready to flush the pump casing with lighter stock	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Pole Yard Tank Field		
1871891	3/20/2010	LI	LI - Equipment Damage	Level 1	Level 1	While driving on Product Rd in the Pole Yard tank field the EE slowly drove over a 3" x 12' log. Th	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Pole Yard Tank Field		
1913326	4/29/2010	LI	LI - Operational Leak	Level 2	Level 2	Operator was making his rounds when discovered oil in one of the tank drains. He call his head oper	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Pole Yard Tank Field		
1811043	2/1/2010	LI	LI - MVC - Company	Level 1	Level 1	At approximately 20:00 on 2/1/2010 an operator was driving away from T-3220 and passed some branche	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Pole Yard Tank Field		
1705010	11/4/2009	LI	LI - First Aid	Level 1	Level 1	Walking down steps to sample tank 3162, employee fell and scraped his knee. The employee had one ha	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Pole Yard Tank Field		
1729917	11/23/2009	LI	LI - Equipment Failure	Level 1	Level 1	During a bi-annual inspection of the roof seals on T-3197 the secondary seal was found to have a 40%	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Pole Yard Tank Field		
1834237	2/3/2010	LI	LI - Contractor Medical w/o lost time	Level 1	Level 2	Poison Oak - Contract Employee was performing pipe support inspections/evaluations no Feb 2nd & 3rd	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Pole Yard Tank Field		
1801869	1/28/2010	LI	LI - Equipment Failure	Level 1	Level 1	RLOP, switched to a new blend by setting the first in product to the 471 line (off-test routing to T	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Pole Yard Tank Field		
1675378	10/15/2009	LI	LI - Equipment Damage	Level 1	Level 1	CB&I EE Moving Man Lift out of tank 3222 the man Lift came to close to the edge of the opening and	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Pole Yard Tank Field		
1623469	9/8/2009	LI	LI - Spill	Level 1	Level 1	TOP INVESTIGATION--CONTRACTORS SPRAYED WITH WATER/CRUDE OIL--While dismantling the last 5 to 6	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1716558	11/13/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 1	During 11/12/09 worker felt no discomfort. After work contractor locked in a mirror and noticed redn	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1643129	9/23/2009	LI	LI - Spill	Level 1	Level 1	An ABS hose connected to a guzzler vacuum truck breaks while in service guzzling tank bottom solids	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1650310	9/28/2009	LI	LI - Spill	Level 1	Level 2	Vacuum truck spills ~10 gallons of crude oil/cutter mix to the soil at 3105 tank. While vacuuming a	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1618398	9/2/2009	LI	LI - Contractor First Aid	Level 1	Level 2	While gauging portable frac tank at T3105 contractor employee reported not feeling well, possible he	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1554105	7/17/2009	LI	LI - Operational Leak	Level 1	Level 2	4 1/2" brass rainfor rent valve bonnet separated from valve body and went aprox 10' up in the air.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1673826	10/14/2009	LI	LI - Contractor First Aid	Level 1	Level 1	Employee was getting his hose back from tank 3105, about eight lengths were strung together. He put	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1784111	1/11/2010	LI	LI - Release	Level 1	Level 1	The initial fill of T3105 started on Jan 10, 2010 0800H with an initial flow of 1,000 BPH crude oil	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1580430	8/5/2009	LI	LI - Spill	Level 1	Level 2	At T3105 processing site a certrate catch tank was overfilled. Less than half a barrel was spilled t	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1580858	8/5/2009	LI	LI - Spill	Level 2	Level 2	TASROOTwhile cleaning out a portable Frac tank the end hatches were open. The tank is tied into comm	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1625422	9/3/2009	LI	LI - Contractor First Aid	Level 1	Level 1	While exiting a van from the drivers seat the PPS employee hooked his foot on exposed wires causing	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1832109	2/20/2010	LI	LI - Product Unavailable	Level 1	Level 1	At approximately 00:32hrs 4 Crude unit reported a spike in the AGAR probe (7.1%) indicating water in	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1832109	2/20/2010	LI	LI - Business Interruption	Level 1	Level 1	At approximately 00:32hrs 4 Crude unit reported a spike in the AGAR probe (7.1%) indicating water in	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1745437	12/3/2009	NLI	NLI - Spill	No Level Selected	Level 1	SPILL TO DIRT WATER AND TRACE AMOUNT OF OIL.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1745437	12/3/2009	NLI	NLI - Water	No Level Selected	Level 1	SPILL TO DIRT WATER AND TRACE AMOUNT OF OIL.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1788202	1/15/2010	LI	LI - Equipment Failure	Level 1	Level 1	TOP INVESTIGATION-VALVE ISSUES ON 3105TK SAMPLING BOX-An Oper. was sprayed while pulling a sample fr	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	Quarry Tank Field		
1831929	2/19/2010	LI	LI - First Aid	Level 1	Level 1	Plant Protection EE was ascending a set of wooden stairs enroute to sign a hotwork permit. One of t	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	SP Hill Tank Field		
1963676	6/25/2010	LI	LI - Product Quality (Int)	Level 1	Level 1	Approximately 7,500bbls of T-3163 (100N) was transferred to the Richmond Lube Plant (RLP) prior to a	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	SP Hill Tank Field		
1739627	11/24/2009	LI	LI - Contractor First Aid	Level 1	Level 2	TOP INVESTIGATION--POLE STRIKES CONTRACTOR--On Nov 24, 2009 an electrical contractor foreman and em	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	SP Hill Tank Field		
1929048	5/18/2010	LI	LI - Non-Industrial	Level 1	Level 1	EE felt ill. Transported to hospital for evaluation.	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	SP Hill Tank Field		
1762488	12/14/2009	LI	LI - Product Unavailable	Level 1	Level 1	T-1292 diesel tank mixer was found running on 1st rounds after tank had been finaled with Certificate	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	SP Hill Tank Field		
1926672	5/16/2010	LI	LI - Business Interruption	Level 1	Level 1	T-1688 gravity could not meet the limit set at .5 difference between top and bottom. Tank was sche	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	SP Hill Tank Field		
1573411	7/30/2009	LI	LI - Fire/Explosion	Level 1	Level 2	Contract company was dismantling fixture inside of tank with torch. A small pocket of product was ign	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	SP Hill Tank Field		
1795080	1/21/2010	LI	LI - Non-Compliance Government Requirement	Level 1	Level 1	Potential Title V deviation: ACIG inspections were missed on TK-3189 Mixer seal. Our initial inves	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	SP Hill Tank Field		
1996001	8/2/2010	LI	LI - Spill	Level 1	Level 1	T-1966 sample system's drop line to the loading racks tank was found leaking to the soil. A bucket	Richmond Refinery	Blending & Shipping (Rich)	Transfer & Blending (Rich)	SP Hill Tank Field		
1592798	8/18/2009	LI	LI - Product Contamination (Ext)	Level 1	Level 1	While loading 600R lube oil on a vessel it was discovered that slight traces of water was discovered	Richmond Refinery	Blending & Shipping (Rich)	Vessels (Rich)	Other Vessels		
1643664	9/23/2009	NLI	NLI - General Liability	No Level Selected	Level 1	Contractor office ee was wearing high heels on a planked board surface and ee stepped into crack be	Richmond Refinery	Capital Projects	214 Main			
1541198	7/7/2009	LI	LI - MVC - Contractor	Level 1	Level 1	Contract safety operator was driving the safety operator truck from the FLUOR tent (#8 asphalt plant	Richmond Refinery	Capital Projects	214 Main			
1598270	8/20/2009	LI	LI - MVC - Contractor	Level 1	Level 2	A Fluor-contracted bus (#6601) scraped the front right bumper area of a parked, Fluor-Leased pickup	Richmond Refinery	Capital Projects	Other			
1926585	5/12/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Two (Timec) contractor employees lifting a 8" pipe 7.5 ft. long into the bed of a pick-up truck. The	Richmond Refinery	Capital Projects	Other			
1729104	11/23/2009	LI	LI - Contractor First Aid	Level 1	Level 1	While cleaning up at the end of the day the worker was putting away a ladder and checking out the wo	Richmond Refinery	Capital Projects	Other			
1904239	4/20/2010	LI	LI - MVC - Personal Use	Level 1	Level 1	Upon departing work in Company parking lot, EE was backing personal vehicle out of parking location	Richmond Refinery	Capital Projects	Other			
1884347	12/31/2009	LI	LI - Business Process	Level 1	Level 1	The local capital budget (individual projects <$2 MM) is a component of the overall line item (>$2 M	Richmond Refinery	Capital Projects	Other			
2035444	9/23/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Contractor employee was walking inside trailer/building on her way home for the day. She felt a pa	Richmond Refinery	Capital Projects	Other			
1932615	5/21/2010	LI	LI - Non-Industrial	Level 1	Level 1	Employee reported to STL office and requested to be seen by EMT's. Employee stated they started to f	Richmond Refinery	Cracking (Rich)	Cracking General (Rich)	Cracking Area Control Center		
1547624	7/13/2009	LI	LI - First Aid	Level 1	Level 1	EE was working at the north yard weld bay. While lifting a valve and pipe, EE felt small sharp pa	Richmond Refinery	Cracking (Rich)	Cracking General (Rich)	Other (CABU)		
1842405	2/23/2010	LI	LI - Business Interruption	Level 1	Level 2	On 2/23/10, the refinery experienced a power dip from Sobrante Line 1 line going to the open positio	Richmond Refinery	Cracking (Rich)	Cracking General (Rich)	Other (CABU)		
1623578	9/8/2009	LI	LI - Abnormal Freight	Level 1	Level 1	Cracking Area Lab	Richmond Refinery	Cracking (Rich)	Cracking General (Rich)	Other (CABU)		
1695109	10/5/2009	NLI	NLI - Paperwork Incorrect/Not Sent	No Level Selected	Level 1	CVX electrical crew performed the light installation and receptacle modifications at the Cracking La	Richmond Refinery	Cracking (Rich)	Cracking General (Rich)	Other (CABU)		
1972680	7/4/2010	LI	LI - Equipment Damage	Level 1	Level 1	Railserve locomotive 201 was heading to track 209 to get a railcar being spotted to the LPG racks fo	Richmond Refinery	Cracking (Rich)	Cracking General (Rich)	Other (CABU)		
1851531	3/2/2010	NLI	NLI - Permit Exceedance	No Level Selected	Level 1	The V-475 fuel gas drum H2S 24 hour average almost reached it's environmental limit of 50 ppm. Sinc	Richmond Refinery	Cracking (Rich)	FCC (Rich)	#3H2S		
1660507	10/2/2009	LI	LI - Permit Exceedance	Level 1	Level 1	The level in the DEA Reactivator, C-220, dropped off from 62% down to 12%. With the loss of DEA in	Richmond Refinery	Cracking (Rich)	FCC (Rich)	#3H2S		
1890513	4/5/2010	LI	LI - First Aid	Level 1	Level 1	While checking P-261 for a VOC seal leak, an operator was sprayed with water used as seal flush for	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Caustic Treating		
1970293	6/30/2010	LI	LI - Equipment Failure	Level 1	Level 1	The electrical crew performed a project to relocate MP-711, the FCC Cooling Water Pump, from TX-146	Richmond Refinery	Cracking (Rich)	FCC (Rich)	FCC/SRU CWT		
1579278	7/27/2009	LI	LI - Equipment Failure	Level 1	Level 1	During the commissioning of the TX-116/117 Power Control Center a component known as Microversa trip	Richmond Refinery	Cracking (Rich)	FCC (Rich)	FCC/SRU CWT		
1970293	6/30/2010	LI	LI - Business Interruption	Level 1	Level 1	The electrical crew performed a project to relocate MP-711, the FCC Cooling Water Pump, from TX-146	Richmond Refinery	Cracking (Rich)	FCC (Rich)	FCC/SRU CWT		
1673587	10/5/2009	LI	LI - Plant Run Out/Slow Down	Level 1	Level 1	MP-133 - ONG VOC violation at coupling end seal, 1200 ppm, found in morning (am) by VOC inspector. V	Richmond Refinery	Cracking (Rich)	FCC (Rich)	NGRU		
2028112	9/15/2010	LI	LI - Contractor First Aid	Level 1	Level 1	While removing a blind on the suction flange of P-148A two contact EE's were sprayed with Gasoline/L	Richmond Refinery	Cracking (Rich)	FCC (Rich)	NGRU		
1816148	1/31/2010	LI	LI - Equipment Damage	Level 1	Level 1	After several days of running P-112 to circulate recovered oil, The outside operator noticed it appe	Richmond Refinery	Cracking (Rich)	FCC (Rich)	NGRU		
1744468	11/30/2009	NLI	NLI - Operational Leak	No Level Selected	Level 1	Employees walking by FCC pipe trench north of C-140 noticed some water flow into the trench that sho	Richmond Refinery	Cracking (Rich)	FCC (Rich)	NGRU		
2009104	8/21/2010	NLI	NLI - General Liability	No Level Selected	Level 1	During start up E-142A (C-140 Deethanizer reboiler) steam safety lifted to relief system. This volum	Richmond Refinery	Cracking (Rich)	FCC (Rich)	NGRU		
2009959	8/20/2010	NLI	NLI - Incorrect Product	No Level Selected	Level 1	At approximately 9:30 pm on Aug 20, 2010 the field machinist discovered the case gasket O.D for P-12	Richmond Refinery	Cracking (Rich)	FCC (Rich)	NGRU		
1959754	6/22/2010	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	FCC V-133 wet gas compressor interstage vessel While switching from P-133 to P-133A to LOTO P-133 f	Richmond Refinery	Cracking (Rich)	FCC (Rich)	NGRU		
1941933	5/31/2010	NLI	NLI - Employee Injury	No Level Selected	Level 1	During FCC start-up outside operators noticed a seal leak on P-123. Operators slopped the pump then	Richmond Refinery	Cracking (Rich)	FCC (Rich)	NGRU		
1963802	6/17/2010	LI	LI - Non-Compliance Company Policy	Level 1	Level 1	While doing rounds in the FCC an Operator noticed a contractor sharpening a tool with a grinder caus	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Other (FCC)		
2015945	8/27/2010	LI	LI - Notice of Violation	Level 1	Level 1	Opacity meter failure on FCC stack. 1) Why did the opacity meter fail? The laser eye was not point	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Other (FCC)		
1763482	12/14/2009	LI	LI - Equipment Failure	Level 1	Level 1	Loss of Signal from the FCC CEMS SO2 Analyzer on Monday 12/14/09 1:00 PM. On Tuesday 12/15/09 The an	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Other (FCC)		
1842463	2/25/2010	LI	LI - Plant Run Out/Slow Down	Level 1	Level 1	The C-90 (fractionator) refluc control valve (52FC105) was partially bypassed for maintenance, the u	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Other (FCC)		
1842463	2/25/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	The C-90 (fractionator) refluc control valve (52FC105) was partially bypassed for maintenance, the u	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Other (FCC)		
1802720	1/27/2010	NLI	NLI - Business Interruption	No Level Selected	Level 1	While switching pump TP-118A online for the spare pump run, the MCO stripper C-111 flow out was lost	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Other (FCC)		
1810521	2/1/2010	NLI	NLI - Health & Food	No Level Selected	Level 1	A BRAND EMPLOYEE CONSUMED SOME HOT SPICEYCHICKEN WINGS AND FRIES, FROM THE LUNCH	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Other (FCC)		
1934325	5/13/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	The FCC got pretty close to exceeding the ESP parametric limits on secondary current.	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Other (FCC)		
1967966	6/25/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	Contract employee did not sign in to FCC control house because they thought they were told by a Chev	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Other (FCC)		
2040347	9/29/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	FCC flare: Brief flare activity due to high flow from Alky relief drum V-734. Source being investiga	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Other (FCC)		
2041094	9/29/2010	LI	LI - Fire/Explosion	Level 1	Level 1	FCC flare: fire on piping at side of flare during flare operation. Flames were observed at vertical	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Other (FCC)		
1902545	4/17/2010	LI	LI - Permit Exceedance	Level 1	Level 1	After placing the booster pump in service for E-171 (Gas Splitter Overhead Condenser) the gas feedin	Richmond Refinery	Cracking (Rich)	FCC (Rich)	SGRU		
1931965	5/20/2010	LI	LI - Plant Run Out/Slow Down	Level 2	Level 2	Loss of seal on P-172A (FCC Frac S/C pump to JHT)	Richmond Refinery	Cracking (Rich)	FCC (Rich)	SGRU		
1941766	5/31/2010	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	During restart of FCC unit after MABT S/O, there was a flare event (Not recordable quantity or Conse	Richmond Refinery	Cracking (Rich)	FCC (Rich)	SGRU		
1739561	1/17/2010	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 1	C-180 is a debutanizer in the South GRU that during normal operation mirrors C-160 (same service).	Richmond Refinery	Cracking (Rich)	FCC (Rich)	SGRU		
2010562	8/23/2010	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	Flaring event at V-731A and V-732A when C-180 Debutanizer was being put in service.	Richmond Refinery	Cracking (Rich)	FCC (Rich)	SGRU		
1966381	6/28/2010	LI	LI - Equipment Failure	Level 1	Level 1	TOP INVESTIGATION---P-257A SEAL FAILURE--On June 28, 2010, P-257A (FCC gasoline to tankage pump) se	Richmond Refinery	Cracking (Rich)	FCC (Rich)	SGRU		
1630145	9/14/2009	NLI	NLI - Non Compliance	No Level Selected	Level 1	In the FCC a TR-2 was dumping and charging V-262 Propane treater. While dumping to the holding vesse	Richmond Refinery	Cracking (Rich)	FCC (Rich)	SGRU		
2029587	9/16/2010	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	The safety, PSV FC-163, located off of the bottom of C-160 Debutanizer opened. This immediate unres	Richmond Refinery	Cracking (Rich)	FCC (Rich)	SGRU		
1770403	12/23/2009	LI	LI - First Aid	Level 1	Level 1	While working on V-60 the Journeyman Mech sent Trainee to retrieve tools from the work truck below.	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Structure		
2005203	8/16/2010	LI	LI - Operational Leak	Level 3a	Level 3a	On nightshift Monday August 16, 2010 during their routine round operations noticed oil on the ground	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Structure		
1940549	5/30/2010	LI	LI - Equipment/Unit Trip	Level 3a	Level 3a	The Richmond FCC experienced an emergency shutdown, on 5/30/10 at 3:35 am, due to a high vibration D	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Structure		
2044421	9/30/2010	LI	LI - Fire/Explosion	Level 1	Level 1	Staging was built up to a process line that isn't always in use. When the operations crew conducted	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Structure		
2047563	10/17/2010	LI	LI - Loss of Containment (LOC) Tier 1	Level 3a	Level 3a	REKEY IMPACT ID 503.	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Structure		
1682588	10/21/2009	NLI	NLI - Incorrect Product	No Level Selected	Level 1	while switching P-105's to the steamer(P-105A). P-105A started and when P-105 was shutdown Bottoms	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Structure		
2047563	10/17/2010	LI	LI - Days Away From Work Case	Level 3a	Level 3a	REKEY IMPACT ID 503.	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Structure		
1909741	4/25/2010	LI	LI - First Aid	Level 1	Level 2	On Tuesday 4/27/2010 at 3:40 PM an EE reported he fell discomfort in his left shoulder and neck left	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Structure		
1839786	2/24/2010	LI	LI - First Aid	Level 1	Level 3a	The Analyzer Mechanic was working at the Sample probe box in the FCC stack. When the mechanic was lo	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Structure		
1538853	7/5/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	On July 5th, 2009, at 1830 the Reactor operator noticed a leak off of FC-105 dripping down the struc	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Structure		
2009188	8/20/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	During FCC restart, Natural gas PRD at F-70 Natural Gas supply lifted to relief when F-70 was being	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Structure		
2047563	10/17/2010	LI	LI - Loss of Containment (LOC) Corp Reportable	Level 3a	Level 3a	REKEY IMPACT ID 503. Richmond Refinery - FCC Operators Sprayed and burned with hot oil. LOC - Tier	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Structure		
1895092	4/12/2010	LI	LI - Equipment Damage	Level 1	Level 1	TOP INVESTIGATION-COUPLING HIT OPERATOR--While conducting performance testing of P-241A, FCC sour	Richmond Refinery	Cracking (Rich)	FCC (Rich)	SWC		
1601139	8/24/2009	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 1	During a start up of the FCC SWC, ops was taking actions to get the vent line from V-244 to V-100 un	Richmond Refinery	Cracking (Rich)	FCC (Rich)	SWC		
1913791	4/29/2010	LI	LI - Permit Exceedance	Level 1	Level 1	Brief flaring (<30 seconds to 1 minute) during FCC Sour Water Concentrator Startup. When V-244 Conce	Richmond Refinery	Cracking (Rich)	FCC (Rich)	SWC		
1865329	3/15/2010	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	Flaring Incident: Hydrogen to relief via LC-910 by-pass.	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Utility Area		
1865329	3/15/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	Flaring Incident: Hydrogen to relief via LC-910 by-pass.	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Utility Area		
1786035	12/10/2009	LI	LI - Incorrect Product	Level 2	Level 2	On December 9th and 10th of 2009 the FCC bypassed E-741(HCO Cooler) to E-740 (Emergency Excess Feed	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Utility Area		
1948610	6/9/2010	NLI	NLI - General Liability	No Level Selected	Level 1	The refinery instrument air system pressure sagged when K-303 air compressor unloaded. The first ind	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Utility Area		

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
1924685	5/12/2010	LI	LI - First Aid	Level 1	Level 1	BRAND EE WAS WORKING IN THE FCC UNIT. CREW FINISHED LOADING THE FLATBED TRUCK WITH NINE	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Utility Area		
1823165	2/11/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	At the start of nightshift 11/feb/2010 at about 17:10 the CSO noticed that F-300 FCC stack CEMS was	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Utility Area		
1893412	4/8/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	850 start-up steam to the stack was down for maintenance. Upon returning the steam line for service,	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Utility Area		
2001409	8/7/2010	NLI	NLI - Business Interruption	No Level Selected	Level 1	TK-303, FCC yard air compressor, tripped off line on 8/7/10 at 00:15. K-2600 (~hydro) was immediatel	Richmond Refinery	Cracking (Rich)	FCC (Rich)	Utility Area		
1736734	11/29/2009	LI	LI - First Aid	Level 1	Level 1	TOP INVESTIGATION--OPERATOR SPRAYED WITH ACID--Operator was puting daily acid samples. At around 0	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Acid Storage & Distribution Facility		
1828284	7/15/2009	LI	LI - Business Interruption	Level 1	Level 1	Loss of efficiency in Alky CWT due to plugging. Lack of chemical injection caused excessive systemat	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky CWT		
1833634	9/18/2009	LI	LI - Permit Exceedance	Level 1	Level 1	Re-routing C-1320 bottoms from C-400 to C-1020 as per the seldom used Butamer Plant shutdown procedu	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Distillation		
2014122	8/24/2010	LI	LI - General Liability	Level 1	Level 1	During startup of the Poly Plant there was a significant amount of C3's routed to the Alky Plant. Fl	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Distillation		
1849317	2/25/2010	LI	LI - Equipment Failure	Level 2	Level 2	Line to E-1414 heat exchangers is 100% plugged. The plugged line requires bypassing the heat exchan	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Distillation		
1783063	1/10/2010	LI	LI - Operational Leak	Level 1	Level 1	V-1441 is a water wash drum in the Alky plant that recalculates alkaline water to neutralize acidic	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Distillation		
1745527	12/3/2009	LI	LI - Spill	Level 1	Level 2	P-1481 developed a leak that spilt acid into it's containment basin. The containment basin is a tem	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Unit		
1830540	2/18/2010	LI	LI - Equipment Failure	Level 1	Level 1	A plug blew off the 150 # condensate line in the ALKY GRU, causing hot condensate to flow out of the	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Unit		
1849754	4/4/2010	LI	LI - Equipment Failure	Level 1	Level 1	While walking through the Alky GRU investigating Loud hammering in the plant, a Valve handwheel fell	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Unit		
1661012	10/3/2009	LI	LI - Plant Run Out/Slow Down	Level 2	Level 2	Acid Emulsion of Alkylation Plant	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Unit		
2019582	8/30/2009	NLI	NLI - Business Interruption	No Level Selected	Level 1	Missed scope input freeze date to perform typical shutdown related inspection and service for the	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Unit		
1869880	3/15/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	While moving the plant into feed segregation bypass the tail end acid strengths were at 89%. Best pr	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Unit		
1869880	3/15/2010	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	While moving the plant into feed segregation bypass the tail end acid strengths were at 89%. Best pr	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Unit		
1869880	3/15/2010	NLI	NLI - Product Quality (Int)	No Level Selected	Level 1	While moving the plant into feed segregation bypass the tail end acid strengths were at 89%. Best pr	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Unit		
1664387	10/6/2009	NLI	NLI - Operational Leak	No Level Selected	Level 1	While placing the F contactor in service, the gauge glass needed to be flushed out to properly see t	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Unit		
1991828	7/28/2010	NLI	NLI - Agency Warning	No Level Selected	Level 1	V-475 fuel gas 24 hr average for H2S	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Alky Unit		
1793202	1/20/2010	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	While in the process of putting feed in the Butamer plant, Reactor R1310A saw 2 high temperature ala	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Butamer Unit		
1565573	7/27/2009	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	At 08:43 on 7/27/2009, Butamer Plant Butane Charge Pump P-1300A Shut Down, causing plant upset and t	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Butamer Unit		
1693838	10/28/2009	LI	LI - First Aid	Level 1	Level 1	EE mounted a bicycle outside of the LPG racks control house. The EE proceeded to paddle the bike gal	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Racks Control House		
1879324	3/23/2010	LI	LI - Business Interruption	Level 1	Level 1	On Dayshift, Tuesday March 23rd, 2010, Operations used their Stop Work Authority when they noticed	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Railcar Racks		
1849888	6/10/2010	LI	LI - First Aid	Level 1	Level 1	Field Operator felt discomfort in their eye. Notified HO and STL. CFD responded. CFD flushed eye, no	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Railcar Racks		
1903988	3/25/2010	NLI	NLI - Incorrect Volume	No Level Selected	Level 1	On 3/25/10, a full railcar (UTLX 952304) carrying C4 olefins was mistakenly sent out of the refinery	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Railcar Racks		
1962343	6/23/2010	NLI	NLI - Business Process	No Level Selected	Level 1	Railcars spotted to LPG racks were input into Mapper using wrong track and spot numbers. This cau	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Railcar Racks		
1727663	11/18/2009	NLI	NLI - Release	No Level Selected	Level 2	Railcar SRUX33699 was reported as having a small leak under the dome that was causing a mercaptan-ty	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Railcar Racks		
1716434	11/12/2009	LI	LI - Release	Level 1	Level 1	On Nov. 10th at 11:45 PM the LPG racks operators released a empty Conoco railcar CATX 63075 that had	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Railcar Racks		
1870898	3/18/2010	NLI	NLI - Release	No Level Selected	Level 1	Odor complaint was called into Plant Protection and determined from wind direction to be coming from	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Railcar Racks		
1926525	5/15/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	LPG Railcar Racks: Threaded plug failed on railcar loading arm swivel joint while grease was being i	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Railcar Racks		
1962343	6/23/2010	NLI	NLI - Paperwork Incorrect/Not Sent	No Level Selected	Level 1	Railcars spotted to LPG racks were input into Mapper using wrong track and spot numbers. This cau	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Railcar Racks		
1918767	5/5/2010	LI	LI - Permit Exceedance	Level 1	Level 1	LPG Racks - T-3050 vent opened to relief causing flare activity during maintenance to calibrate DP c	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Spheres & Truck racks		
1588728	8/12/2009	LI	LI - First Aid	Level 1	Level 1	CVX Employee was climbing into T-3066 to perform inspections and felt a pop and discomfort in the ri	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Spheres & Truck racks		
1669101	10/11/2009	LI	LI - Product Quality (Int)	Level 1	Level 1	C4 Olefin(T3212) inadvertently routed to Blend T-3071 which called for C5 Olefin(T-3211). P-772 (Ole	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Spheres & Truck racks		
1669101	10/11/2009	LI	LI - Incorrect Product	Level 1	Level 1	C4 Olefin(T3212) inadvertently routed to Blend T-3071 which called for C5 Olefin(T-3211). P-772 (Ole	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Spheres & Truck racks		
2016787	8/15/2010	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	Overpressuring T-3050 due to a routine rail car loading activity. T -3050 pressure increased above se	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Spheres & Truck racks		
1740358	11/30/2009	NLI	NLI - Air	No Level Selected	Level 1	17:00 RSL was notified of odor complaint by D&R personnel and also BAAQMD report of odor complaint o	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Spheres & Truck racks		
1762344	12/16/2009	LI	LI - Paperwork Incorrect/not sent	Level 1	Level 1	During routine piping installation at the LPG loading racks it was noticed that 4 sets of flanges ha	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Spheres & Truck racks		
2040199	9/28/2010	NLI	NLI - Product Quality (Int)	No Level Selected	Level 1	T-3208 Sales propane sphere off-test for IC4 content. Sales propane IC4 content should be less than	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Spheres & Truck racks		
1779902	1/5/2010	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 1	While loading a LPG Truck, some LPG was sent to the relief system via a blowdown valve. The flow ra	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Spheres & Truck racks		
1908325	4/26/2010	NLI	NLI - Product Contamination (Int)	No Level Selected	Level 1	The field Operator was off loading rail cars and mis-manifolded C4 Olefins into T-3206 (Isobutanes).	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Spheres & Truck racks		
1557629	7/21/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 1	A PTI truck driver tripped and scraped his knee. The driver parked his truck on spot 5 and 6 of the	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Spheres & Truck racks		
2014336	8/25/2010	NLI	NLI - Product Quality (Int)	No Level Selected	Level 1	Propane in T3208 off test for residue.	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	LPG Spheres & Truck racks		
1849906	3/28/2010	NLI	NLI - Product Contamination (Int)	No Level Selected	Level 2	18 Plant, Cogen, and FCC were all affected by poor anhydrous ammonia quality coming from the NH3 bul	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	NH3 Bullets		
1849906	3/28/2010	NLI	NLI - Product Quality (Int)	No Level Selected	Level 2	18 Plant, Cogen, and FCC were all affected by poor anhydrous ammonia quality coming from the NH3 bul	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	NH3 Bullets		
1733108	11/17/2009	LI	LI - Permit Exceedance	Level 1	Level 1	On or about the morning of Nov 17th, area operators on the LPG area noticed a light olefin odor in a	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Other (LPG/ALKY)		
1733108	11/17/2009	LI	LI - Operational Leak	Level 1	Level 1	On or about the morning of Nov 17th, area operators on the LPG area noticed a light olefin odor in a	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Other (LPG/ALKY)		
1733108	11/17/2009	LI	LI - Loss of Containment (LOC) Corp Reportable	Level 1	Level 1	On or about the morning of Nov 17th, area operators on the LPG area noticed a light olefin odor in a	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Other (LPG/ALKY)		
1733108	11/17/2009	LI	LI - Inadvertent Release of Hazardous Vapor (RRHV)	Level 1	Level 1	On or about the morning of Nov 17th, area operators on the LPG area noticed a light olefin odor in a	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Other (LPG/ALKY)		
1733108	11/17/2009	LI	LI - Equipment Failure	Level 1	Level 1	On or about the morning of Nov 17th, area operators on the LPG area noticed a light olefin odor in a	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Other (LPG/ALKY)		
1778403	1/4/2010	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	Due to MK-1260 A and D (Alky/YDIB CWT fans)being Shutdown C-400 started to overpressur. TBecause ne	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Other (LPG/ALKY)		
1942906	5/31/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	A false environmental alert/concern was triggered by erroneous PI calc for V-475 3HR and 24HR rolln	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Other (LPG/ALKY)		
1816455	2/5/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	The Fuel gas BTU analyzer of V-475 failed on nightshift. As the analyzer technician began to work on	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Other (LPG/ALKY)		
2027559	9/14/2010	NLI	NLI - Permit Exceedance	No Level Selected	Level 1	While depressuring V-496 A&B (C3 Driers) in the YDIB, the flow to the relief header increased enough	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Other (LPG/ALKY)		
1944036	6/2/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Railserve locomotive 201 was pulling 4 loaded and 2 empty LPG cars out of the loading rack when the	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Other (LPG/ALKY)		
1584583	7/31/2009	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	GHG fuel gas data loss from V-475B - CARB regulations require us to analyze the fuel gas mix drums t	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Other (LPG/ALKY)		
1733108	11/17/2009	LI	LI - Business Interruption	Level 1	Level 1	On or about the morning of Nov 17th, area operators on the LPG area noticed a light olefin odor in a	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Other (LPG/ALKY)		
1854419	3/5/2010	LI	LI - Spill	Level 1	Level 1	On the morning of Mar 06, a Nalco Representative along with the Poly plant operator noticed the blea	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly CWT		
2009096	8/20/2010	LI	LI - Operational Leak	Level 2	Level 2	Oil was discovered in the Poly plant CWT basin by Nalco rep. Operations traced the source of the lea	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
2020110	9/1/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Operators shutdown Poly Reactor V-620 B loop when P-621B experienced a seal failure. The seal had be	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1756575	12/12/2009	LI	LI - Operational Leak	Level 3a	Level 3a	TAPROOT INVESTIGATION--ALSO REFERENCE LI 1756374--	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1756575	12/12/2009	LI	LI - Loss of Containment (LOC) Corp Reportable	Level 3a	Level 3a	TAPROOT INVESTIGATION--ALSO REFERENCE LI 1756374-- Incident Summary: On 12/12/09 nightshift at about	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1756575	12/12/2009	LI	LI - Equipment Failure	Level 3a	Level 3a	TAPROOT INVESTIGATION--ALSO REFERENCE LI 1756374--	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1756575	12/12/2009	LI	LI - Business Interruption	Level 3a	Level 3a	TAPROOT INVESTIGATION--ALSO REFERENCE LI 1756374--	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1906437	4/18/2010	LI	LI - Equipment Failure	Level 1	Level 1	Poly Plant Telomer and Pentamer Additive Nalco EC3050A (Isonox) had an unexplained larger than norm	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1727567	11/19/2009	LI	LI - Community Inquiry	Level 1	Level 2	Outside odor complaint was received and tracked down to bioreactors. Initially, U&E tracked source	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1824090	2/12/2010	LI	LI - Operational Leak	Level 1	Level 1	At the beginning or 2/12/10 nightshift, we received an internal odor complaint of a caustic and/or m	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1915340	5/1/2010	NLI	NLI - Spill	No Level Selected	Level 1	TOP INVESTIGATION--TUBING LEAK--While on daily rounds, an Alky plant operator noticed a leak (a mixt	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1756374	12/12/2009	LI	LI - Plant Run Out/Slow Down	Level 2	Level 2		Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1756374	12/12/2009	LI	LI - Equipment/Unit Trip	Level 2	Level 2		Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1814656	2/3/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	While performing the Quick Test procedure (POLK04J) on F-651 in the Poly Plant, the fuel gas chopper	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1769177	12/22/2009	NLI	NLI - Operational Leak	No Level Selected	Level 1	During normal operation The poly plant operator noticed a leak coming from B loop sample draw line o	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1990732	7/27/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	P-621B (Reactor emulsion pump) low level seal oil alarm activated. Field operator responded to fill	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1971567	6/25/2010	NLI	NLI - Abnormal Supply Occurrence	No Level Selected	Level 1	On June 29, 2010, Univar contacted PED to notify the engineer of another shipment of phosphoric acid	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1811167	2/2/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	Poly Plant feed was pulled and plant placed on circulation as a result of a loss of reflux to C-65	Richmond Refinery	Cracking (Rich)	LPG/Alky (Rich)	Poly Plant (LPG/ALKY)		
1765940	12/18/2009	LI	LI - Equipment Failure	Level 1	Level 1	The governor of the rear-end blower for #1 Train (K-2131) failed open causing the blower to overspee	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2100 Plant #1 SRU		
2021417	9/2/2010	LI	LI - Contractor First Aid	Level 1	Level 2	Contract EE after draw filing on a flange, stopped to wipe some sweat from his forehead. He wiped hi	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2100 Plant #1 SRU		
2021919	9/5/2010	NLI	NLI - Fire/Explosion	No Level Selected	Level 1	After welding the sleeve on P-2110 The Fire watch assigned to monitor job 30 min. after Hot Work has	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2100 Plant #1 SRU		
2015230	8/27/2010	LI	LI - Contractor First Aid	Level 1	Level 2	While decending a scaffold ladder at the C-2150 site, gusts of wind were present and during his dece	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2100 Plant #1 SRU		
2014345	8/26/2010	LI	LI - Contractor First Aid	Level 1	Level 1	While performing a grinding job, he was stopped, so work could be checked by his QC, he slightly lif	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2100 Plant #1 SRU		
2024044	9/8/2010	LI	LI - Contractor First Aid	Level 1	Level 2	Laceration to index finger from grinder. Contract EE was grinding on a socket weld on the steam jac	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2100 Plant #1 SRU		
1683001	10/21/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 1	SRU 2200 plant tripped off line when the main reaction furnace recieved a low level indication (FSC	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2200 Plant #2 SRU		
1683001	10/21/2009	LI	LI - Equipment Failure	Level 1	Level 1	SRU 2200 plant tripped off line when the main reaction furnace recieved a low level indication (FSC	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2200 Plant #2 SRU		
1593912	8/15/2009	LI	LI - Business Process	Level 1	Level 1	New valves were ordered to replace the sulfur rundown valves during the 2 SRU shutdown. When the ne	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2200 Plant #2 SRU		
1918668	4/13/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	EE was working on the ADA in SRU when he noticed a strong H2S odor which caused his personal monitor	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2200 Plant #2 SRU		
1918668	4/13/2010	NLI	NLI - Operational Leak	No Level Selected	Level 1	EE was working on the ADA in SRU when he noticed a strong H2S odor which caused his personal monitor	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2200 Plant #2 SRU		
1600729	8/23/2009	NLI	NLI - Business Process	No Level Selected	Level 1	During 2 train startup at the SRU, 22TI101 (main reaction furnace temp - an infrared temperature in	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2200 Plant #2 SRU		
1581753	7/23/2009	NLI	NLI - Operational Leak	No Level Selected	Level 1	condensate line demo job. Contract EE cut into a 3/4" inch line. While making a cut at cut tape i	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2200 Plant #2 SRU		
1576028	8/1/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 1	Two Contract EE's were working on the reactor R-2201cutting off a manway. They cut the first manway	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2200 Plant #2 SRU		
1592094	8/15/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 2	NON WORK RELATED, Contract EE, while getting dressed and making breakfast, felt something in his rig	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2200 Plant #2 SRU		
1597375	8/9/2009	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 2	E-2240 code repairs required a hydrostatic test of 1.5 times MAWP. Contract company was provided de	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2200 Plant #2 SRU		
1583227	8/7/2009	NLI	NLI - Employee Injury	No Level Selected	Level 1	While taping up the hose for the vacuums guzzler, Contractor EE(Redwood)was struck by a canvas tool	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2200 Plant #2 SRU		
1937148	5/26/2010	LI	LI - Equipment Failure	Level 3a	Level 3a	A potential for leak was discovered on top of #3 Train Main Reaction Furnace at SRU. It is an old th	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2300 Plant #3 SRU		
1575675	7/31/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 1	At @ 22:43 hrs Friday 7/31/09, SRU #3 Tripped. First out indication showed low differential pressure	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2300 Plant #3 SRU		
1545400	7/10/2009	LI	LI - First Aid	Level 1	Level 1	While attempting to open the drain valve on 2600 plant condensate drum (V-2601), operator was using	Richmond Refinery	Cracking (Rich)	SRU (Rich)	2600 Plant / SO2		
1891159	4/1/2010	LI	LI - Business Process	Level 1	Level 1	Routine maintenance work process experienced a business interruption as a result of unplanned rework	Richmond Refinery	Cracking (Rich)	SRU (Rich)	Other (SRU)		
1539732	7/8/2009	NLI	NLI - MVC - Contractor	No Level Selected	Level 2	CCE vehicle -- van #471 -- was backing out of a parking spot at SRU North Lot. A Fluor employee was w	Richmond Refinery	Cracking (Rich)	SRU (Rich)	Other (SRU)		
1539722	7/8/2009	LI	LI - Equipment Damage	Level 1	Level 2	Crew were building and as they were setting a strong back into place to hang a leg, one of the crew	Richmond Refinery	Cracking (Rich)	SRU (Rich)	Other (SRU)		
1595468	8/18/2009	LI	LI - General Liability	Level 1	Level 1	Mobile trailer deconstruction personnel placed a sewage tank, that contained some waste, leaning on	Richmond Refinery	Cracking (Rich)	SRU (Rich)	Other (SRU)		
1774083	12/29/2009	NLI	NLI - MVC - Contractor	No Level Selected	Level 1	The sulfur loading rack is used to load sulfur trucks with molten sulfur for transport. Normally a	Richmond Refinery	Cracking (Rich)	SRU (Rich)	Sulfur Tank & Loading Racks		

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	LEVEL6
1989319	7/26/2010	NLI	NLI - Spill	No Level Selected	Level 1	TOP INVESTIGATION-S2 SPILL-A contract truck driver was performing a routine S2 loading @ the S2 Truc	Richmond Refinery	Cracking (Rich)	SRU (Rich)	Sulfur Tank & Loading Racks		
1911155	4/28/2010	LI	LI - Product Quality (int)	Level 3a	Level 3a	This investigation covers both reasons for off-test jet product: the leaking exchanger, E-1107, at t	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1819411	2/3/2010	NLI	NLI - General Liability	No Level Selected	Level 2	At 1600 hours 4 Feb 2010 a contractor reported to the D&R East Head Operator that on 3 Feb 2010 whil	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1563097	7/24/2009	LI	LI - Paperwork Incorrect/not sent	Level 1	Level 1	Intended to purchase new re-designed channels for the E-1103 an E-1104 heat exchangers in #4CU, but	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1578597	8/4/2009	LI	LI - Fire/Explosion	Level 1	Level 1	During start up of 4 crude a flange on the atmospheric short loop developed a flange leak. The vapor	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1892392	4/7/2010	LI	LI - Business Interruption	Level 1	Level 1	While performing a special procedure to take the overflash system out of service in 4 Crude Unit, a	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1752840	1/19/2010	LI	LI - Equipment Failure	Level 1	Level 1	P-1165A had a seal leak on 01/19/2010 night shift after ops. attempted to put into service.	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1564125	7/26/2009	LI	LI - Equipment Damage	Level 2	Level 2	INITIAL REPORT--At approx 4am K-1171A appears to have been severely hit with liquid causing the dist	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1904614	4/22/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Crew was conducting x-ray on a 6" line coming out of F-1160, all shots completed without incident. W	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1568325	7/26/2009	LI	LI - Safe Operating Limit (SOL) Exceeded	Level 1	Level 1	During the 4 Crude Unit shutdown C-1160 over head system exceeded 450 degree limit.	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1941937	5/29/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 2	TOP INVESTIGATION--D&R K1008 COMPRESSOR TRIP	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1674774	10/14/2009	LI	LI - First Aid	Level 1	Level 1	Operator was de-LOTO'ing P-1601 for warm up. In the process of turning one valve, the operators fing	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1594079	8/13/2009	LI	LI - Equipment Failure	Level 1	Level 2	After the 4 Crude start up the operations tried to energize the deaerter grids , they were high in a	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1619775	9/3/2009	LI	LI - First Aid	Level 1	Level 3a	TOP INVESTIGATION--NH3 EXPOSURE AT V-1159B--V-1159B, Off-Gas Compressor Knockout Drum for the	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1970124	6/30/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 2	TOP INVESTIGATION--Two electricians were doing routine online motor tests of checking amps and volt	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1645774	9/23/2009	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	8 S/C availability to HNC decreased from 23 MBPD to 19 MBPD over a few hours. This was caused by th	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1861597	3/10/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Two EE's came down the ladder of the fin fan deck and found themselves in the middle of X-ray barrie	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1866120	3/15/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Th EE was working inside an Analyzer shelter when he open the door to leave the shelter he found him	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1609460	8/9/2009	NLI	NLI - Agency Warning - Air	No Level Selected	Level 1	Bypass left open on E-1107 when removing shutdown isolation LOTO resulting in loss of preheat in cru	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1609460	8/9/2009	NLI	NLI - Operational Leak	No Level Selected	Level 1	Bypass left open on E-1107 when removing shutdown isolation LOTO resulting in loss of preheat in cru	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1609460	8/9/2009	NLI	NLI - Release	No Level Selected	Level 1	Bypass left open on E-1107 when removing shutdown isolation LOTO resulting in loss of preheat in cru	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1643935	9/23/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Upon returning from being repaired, P-1149 was turned over to Ops from Maint. Ops was preparing to	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1681652	10/21/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	TOP INVESTIGATION--P-1165A APS VALVE	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1771049	12/24/2009	NLI	NLI - General Liability	No Level Selected	Level 1	After testing alarms X-1100 B shutdown when the shutdown bypass switch was returned to the run posit	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1631327	10/27/2009	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	Warming up P-1159 for hot alignment (6 s/c product) caused a loss of suction pressure to P-1168 (VTC	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1631318	9/26/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	On 9/26/2009, at 0431, P-1165 tripped off line due to low lube oil pressure. At that point operato	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1677823	9/28/2009	LI	LI - First Aid	Level 1	Level 1	Employee felt discomfort in eye. Reported to clinic to flush eye. No material was found in eye.	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#4 Crude Unit		
1540065	7/6/2009	LI	LI - Safe Operating Limit (SOL) Exceeded	Level 2	Level 2	TOP INVESTIGATION--C-810 FOAMING: 20 PLANT SHUTDOWN INCREASED FLOW OF SOUR GAS TO SH2S	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#5 H2S		
1595542	8/15/2009	LI	LI - First Aid	Level 1	Level 1	Tonight the HO called saying an operator was requesting for someone to look at her knee which was hu	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#5 H2S		
1558212	7/20/2009	LI	LI - First Aid	Level 1	Level 1	On Monday July 20th around 4 pm during fast round employee was out in the DHT. He got something in	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#5 H2S		
1739840	11/29/2009	NLI	NLI - Product Contamination (int)	No Level Selected	Level 1	High LPG make in the D&R complex exceeded the hydrulic capacity of C-860 this raises C-860 pressure	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#5 H2S		
1543141	7/14/2009	NLI	NLI - Product Quality (int)	No Level Selected	Level 1	Earlier today, we reduced the C-450 draw rate to the Pentex. At the same time, we were supposed to	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#5 H2S		
1645667	9/14/2009	NLI	NLI - Product Quality (int)	No Level Selected	Level 1	The DHT had a compressor failure and the DHT operators had to perform an emergency shutdown of the D	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#5 H2S		
1828225	2/16/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	During installation of VOC taps on the new V870 analyzer buildings the technician felt heat on his h	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	#5 H2S		
1979961	7/14/2010	LI	LI - NOV - Air	Level 1	Level 1	In preparation to put C-1600 Recycle Gas/H2S absorber in service the residual level of rich DEA an	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1632261	9/15/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 1	At ~ 21:00 the DHT recycle compressor speed controller (Triscn) started acting erratically even thoug	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1981669	7/10/2010	LI	LI - Non-Industrial	Level 1	Level 1	Employee experienced an allergic reaction to seafood that was being cooked in control house.	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1976552	7/9/2010	LI	LI - Operational Leak	Level 3a	Level 3a	On July 9, 2010 at 8:35 p.m. the feed pump to the Richmond Diesel Hydrotreater (DHT), P-1601, shut d	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1976552	7/9/2010	LI	LI - Equipment/Unit Trip	Level 3a	Level 3a	On July 9, 2010 at 8:35 p.m. the feed pump to the Richmond Diesel Hydrotreater (DHT), P-1601, shut d	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1976552	7/9/2010	LI	LI - Equipment Failure	Level 3a	Level 3a	On July 9, 2010 at 8:35 p.m. the feed pump to the Richmond Diesel Hydrotreater (DHT), P-1601, shut d	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1630433	9/15/2009	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	The DHT was operating in a steady state condition when K-1500 recycle compressor and surge valve 16	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1881528	3/28/2010	NLI	NLI - Product Contamination (int)	No Level Selected	Level 1	TOP INVESTIGATION--DHT HIGH SULFUR--Diesel Tail Line Product was high in Sulfur cenient on 3/28/10.	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1770377	12/23/2009	NLI	NLI - Business Interruption	No Level Selected	Level 1	On Monday the electricians were sent out to MP-1601 in DHT to attach a lap top computer to download	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1564577	7/26/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 2	Employee was assisting Timec in hang a cama long inside reactor R-1610 as employee looked up same de	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1583904	8/6/2009	NLI	NLI - Release	No Level Selected	Level 1	In the process of displacing sour DEA from C-1600 to the relief drum a small flow of H2 was released	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1635589	9/17/2009	NLI	NLI - Permit Exceedance	No Level Selected	Level 1	F-1510 in the DHT was out of the NOx polygon for a 24 hour period following the compressor trip on S	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1981363	7/14/2010	NLI	NLI - Fire/Explosion	No Level Selected	Level 1	During his round the operator in the DHT noticed insulation smoldering on the outlet cold feed valv	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Diesel Hydro Treater		
1810715	2/1/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	Approximately 0830 a large flow of gas from V-3211 into flare gas recovery compressor K-3950 caused t	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1560972	8/11/2009	NLI	NLI - Release	No Level Selected	Level 1	D&R was trying to purge the condensed light ends out of the out of service 106L (D&R H2 Export Line	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1582065	8/6/2009	LI	LI - General Liability	Level 1	Level 1	Approximately 10:15 A.M. K-3950 shut down due to a high liquid level in the first stage knock out. 30	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1576520	8/3/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 1	K-3950 tripped due to low suction pressure as it was being unloaded . V-1190 off-gas flow rate had i	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1675802	10/15/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 2	TOP INVESTIGATION--LEVEL CONTROLLER ISSUES AT K-3950 CAUSES FLARING	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1976987	7/11/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	On the previous shift hydrocarbon was introduced into the DEA system while placing contactor in serv	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1976713	7/10/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	While depressuring E-1665 to relief with Nitrogen we experienced break through and tripped the total	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1725261	11/11/2009	NLI	NLI - Lessons Learned	No Level Selected	Level 1	Near Loss - Potential exposure to H2S and liquid hydrocarbon release.	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1725261	11/11/2009	NLI	NLI - Employee Injury	No Level Selected	Level 1	Near Loss - Potential exposure to H2S and liquid hydrocarbon release.	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1725261	11/11/2009	NLI	NLI - Operational Leak	No Level Selected	Level 1	Near Loss - Potential exposure to H2S and liquid hydrocarbon release.	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1731718	11/24/2009	NLI	NLI - General Liability	No Level Selected	Level 1	Unknown release to flare causing high liquid level in flare gas recovery compressor knockout pot (V	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1563049	7/24/2009	NLI	NLI - General Liability	No Level Selected	Level 1	During the clean up and de; .ssurization of the DHT the flow to relief exceeded the capacity of the	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1605486	8/25/2009	NLI	NLI - General Liability	No Level Selected	Level 1	At approximately 2100 hours #4H2S experienced an upset. To avoid lifting a safety in V-475 the Isoma	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1580728	8/5/2009	NLI	NLI - General Liability	No Level Selected	Level 1	Approximately 1300 #1 Power plant blew down a vessel to D&R relief system at a high rate. The console	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1563589	7/25/2009	NLI	NLI - General Liability	No Level Selected	Level 2	During the clean up and depressurization of 4CAT the flow to relief exceeded the capacity of the fla	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1560972	8/11/2009	NLI	NLI - Lessons Learned	No Level Selected	Level 1	D&R was trying to purge the condensed light ends out of the out of service 106L (D&R H2 Export Line	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1562085	7/23/2009	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	During cleanup of the DHT plant, H2 used for the hot/stripping phase of tyhe cleanup was being switch	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	LSFO Flare		
1958938	6/29/2010	LI	LI - Plant Run Out/Slow Down	Level 1	Level 1	TOP INVESTIGATION--LOSS OF GHT FEED PUMP--On June 29, 2010 at approximately 4:20pm D&R (Distillation	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Other (D&R East)		
1962938	6/29/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	TOP INVESTIGATION--LOSS OF GHT FEED PUMP--On June 29, 2010 at approximately 4:20pm D&R (Distillation	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Other (D&R East)		
1751079	12/8/2009	LI	LI - Spill	Level 1	Level 2	Contaminated Spent Carbon spill during transfer operations due to equipment failure, a broken alumin	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Other (D&R East)		
1930287	5/19/2010	NLI	NLI - Permit Exceedance	No Level Selected	Level 1	On 19/may/2010 at 12:27 Hrs, Outside Operator was checking suction pressure on K-3950 when suction p	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Other (D&R East)		
2010887	8/23/2010	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	TOP INVESTIGATION--LOSS OF GHT FEED PUMP--On August 23, 2010 at approximately 20:30 hours, the Gasol	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Other (D&R East)		
1609588	8/27/2009	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	a lolo box was left on a piece of equipment since 2007	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Other (D&R East)		
1582928	7/21/2009	NLI	NLI - Product Unavailable	No Level Selected	Level 1	Air Products notified INPACT group that they would be unable to provide a PCS Unit (N2) for the GHT	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Other (D&R East)		
1706430	11/5/2009	LI	LI - Product Quality (int)	Level 1	Level 1	TOP INVESTIGATION--GHT Product Off Test--Gasoline hydrotreater product was routed off test. The lev	Richmond Refinery	Distillation & Reforming (Rich)	D&R East (Rich)	Other (D&R East)		
1641362	8/5/2009	LI	LI - MVC - Company	Level 1	Level 1	While backing up a company truck the rear bumper hit the rear taillight on the Nalco car.	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	D&R Admin Office Building #3		
1858393	3/4/2010	LI	LI - First Aid	Level 1	Level 1	Upon returning to his truck after bottle delivery to D&R, employee noticed bleeding on his left thum	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	D&R Control House		
2000269	8/9/2010	LI	LI - MVC - Company	Level 1	Level 1	Employee was driving north on Petrolite St. and making a right onto Rerun St. to enter the D&R Contr	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	D&R Control House		
1539741	7/6/2009	NLI	NLI - Employee Injury	No Level Selected	Level 1	Worker was walking on a 12' beam without being tied off with Harness Lanyard. (10 feet above ground	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	Other (D&R)		
1721250	11/16/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 2	TOP INVESTIGATION--PIPE FELL FROM PIPERACK AT 1H2S	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	Other (D&R)		
1721250	11/16/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 2	TOP INVESTIGATION--PIPE FELL FROM PIPERACK AT 1H2S	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	Other (D&R)		
1536568	7/2/2009	LI	LI - Contractor First Aid	Level 1	Level 2	Worker was walking down the V-line and felt something in his left eye.	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	Other (D&R)		
1983286	7/19/2010	LI	LI - Release	Level 1	Level 1	This less investigation is for Pentex reactor excursion and flare totalizer trip that was a conseque	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	Other (D&R)		
1775341	12/30/2009	LI	LI - Equipment Damage	Level 1	Level 1	The operator was using an extended reach forklift equipped with a hook attachment secured to the for	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	Other (D&R)		
1976452	7/9/2010	LI	LI - First Aid	Level 1	Level 1	Employee was riding a bike to the control room and felt a sting or bite on the neck. Employee immed	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	Other (D&R)		
1709401	11/9/2009	LI	LI - Contractor First Aid	Level 1	Level 1	Two workers were lifting a 40' section of 2" sch 80 pipe to set on jack stands. (Approx. 200lb) Work	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	Other (D&R)		
1550894	7/15/2009	LI	LI - Contractor Days Away From Work Case	Level 3a	Level 3b	Initial description revised per TapRooT Investigation report: On July 15, 2009 at approximately 2:0	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	Other (D&R)		
1980391	6/17/2010	LI	LI - First Aid	Level 1	Level 2	Record keeping purpose only, no injury at this time - Hearing shift	Richmond Refinery	Distillation & Reforming (Rich)	D&R General (Rich)	Other (D&R)		
1865823	3/15/2010	LI	LI - Contractor First Aid	Level 1	Level 1	EE putting on face shroud, and felt an insect bite on his chin.	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1830476	2/18/2010	LI	LI - Contractor First Aid	Level 1	Level 2	Scaffold builder pinched finger between a monorail and catwalk handrail, while lowering the monorail	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1878274	3/25/2010	LI	LI - Equipment Failure	Level 1	Level 1	EE's were torquing bottom flange on R-3560 using a 17/8" tensioner. The tensioning head has a rating	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1580282	8/4/2009	NLI	NLI - Release	No Level Selected	Level 1	Two PTS employees were working near R-3550 (approximately 20-30 feet away) during catalyst loading.	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1853807	3/4/2010	NLI	NLI - General Liability	No Level Selected	Level 1	Atop the reactor R-3560 while using a 1 inch drive impact, the THOR fitting came unscrewed from the	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1878240	3/23/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 2	Near Loss, Falling scaffold plank from 25'. Two employees were working on a scaffolding torquing a f	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1878240	3/23/2010	NLI	NLI - Non Compliance	No Level Selected	Level 2	Near Loss, Falling scaffold plank from 25'. Two employees were working on a scaffolding torquing a f	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1871779	3/20/2010	NLI	NLI - General Liability	No Level Selected	Level 1	Radiography was being set-up to perform during morning 4 Rheniformer shift change window without SD	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1860473	3/10/2010	NLI	NLI - General Liability	No Level Selected	Level 1	6" line failed downstream of V-3399 during clean up on the 2010 4 Rheniformer S/D. Failure appears	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
2024056	9/8/2010	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	Mi conducting vibration check on P-3553A (lube oil pump for K-3550). Operations switched pumps from	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1894323	4/10/2010	LI	LI - Business Interruption	Level 1	Level 1	The H2 reduction was completed this evening. Once H2 was introduced, we have to complete an H2 leak	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1891331	8/13/2009	LI	LI - Product Unavailable	Level 1	Level 1	Delay in start up of the 4Rheniformer. It was shutdown for a planned regen and dump and screen of R-	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1995326	6/2/2010	LI	LI - Equipment/Unit Trip	Level 2	Level 2	TOP INVESTIGATION--K-3550 TRUSEN ISSUES--On 6/1/10, at 11pm, the CBO for the 4 Rheniformer Plant, re	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1858440	3/9/2010	LI	LI - Equipment Damage	Level 1	Level 1	TOP REPORT--HYDRAULIC JACK FAILED--On March 9th, 2010, during a planned shutdown, there was a contra	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1863476	3/14/2010	LI	LI - Contractor First Aid	Level 1	Level 1	WHILE USING A "PEANUT GRINDER" CUTTING ANGLE IRON FOR BRICK SUPPORT, THE GRINDER JUMPED	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1872044	3/21/2010	LI	LI - Contractor First Aid	Level 1	Level 1	EE vacuuming sandblast grit inside F-3570, hose bounced, and finger pinched against furnace tube. EE	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1877986	3/24/2010	LI	LI - Contractor First Aid	Level 1	Level 1	EE was moving a vacuum hose at North side of F-3550/60/70/80, when he dropped hose,and received a sc	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	LEVEL6
1989171	7/26/2010	LI	LI - First Aid	Level 1	Level 1	TOP INVESTIGATION--PONTENTIAL ARM INJURY--As part of daily duties, the operator working the Caustic	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1863540	3/14/2010	LI	LI - Days Away From Work Case	Level 2	Level 2	On Sunday, March 14th at approximately 11:20am, a Chevron Fixed Equipment Inspector was injured whil	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
2036930	9/26/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	At 18:56 K-3550 tripped off line. Operations responded and found the Trisend had no power on the pan	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1865830	3/15/2010	LI	LI - Contractor First Aid	Level 1	Level 1	EE was inside R-3560, moving scaffoips, when a C-clamp fell onto his hardhat.	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
1892097	4/5/2010	LI	LI - Equipment Failure	Level 1	Level 1	TOP INVESTIGATION--START UP DELAYS--During the commissioning of the 4Rheniformer Plant (at the Distl	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer		
5	12/22/2009	LI	LI - Spill	Level 1	Level 1	One gallon of used oil was spilled onto the asphalt around the D&R ABU from a punctured drum by a	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#4 Rheniformer CWT		
1	9/2/2009	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	Today at the NHT we had TP-447A trip off line on governor control swings (under investigation IMI) a	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Naphtha Hydro Treater		
3	10/14/2009	LI	LI - Plant Run Out/Slow Down	Level 3a	Level 3a	TOP INVESTIGATION--FIRE AT #5 CAT-E-570B EXCHANGER--This event occurred at the 5Rheniformer (5 CAT)	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
06	10/14/2009	LI	LI - Fire/Explosion	Level 3a	Level 3a	TOP INVESTIGATION--FIRE AT #5 CAT-E-570B EXCHANGER--This event occurred at the 5Rheniformer (5 CAT)	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
1575833	7/15/2009	NLI	NLI - Product Quality (Int)	No Level Selected	Level 2	Untreated TKN Ut/Med to T-634 - During the 7/15/09 RROT call PED heard that while V-451 is out-of-se	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
1739759	11/30/2009	LI	LI - Fire/Explosion	Level 1	Level 1	Insulation fire due to small leak on top side of E-593 (Reboiler). Operations quickly extinguished f	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
1741625	11/30/2009	LI	LI - Fire/Explosion	Level 1	Level 1	TOP INVESTIGATION--POSSIBLE BENZENE EXPOSURE--Following an insulation fire due to a small leak on th	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
1741625	11/30/2009	LI	LI - Non-Compliance Company Policy	Level 1	Level 1	TOP INVESTIGATION--POSSIBLE BENZENE EXPOSURE--Following an insulation fire due to a small leak on th	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
1625215	8/5/2009	LI	LI - Plant Run Out/Slow Down	Level 3a	Level 3a	On August 4th routine sampling of the 5 Rheniformer recycle gas with a drager revealed a concentrati	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
1659770	10/2/2009	NLI	NLI - Lessons Learned	No Level Selected	Level 1	At 10/2/09, approximate 00:33 hrs. While depressurizing 5 Rhen. outside operations cracked open a va	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
1659770	10/2/2009	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 1	At 10/2/09, approximate 00:33 hrs. While depressurizing 5 Rhen. outside operations cracked open a va	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
2008730	8/20/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	Blowing down low points tripped the totalizer, no flare activity seen	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
1545482	7/7/2009	LI	LI - Fire/Explosion	Level 1	Level 1	Work was being performed on leaking exchanger. This was necessary pre-work to prepare exchanger for	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
1575833	7/15/2009	NLI	NLI - Product Contamination (Int)	No Level Selected	Level 2	Untreated TKN Ut/Med to T-634 - During the 7/15/09 RROT call PED heard that while V-451 is out-of-se	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
1937241	5/26/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	5 Cat furnaces (F550/60/7030) tripped to min fires during Manual S/D trip quick test (AP7002). The s	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	#5 Rheniformer		
1554571	7/17/2009	NLI	NLI - Release	No Level Selected	Level 2	While starting K-242, the D&R flare experienced brief activity. All K-242 valves were immediatly ret	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	Jet Hydro Treater		
1832860	2/21/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	South of the JHT plot limit. A fire labeling signboard made of plywood in the overhead fell on over	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	Jet Hydro Treater		
1586451	8/5/2009	LI	LI - Permit Exceedance	Level 1	Level 1	F-210 exceeded it's CO limit of 400 ppm average for 24 hour period. The JHT was being started up and	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	Jet Hydro Treater		
1586451	8/5/2009	LI	LI - NOV - Air	Level 1	Level 1	F-210 exceeded it's CO limit of 400 ppm average for 24 hour period. The JHT was being started up and	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	Jet Hydro Treater		
1994494	7/30/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	While bringing up a 2nd Relief compressor K-242 on the West side, a high level S/D in V-243 K/O trip	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	Jet Hydro Treater		
1994494	7/30/2010	LI	LI - Release	Level 1	Level 1	While bringing up a 2nd Relief compressor K-242 on the West side, a high level S/D in V-243 K/O trip	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	Jet Hydro Treater		
1563051	7/18/2009	LI	LI - NOV - Air	Level 1	Level 1	We exceeded the CO title V limit on F-210 on Saturday 7/18 and Sunday 7/19. The 24 hours averages ca	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	Jet Hydro Treater		
1696442	10/10/2009	LI	LI - Equipment Failure	Level 1	Level 1	Pump could not be put in service due to shaft seizing while heating up for alignment. Pump was remov	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	Jet Hydro Treater		
1987502	7/19/2010	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 1	-TOP INVESTIGATION--FSC CHOPPER TRIP-On July 19th, 2010, the Jet Hydrotreater Plant experienced a lo	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	Jet Hydro Treater		
1808826	1/31/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 3a	GMfg Lessons Learned - API612 work for TK-200. TK-200 is the steam turbine driving the Jet Hydrotrea	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	Jet Hydro Treater		
1629391	9/10/2009	LI	LI - MVC - Company	Level 1	Level 1	EE was moving a weld rig between Debru and the cooling tower and made contact with a yellow pole.	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	LSFO CWT		
1926393	5/15/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	At approximately 10:36 A.M. on May 15th, the temperature on the 2nd stage #1 cylinder for K-900 Hydr	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	LSFO H2 Booster		
1829759	2/17/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	K900A 2nd stage valves got hot and during the switching the machine with hot valves the stop switch	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	LSFO H2 Booster		
1630491	10/19/2009	NLI	NLI - Release	No Level Selected	Level 1	Head Operator and Plant Operator were getting K-900A ready for blinding. Once compressor was isolate	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	LSFO H2 Booster		
1538406	7/5/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 2	West side ops received an alarm for a hot valve on K-900A second stage (41T1010). The temperature h	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	LSFO H2 Booster		
2015540	8/21/2010	LI	LI - Business Interruption	Level 1	Level 1	V-970 had a crust layer at the top of the chloride adsorbent bed that would not come out of the dump	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	LSFO H2 Booster		
2023718	9/5/2010	LI	LI - Equipment Failure	Level 1	Level 1	On Sunday September 5th, K-900A was put back in service after completion of compressor frame bolt re	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	LSFO H2 Booster		
1568256	7/28/2009	LI	LI - Equipment Damage	Level 1	Level 1	A company employee parked a leased pickup on Furnace St facing north on east side of road and shut o	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	Other (D&R West)		
1568256	7/28/2009	LI	LI - MVC - Company	Level 1	Level 1	A company employee parked a leased pickup on Furnace St facing north on east side of road and shut o	Richmond Refinery	Distillation & Reforming (Rich)	D&R West (Rich)	Other (D&R West)		
1879765	3/25/2010	LI	LI - Non-Industrial	Level 1	Level 1	RLOP EE Non Industrial: EMT's responded to Hydro control room for Operator complaining of chest pai	Richmond Refinery	Hydro Processing (Rich)	Hydro Processing General	Hydro Processing Control Center		
1927364	4/30/2010	LI	LI - First Aid	Level 1	Level 1	Record keeping purpose only, no injury at this time - Hearing shift	Richmond Refinery	Hydro Processing (Rich)	Hydro Processing General	Hydro Processing Control Center		
2021770	9/4/2010	NLI	NLI - Fire/Explosion	No Level Selected	Level 1	At 18:25 9/4/10 a small fire was noticed burning inside of 475 platform (just outside of the HPCC No	Richmond Refinery	Hydro Processing (Rich)	Hydro Processing General	Hydro Processing Control Center		
1984347	7/20/2010	LI	LI - Contractor First Aid	Level 1	Level 1	ERS employee was installing a tray of Potassium Permanganate H2S filtration media in the HPCC. While	Richmond Refinery	Hydro Processing (Rich)	Hydro Processing General	Hydro Processing Control Center		
1927410	4/30/2010	LI	LI - Non-Industrial	Level 1	Level 1	Record keeping purpose only, no injury at this time - Hearing shift.	Richmond Refinery	Hydro Processing (Rich)	Hydro Processing General	Hydro Processing Control Center		
1891208	4/6/2010	LI	LI - First Aid	Level 1	Level 1	Operator came to work with slight eye irritation. Operator was working on the North Isomax control b	Richmond Refinery	Hydro Processing (Rich)	Hydro Processing General	Hydro Processing Control Center		
1605660	8/25/2009	LI	LI - Safe Operating Limit (SOL) Exceeded	Level 1	Level 2	On night shift of 8/25/09 - Loss of C-730 18A tray caused P-734 pump to loose suction. This caused N	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	GRU 7		
1813716	2/3/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	At about 3:30 pm today, - contract employee is working on vessell V-7344, before starting his wor	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	GRU 7		
1605476	8/25/2009	LI	LI - Equipment Failure	Level 1	Level 1	At start of night shift, Operations became concerned about H2S coming from the K-734'S. K-734B had j	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	GRU 7		
1815944	2/5/2010	LI	LI - First Aid with Medical Referral	Level 1	Level 3a	Operator fell through grading at K-734A while performing routine operator duties. The operator repo	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	GRU 7		
1686032	10/23/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	GRU7 Light Gas sample station began to spray from NACT fitting while pulling a sample. The fitting	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	GRU 7		
96708	8/18/2009	LI	LI - Contractor First Aid	Level 1	Level 1	TapRoot Investigation - TKN E757 H2S exposure; Clinic reported that a Flour EE performing Fire Wat	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	GRU 7		
57	6/17/2010	LI	LI - Permit Exceedance	Level 1	Level 1	77PT750 plugged causing a false lower pressure indication on C-750 over head pressure, thus Opening t	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	GRU 7		
31	3/5/2010	LI	LI - Release	Level 1	Level 2	Operators were preparing to blind the first stage pulsation bottle for K-734. The safety operator on	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	GRU 7		
50	3/23/2010	LI	LI - Non-Industrial	Level 1	Level 1	EE was working in V-640 setting up heat mats when he felt ill. Symptoms experienced were nausea, cou	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 6		
4099	4/9/2010	LI	LI - Fire/Explosion	Level 1	Level 1	P-601A Incipient Insulation fire: Outer Smoldering Insulation on discharge stop-check valve of P-60	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 6		
1874159	3/22/2010	LI	LI - First Aid	Level 1	Level 1	At approximately 2300 an operator in the North Isomax shutdown bumped his head on a horizontal stagi	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 6		
1568393	7/26/2009	LI	LI - Operational Leak	Level 1	Level 2	On July 26th at around 7pm the process flow through E-620, F620 and R-620 was turned off. There was	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 6		
1816490	2/6/2010	LI	LI - Equipment Failure	Level 1	Level 2	~ 1135 hrs on 2-6-10 D Crew North Isomax	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 6		
1845726	2/28/2010	LI	LI - Operational Leak	Level 1	Level 3a	TOP INVESTIGATION--On February 28th at midnight, during a planned shutdown exchanger E-620 located i	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 6		
1860535	3/10/2010	NLI	NLI - Release	No Level Selected	Level 1	At approximately 23:00, nineteen personal H2S monitors went off in the vicinity of ISO 7, F-731. As	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1863258	3/13/2010	NLI	NLI - Employee Injury	No Level Selected	Level 1	While performing firewatch duties, Contract EE noticed some grinding activities on C-730 above were	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1863508	3/14/2010	NLI	NLI - Fire/Explosion	No Level Selected	Level 2	Ox/Acetylene bottles left on @ regulator during shift change. Torch leaking in column.	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1603421	8/25/2009	NLI	NLI - Operational Leak	No Level Selected	Level 1	During pressure test on K-734 B after repair, it was found that N2 pressure was not holding. No ext	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1854823	3/3/2010	NLI	NLI - Release	No Level Selected	Level 1	5 workers were working downwind of a fresh air job being performed on K-734's, when their personnel	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1891795	4/6/2010	NLI	NLI - Release	No Level Selected	Level 1	While cleaning up area around P-737 EE's personal H2S monitor activated.	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1890775	4/5/2010	NLI	NLI - Release	No Level Selected	Level 1	While replacing the gasket on PRD flange leak 3 S/D personnel had their personal H2S monitors active	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1854706	3/5/2010	NLI	NLI - Release	No Level Selected	Level 2	Multiple H2S alarm activations (18), Readings and Contract EE names documented and recorded by IH on	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1854564	3/5/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	EE reported to supervisor on 05/Mar/2010 at 2200 hours that on previous shift at approximately 0100	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1860580	3/10/2010	NLI	NLI - Release	No Level Selected	Level 1	At approximately 23:00 on 10/Mar/2010, EE experienced symptoms after personal H2S monitor went off i	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1855720	3/8/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	On March 8, 2010 approximately 03:10 a Biggs Rigger was unloading a valve from the P-737A piping dem	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1857525	3/9/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	During an incident with the evacuation alarms going off in North Isomax, an contract EE working to a	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1679117	10/15/2009	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Maintenance was seal welding two leaking plugs on TP-737A. Weld rod was checked out on 10/14 for the	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1871919	3/19/2010	NLI	NLI - General Liability	No Level Selected	Level 1	On 3/19/2010 sometime after 10:00 pm it was observed that there was a contractor inside of F-731 wit	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1871919	3/19/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	On 3/19/2010 sometime after 10:00 pm it was observed that there was a contractor inside of F-731 wit	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1891438	4/5/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	IX-733 was installed, QC'd and turned over to Operations. Valve leaked when put into service, result	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1891457	4/5/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	After releasing ISO 7 back to Operations, it was noticed that a section of 1-1/2" screwed water pipi	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1891479	4/6/2010	LI	LI - First Aid	Level 1	Level 1	After putting burners in service on F-731 an Operator turned to descend the stairs on the associated	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1894210	4/9/2010	LI	LI - Equipment Damage	Level 1	Level 3a	K-734B Shutdown: During startup of ISO-7, K734B was started up as part of normal procedures. Aprox	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1879065	3/25/2010	LI	LI - Non-Industrial	Level 1	Level 1	At 0810 it was reported to Chevron Safety that a contractor EE was having a nose bleed that he was u	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1853580	3/4/2010	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	Two EE's, one Chevron, and one Contract had their H2S monitors activate in the vicinity of Iso 7. Ma	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1890691	4/5/2010	LI	LI - First Aid	Level 1	Level 2	EE was inspecting completed work performed on a leaking flange when they were exposed to H2S from an	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1889596	4/3/2010	LI	LI - Contractor First Aid	Level 1	Level 1	While performing an inspection of pumps in ISO-7 a contract employee felt a particle of dust enter t	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1824362	2/13/2010	LI	LI - Product Quality (Int)	Level 1	Level 1	During the raising of TKN from 30K to 50K feed rate the Jet product was off test on the freeze	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1883482	3/29/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Contractor was working on C-730 pulling up insulation boxes to a scaffold deck with a rope. Contract	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1597104	8/19/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 1	ISO-7 Loss of K734's: During start up of GRU-7 level indication of V731 (LI737) went suspect after	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1892654	4/7/2010	LI	LI - First Aid	Level 1	Level 2	EE was climbing down a roll-around ladder and as he stepped off the bottom step onto the pavement, h	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1871616	3/18/2010	LI	LI - Safe Operating Limit (SOL) Exceeded	Level 1	Level 1	During a hydrotest of E-733A a tube plug shot out of its respective tube, bounced across a smal	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1854663	3/5/2010	LI	LI - Non-Industrial	Level 1	Level 1	Contract EE working in his work shop area, was using a wheel wheel to clean a valve when he complain	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1899563	4/17/2010	LI	LI - Equipment Damage	Level 2	Level 3a	C730 Jet Line Leak: At 4am this morning a field operator noticed smoke wisping from underneath insu	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1883254	7/19/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	76ic737 failed and caused v-731 to carry over resulting in shutdown of k-734a/b. compressors were d	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1600362	8/22/2009	LI	LI - Equipment Failure	Level 1	Level 2	On 22/aug/2009, 05:15, North Isomax operators were getting high H2S alarms around K-734 compressors.	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1873712	3/22/2010	LI	LI - Fire/Explosion	Level 1	Level 1	At approximately 0630 a fire was reported on the east side of C-730 in the pipe rack. Open flame, on	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	ISO 7		
1900786	4/15/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	EE inadvertantly charged an air hose which once was connected to a chipping gun.	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	N. Iso CWT		
1900601	4/15/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	A Welder was grinding on a pile in a trench while another crew (Civil Crew) was chipping concrete in	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	N. Iso CWT		
1830940	2/16/2010	NLI	NLI - Spill	No Level Selected	Level 1	Sulfuric acid leak from a chemical tote located at North Isomax elevated just behind MP-261. (2) Ele	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	N. Iso CWT		
1628159	9/11/2009	LI	LI - Equipment Failure	Level 2	Level 1	At 19:07 north isomax operators noticed a drop of cooling water pressure. The board operator instruc	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	N. Iso CWT		
1812285	2/2/2010	LI	LI - Contractor First Aid	Level 1	Level 1	TOP INVESTIGATION--WORKER SPLASHED WITH ACID-Maintenance worker was splashed with acid under his fac	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	N. Iso CWT		
1836949	2/23/2010	LI	LI - Contractor First Aid	Level 1	Level 1	BRAND EMPLOYEE WAS REMOVING A SUPPORT SCAFFOLD IN AN ACID AREA, ALL THE PROPER PPE THAT	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	N. Iso CWT		
3277	3/4/2010	LI	LI - Contractor First Aid	Level 1	Level 1	EE was performing work related to the demolition of an old transformer. He was cutting bolts and ot	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	N. Iso CWT		
607	9/28/2009	LI	LI - Contractor First Aid	Level 1	Level 1	Contract ee was in a boomlift 12'-15' in elevation and saw a bolt that needed torqueing on the cool	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	N. Iso CWT		
970	8/31/2009	LI	LI - Spill	Level 1	Level 1	The vacuum truck driver passed across a hump of underground pipe between RLOP Control Room and the c	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	N. Iso CWT		
15970	8/31/2009	LI	LI - Equipment Damage	Level 1	Level 1	The vacuum truck driver passed across a hump of underground pipe between RLOP Control Room and the c	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	N. Iso CWT		
1827185	2/16/2010	LI	LI - Spill	Level 1	Level 2	Temporary acid tote located on staging at the north Isomax cooling tower found leaking to grade. Mal	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	N. Iso CWT		

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	LEVEL6
1859534	3/17/2010	LI	LI - First Aid	Level 1	Level 2	At around 11:45 a.m. Hydro supervisor was called to the old north isomax control room for an operato	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Old Control House (N.Iso)		
1860407	3/17/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	While exiting trailer EE stepped off platform and twisted left ankle. EE was checked out by Chevron	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
1916871	5/2/2010	NLI	NLI - Employee Injury	No Level Selected	Level 1	While conducting water washing of the reactor effluent samples the product had to be removed from th	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
1858746	3/9/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	EE woke up and his shoulder left hurt. Reported to supervisor after safety meeting.	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
1855159	3/8/2010	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 1	Two contract EE's (Matrix) reported to NISO SDC that their personal monitor alarmed.	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
*0	6/22/2010	NLI	NLI - Agency Warning	No Level Selected	Level 1	Contra Costa County Health Services Department's Audit follow up review for:	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
	6/22/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	Contra Costa County Health Services Department's Audit follow up review for:	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
,	7/2/2009	LI	LI - Contractor First Aid	Level 1	Level 2	Iron Worker had set her grinder off to the side after use. A moment later she shifted her body posit	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
,47	7/6/2009	LI	LI - Contractor First Aid	Level 1	Level 2	A worker was chipping concrete when the wind kicked up and he felt dust go into both of his eyes. H	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
1951495	6/14/2010	LI	LI - First Aid	Level 1	Level 2	While returning from the lab after reporting his sample results a North Isomax Operator was returnin	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
1835676	7/1/2009	LI	LI - Contractor First Aid	Level 1	Level 2	A worker reported that he scraped his hand while moving a welding machine. He stated that he had r	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
1880722	8/5/2009	LI	LI - MVC - Contractor	Level 1	Level 1	Biggs Operator was leaving after installing pump near cooling towers. He was not using a spotter. He	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
1744464	12/12/2009	LI	LI - First Aid	Level 1	Level 1	Operator was sitting at the TKC control board when his neck suddenly tightened and locked up. He imm	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
1893642	9/24/2009	LI	LI - Equipment Damage	Level 1	Level 1	Contra Costa Fire Department Engine company responded mutual aid to the Richmond Refinery for a gum	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
1910410	4/22/2010	LI	LI - Security Incident	Level 1	Level 1	Personal employee's computer was taken to home for intermittent work around a vacation scheduled. T	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	Other (N.Iso)		
1821011	9/5/2009	NLI	NLI - Employee Injury	No Level Selected	Level 2	While performing an inspection inside of R-421, EE was struck on his right forearm by a tape measure	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1947644	6/5/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	In an attempt of removal of the heat insulator (sleeve) from inside of the quench nozzle to bed 3 in	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1861666	3/11/2010	LI	LI - MVC - Company	Level 1	Level 1	The Chevron "low boy" tractor/trailer was traveling west bound on Isomax St., As the driver of the "	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1964467	6/26/2010	NLI	NLI - Safe Operating Limit (SOL) Exceeded	No Level Selected	Level 1	NLI is for the increase of reactor sums in TKC. This was caused by the lose of SOA hot DAO. There	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1976779	7/11/2010	NLI	NLI - Abnormal Supply Occurrence	No Level Selected	Level 2	At 04:15 on 11/7/10 the TKC feed valves started swinging 1.5-2.0 KBPD each. The VGO rate to the TKC	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1923874	5/12/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Machinist were installing MF-455A. Electricians were called to reconnect motor. One electrician went	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1948266	7/25/2010	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 1	On July 25, 2010 at about 15:25, while operations was completing the job of water washing E-450 and	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
2028511	8/26/2010	LI	LI - Equipment Damage	Level 1	Level 1	110 Volts applied to Honeywell FTA card	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1733394	11/24/2009	LI	LI - Operational Leak	Level 1	Level 1	Li 452 level bridal needed to be clean up for work on Li.This process involves having a maintenance	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1785275	1/12/2010	LI	LI - NSR Consent Decree	Level 2	Level 3a	Description of Incident:	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1785275	1/12/2010	LI	LI - Equipment Failure	Level 2	Level 3a	Description of Incident:	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1946089	6/8/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	TOP INVESTIGATION--P-455B HIGH VIBRATION TRIP OUT--The weekly water wash of E-550 (Shell/Tube Heat E	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1677685	10/18/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 2	At 07:30, TKC lost feed. The previous night shift had experienced P-401B feed pump cavitation and th	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1995306	8/2/2010	LI	LI - First Aid	Level 1	Level 1	At 01:30 North Isomax He notified STL that an operator made contact with steam tracing and had a bur	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1943891	6/2/2010	LI	LI - Contractor Medical w/o lost time	Level 2	Level 2	A Catalyst Services crew was working in reactor R-411 at Chevron Richmond Refinery on June 2, 2010.	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1954541	6/16/2010	LI	LI - Permit Exceedance	Level 1	Level 2	During Sulfiding of TKCR410/411 reactors, a quench valve was opened in response to cat activity in b	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1571196	7/29/2009	LI	LI - Permit Exceedance	Level 1	Level 3a	TapRoot Investigation - Liquid Carryover into TKC K-400 Recycle Compressor and Resulting Flaring aft	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1571196	7/29/2009	LI	LI - Equipment Damage	Level 1	Level 3a	TapRoot Investigation - Liquid Carryover into TKC K-400 Recycle Compressor and Resulting Flaring aft	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1571196	7/29/2009	LI	LI - Business Interruption	Level 1	Level 3a	TapRoot Investigation - Liquid Carryover into TKC K-400 Recycle Compressor and Resulting Flaring aft	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1538401	7/4/2009	LI	LI - Equipment Failure	Level 1	Level 1	During TKC start up the level indicators on V-440 and V-450 failed. These instrument (level indicato	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1536039	7/1/2009	LI	LI - First Aid	Level 1	Level 1	Operator looked up and felt something fall into his eye. Another operator came to assist him to a ey	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1779255	1/4/2010	LI	LI - Plant Run Out/Slow Down	Level 1	Level 1	TKC4 - Bad packing orbit valve on PC4000 mainfold; PC4000 downstream block valve was discovered to	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1562822	7/4/2009	LI	LI - Business Interruption	Level 1	Level 1	The new guided wave radar transmitters gave false high scale readings for level measurements for V-4	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1581769	7/4/2009	LI	LI - Equipment Failure	Level 1	Level 1	During the execution of the TKC purity project (reliability scope), the M/U 1-2 to K-400 suction pipi	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 4		
1693492	10/27/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 2	P-713 pump was returned to service but prior to startup 2 improper conditions were found:	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1857458	3/8/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	While walking in plant near east end of P-737 in ISO 7, EE stepped on anchor bolt that was protrudin	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1986444	7/19/2010	NLI	NLI - Incorrect Product	No Level Selected	Level 1	P-713A APS controller had failed. Incorrect replacement was ordered by the P&S Group Planner. Spare	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1687006	10/24/2009	NLI	NLI - Product Unavailable	No Level Selected	Level 1	Followed written procedure of lining up valves to allow a standby pump (returning from maintenance)	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1872275	3/21/2010	LI	LI - Contractor First Aid	Level 1	Level 1	On March 21, 2010 at about 17:30 an contractor got a particle in the eye while being a gate attendon	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1927757	5/17/2010	LI	LI - Non-Industrial	Level 1	Level 1	EE had felt ill at home prior to reporting to work. After EE arrived at work the discomfort never su	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1756189	12/20/2009	LI	LI - Equipment Failure	Level 1	Level 2	0530 while filling LGO pumps into oil reservoir, area operator smelled H2O in atmosphere.	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1597638	8/11/2009	LI	LI - Equipment Failure	Level 1	Level 1	Operators was switch compressor K-714A to K-714. K-714 had been returned to operators following mino	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1946120	6/6/2010	LI	LI - Equipment Failure	Level 1	Level 1	TOP INVESTIGATION--SAFETY LIFTS ON V-712--An Operator was called to check on a pressure gauge on the	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1918805	5/5/2010	LI	LI - NOV - Air	Level 2	Level 2	FCC analyzer was disrupted by vapor flow from NISO during startup of the NH3 scrubber. No water sea	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1846745	7/27/2009	LI	LI - Spill	Level 2	Level 2	TOP INVESTIGATION--FLARING EVENT/NOx LIMITS EXCEEDED--Flaring occurred for approximately 14 minutes	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
,45	7/27/2009	LI	LI - Equipment Failure	Level 2	Level 2	TOP INVESTIGATION--FLARING EVENT/NOx LIMITS EXCEEDED--Flaring occurred for approximately 14 minutes	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
,4	9/24/2009	LI	LI - Spill	Level 3a	Level 3a	P-713 seal failed which ignited and caused shut down of TKC (No spare available). OWS-4 operator	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
,4	9/24/2009	LI	LI - Loss of Containment (LOC) Corp Reportable	Level 3a	Level 3a	P-713 seal failed which ignited and caused shut down of TKC (No spare available). OWS-4 operator	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1646404	9/24/2009	LI	LI - Fire/Explosion	Level 3a	Level 3a	P-713 seal failed which ignited and caused shut down of TKC (No spare available). OWS-4 operator	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1607220	8/24/2009	LI	LI - Equipment Failure	Level 3a	Level 3a	The TKC Main Fractionator (C-710) overhead temperature experienced a temp excursion for the period b	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1542561	7/7/2009	LI	LI - First Aid	Level 1	Level 2	When working at TKC a partical landed in my left eye, causing discomfort. Went to the refinery clin	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1957951	6/29/2010	LI	LI - First Aid	Level 1	Level 1	Mechanic was walkin through plant when he felt a partical enter his eye. He had on his safety glasse	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1852138	3/4/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Delta Tech employee moving down a ladder when a particle was blown around his safety glasses and int	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1627750	8/24/2009	LI	LI - Product Quality (Int)	Level 1	Level 1	Between 8/24 2AM and 8/26 9AM, T-1798 jet tank was being filled. When the tank was attempted to be	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKC 7		
1560320	7/22/2009	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	loss of mp-510 suc; while doing a pump swap on tp-510 to mp-510 the pump lost suction. these pumps	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
1855704	3/3/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	On March 8, 2010 approximately 01:30 Koch Plant Specialty EE's were working on replacing a slip blin	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
1857219	3/8/2010	NLI	NLI - Release	No Level Selected	Level 1	Contractor EE cleaning out V-550 had a personal H2S monitor go off. EE notified supervisor who then	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
1857219	3/8/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	Contractor EE cleaning out V-550 had a personal H2S monitor go off. EE notified supervisor who then	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
1857398	3/9/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	EE went to get in his vehicle and noticed he had cut his left index finger. EE is not sure when or	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
1620002	8/28/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	C-730 Btm sample: Three way valve was replaced with 3/4 inch globe valve, IQ guide was not changed	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
2021095	9/2/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	Particle in the eye as the EE was removing debris from E-530 stud holes using an air hose. EE was wo	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
2030167	9/17/2010	NLI	NLI - General Liability	No Level Selected	Level 2	R-530, Falling tool from top of reactor; At the end of shift, a Contract EE lost control of a tool h	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
2035727	9/23/2010	NLI	NLI - Operational Leak	No Level Selected	Level 1	At approximately 2:30 A.M. on Friday Sept 24th, while Performing the 2000lb leak check on R-530 ro	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
1883567	3/26/2010	LI	LI - First Aid	Level 1	Level 1	While performing shutdown related work, A North Isomax operator bumped his right elbow on a staging	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
2038682	9/25/2010	LI	LI - Incorrect Volume	Level 1	Level 1	Discrepancy in volume of DMDS delivered to TKN for sulfiding of R-530 The totalizer flow on the de	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
1898569	4/15/2010	LI	LI - First Aid	Level 1	Level 1	Pinched Thumb while opening isolation block valve. Operator was unblocking an isolation block valve	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
2030450	9/18/2010	LI	LI - Fire/Explosion	Level 1	Level 2	On the morning of Saturday September 18, 2010, during the unplanned R-530 Catalyst Change Shutdown,	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
1599224	8/21/2009	LI	LI - Equipment Failure	Level 3a	Level 3a	TapRoot Investigation - (Loss of K500) At approximately 0130 the North Isomax workstation 3 operator	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
2040374	9/28/2010	LI	LI - Release	Level 1	Level 1	Leak found on R530 bed 5 quench controller 74tcv536. Steam lance put on leak to mitigate fire poten	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
2040374	9/28/2010	LI	LI - Loss of Containment (LOC) Tier 2	Level 1	Level 1	Leak found on R530 bed 5 quench controller 74tcv536. Steam lance put on leak to mitigate fire poten	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
2012009	8/24/2010	LI	LI - Contractor First Aid	Level 1	Level 2	Contract EE working as hole watch person for 2 fellow workers wet dumping spent catalyst from Reacto	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
2017152	8/26/2010	LI	LI - Non-Industrial	Level 1	Level 1	At the end of his shift, Contract EE started to feel a twitching sensation in his fingers. He report	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
1874358	3/22/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Employee was carrying some material, walking around quite a bit. Employee was seen holding his chest	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
1880915	3/26/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Around 1400 hrs a contract EE felt a particle enter their eye possibly from a truck who passed them	Richmond Refinery	Hydro Processing (Rich)	North Isomax (Rich)	TKN 5		
1555649	7/20/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	TOP INVESTIGATION--PERSONNEL STUCK IN ELEVATOR--Three contract employees were mobilizing their equip	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1635804	10/29/2009	NLI	NLI - Product Quality (Int)	No Level Selected	Level 1	T-3167, which contains 600R from the HNF unit, did not final for appearance only. A test for residu	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1766462	12/20/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Near loss: loss of feed to plant for 8 minutes.	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
2003160	8/12/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	At 1523 hrs, Heavy Neutral Hydrofinisher recycle hydrogen compressor shutdown alarm 86UA864 came on	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1754802	12/10/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 1	At 13:25 on Thursday, December 10th, HNF (16pit) H2 recycle compressor (K-1600) tripped on a suction	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1802694	1/26/2010	LI	LI - Days Away From Work Case	Level 2	Level 2	WHILE INSTALLING BLINDS AT P-1601B, MECHANIC WAS LOOSENING STUDS ON 1 1/2" 2500# FLANGE	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1978775	7/13/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	RLOP Operators we prepairing to switch P-1655 and P-1635 pumps for maintenance. These bottoms pumps	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1974968	7/7/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	TOP INVESTIGATION--P1635 PUMP SWAP ISSUES (Also reference IPS # 1978775): On July 7th, 2010, the Hea	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1575705	5/1/2009	LI	LI - Contractor First Aid	Level 1	Level 2	EE was hit by the chain from a chain fault in the hard hat and slightly down his right arm causing a	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1589757	7/21/2009	LI	LI - Abnormal Supply Occurrence	Level 1	Level 1	New 2.4 KV Electrical equipment ordered for the P-1601 Replacement project had several fit-up proble	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1582387	6/6/2009	LI	LI - First Aid	Level 1	Level 1	During the RLOP shutdown, as the operator was walking through path in HNF, maintenance pulled on a h	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1816303	2/5/2010	LI	LI - Business Interruption	Level 1	Level 1	C-1650 600R product was routed off test. The column was upset do to the selected level indicator gol	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1600272	8/22/2009	LI	LI - First Aid	Level 1	Level 1	Operator was using a steam lance on K-1600 and accidently moved his hand from the steam lance handle	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1537958	7/3/2009	LI	LI - Product Quality (Int)	Level 1	Level 1	HNF Off test product -- Pour point: At 18:30hrs the HNF Btms stream (600R) was routed Off test due	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNF		
1559856	7/7/2009	NLI	NLI - Release	No Level Selected	Level 1	HNC R-1410 inlet companion flange leak during recycle cool down (3Q09 RLOP Turnaround).	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNC		
1594529	8/17/2009	NLI	NLI - Release	No Level Selected	Level 1	HNC flare event	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNC		
2022369	9/8/2010	NLI	NLI - Equipment Damage	No Level Selected	No Level Selected	At Approx. 12:16 K-1400 started surging. At approx 14:10 the compressor started surging to the point	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNC		
*2926	8/12/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	TOP INVESTIGATION-- ELEVATOR MALFUNCTIONED--At approximately 21:00 hrs two contractors ascended the	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNC		
926	8/12/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 1	TOP INVESTIGATION-- ELEVATOR MALFUNCTIONED--At approximately 21:00 hrs two contractors ascended the	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNC		
307	8/5/2009	LI	LI - Fire/Explosion	Level 1	Level 1	While stripping 12" S.S. water quench piping at 1600 degrees, resistance heater laid on top of therm	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNC		
,2911	8/15/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 1	R-1410 and R-1411 Catalyst soak and flush before Sulfiding.	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNC		
1744153	12/3/2009	LI	LI - Plant Run Out/Slow Down	Level 1	Level 1	K1400 Lube Oil/Seal Oil Issues; Reducing HNC feed for K1400 (possible) seal failure....	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNC		
1682618	8/6/2009	LI	LI - Contractor First Aid	Level 1	Level 1	EE reach into the machine grabbed piece of steel, the material cut threw EE's gloves and cut index	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNC		

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	LEVEL6
1999007	8/5/2010	LI	LI - Plant Run Out/Slow Down	Level 1	Level 1	During day shift on August 5, 2010, Process Control Engineering and Process Engineering were trouble	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNC		
1949316	6/6/2010	LI	LI - Equipment Failure	Level 1	Level 1	A leak was discovered on the HNC V-1410-20 sour H20 line at the cracker heuncry just upstream of an	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HNC		
1556851	7/19/2009	NLI	NLI - Operational Leak	No Level Selected	Level 1	On Saturday July 19 at 14:00 operations noticed C-1550 inlet flange leaking process. This was durin	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HND		
1783965	1/11/2010	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	Loss of instrument air supply to controller for Fuel Gas for F-1500 and A&B chopper valves on Fuel &	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HND		
1783965	1/11/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	Loss of instrument air supply to controller for Fuel Gas for F-1500 and A&B chopper valves on Fuel &	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	HND		
1626453	9/7/2009	NLI	NLI - Product Quality (Int)	No Level Selected	Level 2	T-3164 was off-test on cold crank viscosity for the 100R run that ended on 9/7/09. The measured CCV	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1774665	12/30/2009	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	LNF - K1300 slowed down; chopped F1310 to min. fire on low low H2 flow. Suspected cause was wet 40#	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1923281	5/11/2010	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 1	Attempted to start the LNF feed pump P1301A but the pump tripped out before pump came online. An el	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1812179	2/1/2010	NLI	NLI - Product Quality (Int)	No Level Selected	Level 2	The RLOP Light Neutral Finishet was on a 7R UCBO run from 1/29/10 at 12:00 to 2/1/10 at 00:00 (2.5 d	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1865748	3/15/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Loss of P-1360A (Hot Oil Pump);	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1908131	4/26/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	HVAC mechanic was called out to repair a chiller at the LNF. The mechanic did not have an operator s	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1867613	3/16/2010	NLI	NLI - Product Unavailable	No Level Selected	Level 1	During dayshift, plant operators noticed LNF stand-by feed pump was cold. Operations opened warm-up	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1923356	5/12/2010	NLI	NLI - Release	No Level Selected	Level 1	During the LNF startup the level in the High Pressure Separator dropped and the level control valve	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1555473	6/18/2010	LI	LI - First Aid	Level 1	Level 2	RLOP Operator was walking to collect a 2 side cut sample while he was walking past the 4 side cut pu	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1671483	10/13/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 1	LNC recycle gas compressor K-1100 was automatically shutdown due to a high vibration reading on the	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1812205	1/11/2010	LI	LI - Paperwork incorrect/not sent	Level 1	Level 3a	A pin-hole leak developed on the boiler feed water line attached to V-1375 in 13 plant in RLOP. This	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1812205	1/11/2010	LI	LI - Business Process	Level 1	Level 3a	A pin-hole leak developed on the boiler feed water line attached to V-1375 in 13 plant in RLOP. This	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1537949	7/3/2009	LI	LI - Product Quality (Int)	Level 1	Level 1	LNF Off Test Product – Pour Point At 18:40hrs the LNF Btms stream (220R) was routed Off test due	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1824933	2/14/2010	LI	LI - Business Interruption	Level 1	Level 1	LNF btms off test on high Pour Point: LNF bottoms (220R) routed off test line due to off-test pour	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1560443	7/5/2009	LI	LI - Days Away From Work Case	Level 2	Level 2	On the morning of July 5th 2009 approx 0900 CFD/EMT were notified of possible injury in Hydro. EE w	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1962169	6/24/2010	LI	LI - Safe Operating Limit (SOL) Exceeded	Level 1	Level 1	While switching to a 220R run in the LNF F-1750 was run with <0.0 O2 for 5 hrs. (From shortly after	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1892214	4/7/2010	LI	LI - Safety Systems and Relief Devices	Level 1	Level 2	LNF recycle compressor K-1300 shutdown due to high turbine vibration. Consequently, system pressure	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1892214	4/7/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 2	LNF recycle compressor K-1300 shutdown due to high turbine vibration. Consequently, system pressure	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1971076	4/4/2010	LI	LI - Equipment/Unit Trip	Level 2	Level 2	LNF reactor feed furnace F-1310 FSC tripped on low gas low during a 220R to 110RLV feed switch. The	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1962618	4/20/2010	LI	LI - Equipment Failure	Level 3a	Level 3a	On 4/20/10, water-contaminated feed was sent to the LNF during a 220R to 110RLV feed switch. As the	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1897330	1/29/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 2	Chopped F1750 on low HC flow due to reducing feed 3K. Didn't lose any product since procedure requi	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1986649	7/17/2010	LI	LI - Product Quality (Int)	Level 1	Level 1	The LNF completed a 110RLV production run on 7/16/10 night-shift. The tank finated with a VI of 119	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNF		
1588153	8/8/2009	NLI	NLI - Lessons Learned	No Level Selected	Level 1	During an SSE audit, Short Service Employee lacked knowledge of LPSA. EE is at elevated risk of inj	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
1556242	7/18/2009	NLI	NLI - Release	No Level Selected	Level 1	TOP INVESITIGATION--OVER-PRESSURED RELIEF SYSTEM at FLARE GAS RECOVERY	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
1769830	12/22/2009	NLI	NLI - Business Process	No Level Selected	Level 1	On 09/04/2009 Operations generated a Work Request for electrical support to troubleshoot a possible	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
2022366	9/5/2010	NLI	NLI - Safe Operating Limit (SOL) Exceeded	No Level Selected	Level 1	-Currently reducing feed in LNC due to a high temperature on E-1256. -The outlet temperature high	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
1551279	7/22/2009	LI	LI - Operational Leak	Level 1	Level 1	TOP INVESTIGATION--R1110 TOP INLET COMPANION FLANGE LEAK--While performing a sniff test for an entry	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
1903341	4/16/2010	LI	LI - Incorrect Product	Level 1	Level 1	This is a loss of approximately 1.8 MB of W110RLV production into the W100 tank.	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
1539187	8/15/2009	LI	LI - Permit Exceedance	Level 1	Level 1	8/15 - Exceedance confirmed - High CO from F-1200 is the main contributor to >1000 ppm due to FG flo	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
2011773	8/24/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 2	The LNC Recycle compressor, K-1100, emergency Shutdown activated on 8/24 @ 1:13 PM. Operations made	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
1553217	7/17/2009	LI	LI - Fire/Explosion	Level 1	Level 1	LNC Fire at E1103 Feed/Bottoms exchanger. E1103 channel to shell side developed a leak and ignited.	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
1997707	8/4/2010	LI	LI - Equipment Failure	Level 1	Level 1	TOP INVESTIGATION--While on an 110RLV (Richmond Low Volatility) specialty run, the Light Neutral Hyd	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
1879116	3/25/2010	LI	LI - Equipment Failure	Level 1	Level 1	At roughly 09:50am LNC bottoms P-1255 cavitated. The other pump P-1255A AFS'ed and cavitated also. O	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
1620778	8/31/2009	LI	LI - Equipment Damage	Level 1	Level 1	Loss of base oil production due to reducing LNF feed rate, slumping of the LNC, in order to repair (	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
2014113	8/26/2010	LI	LI - Product Quality (Int)	Level 1	Level 1	LNC off test throwing off Jet Production Tank T-3190.C-1200 stripper C-1230 level upset caused hea	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
1809904	2/1/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	LNC--K1100 shutdown on High Vibration: There has been recent issues with controlling E-1100 (Surfa	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LNC		
1907439	4/24/2010	NLI	NLI - Product Quality (Int)	No Level Selected	Level 1	LNC jet product off-test on freeze (high).	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LND		
1769125	12/21/2009	NLI	NLI - Product Unavailable	No Level Selected	Level 1	RLOP K-1297 variable speed drive fan failed. Fan serial and model numbers were not accessible unles	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LND		
1764634	12/17/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 1	K1297 went down on high temp and chopped F1200 and F1250. K-1297 shutdown due to high temperature a	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LND		
1767688	12/21/2009	LI	LI - First Aid	Level 1	Level 1	As operator was descending stairs on north side of LND boundary, steam from V-1275 bleed to grade co	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	LND		
1650883	9/25/2009	NLI	NLI - Business Interruption	No Level Selected	Level 2	A Near Miss occured when a 9/16th socket fell from a unknown height off of C-1810. No workers were	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1576125	7/31/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 1	Engaged in Wheel Work When Injured. Night shift employee was removing old grease fittings and install	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1691118	10/19/2009	NLI	NLI - Lessons Learned	No Level Selected	Level 1	During the 3Q09 18 Plant Major Shutdown, a total of (6) API 85 trim (410SS/HF) valves were installed	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1648280	9/27/2009	NLI	NLI - Lessons Learned	No Level Selected	Level 1	Do to the TKC fire on 9/24; the wild naphtha stream to C-1100 (ATCR) was blocked in order to prevent	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1679164	10/15/2009	NLI	NLI - Business Interruption	No Level Selected	Level 1	Mechanics were installing the bearing bracket on P-1021A. There was a discrepancy noted by the mecha	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1560350	7/22/2009	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 1	During the clean-up of 18 Plant GRU, the combined relief header to K-1060 and K-1070 FGR compressors	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1686781	10/24/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	During the start up of 18 plant (RLOP 2NHS H2S) an operator noticed the small stream of sour water s	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1640180	9/10/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	RLOP's Trainer (setting a Job Aid) was conducting a field test on GRU-19 propane sample station - di	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1691592	10/20/2009	NLI	NLI - Lessons Learned	No Level Selected	Level 1	During the 3Q09 18 Plant Major Shutdown execution, a new column was ordered from BFM to replace C-18	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1667280	10/8/2009	NLI	NLI - Operational Leak	No Level Selected	Level 1	Employee was verifying Loto of pump in 19 Plant. Pump was returning from shop. While opening bleed	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1758119	12/12/2009	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 1	while in route to shut down a feed pump p-1601, at 13:00 RLOP lost all radio contact, the portable h	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
2030270	9/17/2010	NLI	NLI - Product Contamination (Int)	No Level Selected	Level 1	At about 1000H, P1845 is observed to be gassing off and this initiated fluctuation of flow swingin	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1991405	7/28/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	I recieved a notice through the RLOP OMC from the ACIG-VOC inspections group stating that VOC TAG #	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1926728	5/15/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	"C" Crew Night shift on 05/15/2010 & 05/16/2010 worked understaffed. While plant start up was in pro	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1970102	6/30/2010	NLI	NLI - General Liability	No Level Selected	Level 1	The planning of the E-1950 (C-1950 OVHD condensers) water wash job was to take one fin fan out of se	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
2030493	9/18/2010	NLI	NLI - Product Quality (Int)	No Level Selected	Level 1	At 21:10 on September 18, 18 plant C-1020 became unstable. The outlet temperature dropped from 308F	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1591944	8/14/2009	LI	LI - Release	Level 1	Level 2	3rd stage H2 release at RLOP upon opening makeup valve to HNC.	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1591944	8/14/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 2	3rd stage H2 release at RLOP upon opening makeup valve to HNC.	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1562531	7/23/2009	LI	LI - First Aid	Level 1	Level 1	During steam out operation of 19 plant clean up. An operator took off his Glove to wipe his brow.	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1541650	9/22/2009	LI	LI - Spill	Level 1	Level 1	During 18 plant clean up, and checking lines for cleanliness, a bleeder was opened and a small amoun	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1775396	12/23/2009	LI	LI - Equipment Failure	Level 1	Level 2	When we try to give P-1631A to maintenance for repair we find out that the Discharge block valve was	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1903818	4/21/2010	LI	LI - Non-Industrial	Level 1	Level 1	This is for reporting purpose only. An operator reported to work with a discomfort in his right wris	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1563579	7/24/2009	LI	LI - First Aid	Level 1	Level 1	While in the process of opening a 2" block valve located under the reboiler deck of E-1927A&B(valve	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1648558	9/26/2009	LI	LI - First Aid	Level 1	Level 1	RLOP Operator Arm Slinger:: Operator was hooking up a double block & bleed line at chest level to st	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1581262	8/5/2009	LI	LI - Non-Compliance Government Requirement	Level 1	Level 1	Operators, while walking a LOTO, noticed what appeared to be a radiation containment box that was la	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1581262	8/5/2009	LI	LI - Non-Compliance Company Policy	Level 1	Level 1	Operators, while walking a LOTO, noticed what appeared to be a radiation containment box that was la	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1690628	10/27/2009	LI	LI - Non-Industrial	Level 1	Level 2	On Oct 26, 2009 was informed of a possible injury that may have taken place on 09 Oct 2009. Internal	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
2039900	9/28/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Employee reported feeling sick, nauseous, slight headache.	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
2001515	8/11/2010	LI	LI - First Aid	Level 1	Level 1	Near the end of Tuesday's nightshift, Operator was in the process of emptiing the recovered solvent t	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1824550	2/13/2010	LI	LI - Equipment Failure	Level 1	Level 1	Operator water flushed P1850 NH3 reflux pump for maintenance work on leaking seal flush tubbing. Op	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1723275	11/18/2009	LI	LI - Equipment/Unit Trip	Level 2	Level 2	K-1900 is the feed gas compressor for the RLOP Gas Recovery Unit. This compressor takes offgas from	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1552703	7/16/2009	LI	LI - Equipment Damage	Level 1	Level 1	TOP INVESTIGATION--P-1845 ELECTRICAL ISSUES	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1933019	5/22/2010	LI	LI - Equipment Failure	Level 1	Level 1	Starting the week of 5/16/10 P1850A started amping out. We have been running without a spare for to	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1830284	1/30/2010	LI	LI - Equipment Failure	Level 1	Level 1	E1940 fin fans B & C shutdown due to vibration numerous times. We restarted them and they shutdown	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1604684	8/22/2009	LI	LI - Product Quality (Int)	Level 1	Level 1	The RLOP GRU offtasted propane for i-C4 and n-C4 at the RAX from ~8/21 17:00 to 8/23 01:00. During	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1641907	9/22/2009	LI	LI - First Aid	Level 1	Level 3a	RLOP operator was in the RLOP change room at his locker. As the operator was getting up from the ben	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1920562	5/7/2010	LI	LI - Permit Exceedance	Level 1	Level 1	FCC Totalizer tripped: Increased flow to the flare triggered the FCC totalizer. Investigation as	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	Other (RLOP)		
1929998	5/17/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	Near Loss - potential reduction of reates in RLOP due to loss of cooling.	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	RLOP CWT		
1585537	8/10/2009	LI	LI - Release	Level 1	Level 1	Flare totalizer at South Isomax went off when K-1900 had to be shut down for lube oil leak on coupli	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	RLOP Flare		
1592329	7/23/2009	LI	LI - Permit Exceedance	Level 1	Level 1	Increased flow to North yard FGR due to Rlop cleanup of plants for shutdown.	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	RLOP Flare		
1852927	2/25/2010	LI	LI - Non-Compliance Government Requirement	Level 1	Level 1	Loss: Bad order instrumentation; no title V entry; alarm disabled with no turnover / communication.	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	RLOP Flare		
1542998	7/8/2009	LI	LI - Contractor First Aid	Level 1	Level 2	Contract EE was moving the Scaffolding materials in the yard ,Wind was blowing , and with the wind h	Richmond Refinery	Hydro Processing (Rich)	RLOP (Rich)	RLOP Flare		
1936792	8/3/2010	NLI	NLI - Product Mis-Delivery	No Level Selected	Level 1	Shipment document #10260852 from HUNTSMAN showed a delivery of 45,835 LB Diethanolamine (DEA) with	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10 Plant #4 H2S		
1936792	8/3/2010	NLI	NLI - Paperwork Incorrect/Not Sent	No Level Selected	Level 1	Shipment document #10260852 from HUNTSMAN showed a delivery of 45,835 LB Diethanolamine (DEA) with	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10 Plant #4 H2S		
1935889	5/19/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 2	At 18:30 on 5/19/10, the 4H2S hydrocarbon in acid gas analyzer spiked from ~ 1000 ppm to the range m	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10 Plant #4 H2S		
1912440	4/1/2010	LI	LI - Equipment Failure	Level 2	Level 2	Time was lost during the exection window of 4 H2S. The 4 H2S plant was shutdown for routine API ins	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10 Plant #4 H2S		
1603047	8/24/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Instrumentation failure. Tubing connection to regulator failed. Causing PSL1052 to fail low, inform	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
1640874	9/22/2009	NLI	NLI - Employee Injury	No Level Selected	Level 2	TOP INVESTIGATION--CONTRACTOR H2S EXPOSURE--At 08:07 a Contractor's personal H2S (Hydrogen sulfide)	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
1640874	9/22/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 2	TOP INVESTIGATION--CONTRACTOR H2S EXPOSURE--At 08:07 a Contractor's personal H2S (Hydrogen sulfide)	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
1640874	9/22/2009	NLI	NLI - Operational Leak	No Level Selected	Level 2	TOP INVESTIGATION--CONTRACTOR H2S EXPOSURE--At 08:07 a Contractor's personal H2S (Hydrogen sulfide)	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
1860725	3/10/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	South Isomax was water washing E-1051 for plugging during the previous shift and the OWS-2 Operator	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
1782567	12/14/2009	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 1	Flaring Activity: natural gas flaring during shutdown of K100's.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
2003357	8/13/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 2	Note, this is a continued attorney - client privileged investigation IPS# 1385282.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
1852259	3/13/2010	LI	LI - Equipment Damage	Level 1	Level 1	Times was asked to support Veolia with the spacing of a flange in order to hydro blast V-1011. Times	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
1654081	9/30/2009	LI	LI - Equipment Failure	Level 1	Level 1	FGR compressors, K-1060 and K-1070 second stage discharge after cooler (Fin Fan E-1052) plugged. Thi	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
1853445	3/14/2010	LI	LI - Equipment Failure	Level 1	Level 1	K-1060 FGR compressor slugged with liquid which leaked past the piston rings, then past the packing	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	LEVEL6
2009249	8/21/2010	LI	LI - Contractor First Aid	Level 1	Level 2	The man was using a board that was nearby to move some gravel around to level the wire pulling stand	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
1749518	12/4/2009	LI	LI - Permit Exceedance	Level 1	Level 1	Flaring Activity: Non-Environmental Incident.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
1659204	10/1/2009	LI	LI - Fire/Explosion	Level 1	Level 1	Two Chevron EE were working at K-1060 installing new handrails. As one was welding, the other employ	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
2010244	8/23/2010	LI	LI - Contractor First Aid	Level 1	Level 1	During a wire pulling operation on the south end of the 10.5 Plant in SISO, a Contra Costa Electrica	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
1868247	3/17/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Contractor Employee was working by the flare and reported a possible bug bite. CFD was notified and	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
9629	7/11/2009	LI	LI - Equipment Damage	Level 1	Level 2	K-1070 Flare Gas compressor trips out on high vibration. Initial instection finds the crankcase has	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
14	7/13/2010	LI	LI - Equipment Failure	Level 1	Level 1	Last night the South Isomax AO-2 operator was in Flare gas recovery and noticed that P-1057A jacket	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
31	3/5/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	K-1060/70 Shutdown on High Level in V-1050 source of level unknown. OWS 2 received high level alarm	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	10.5 Plant Flare Gas Recovery		
324	3/19/2010	NLI	NLI - General Liability	No Level Selected	Level 1	A LOTO key was lost on the 2010 cluster S/D. When the operators openned the box to unlcto 20 Plant.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	20 Plant Hydrogen Recovery		
4030496	9/18/2010	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	Valve 504D, the repressurization valve for Bed 4, failed. It would not open during its cycle to pre	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	20 Plant Hydrogen Recovery		
1863257	3/13/2010	LI	LI - Contractor First Aid	Level 1	Level 1	"Contractor employee complained of sore throat and said there was a lump in throat. CFD checked the	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	20 Plant Hydrogen Recovery		
1593299	8/13/2009	LI	LI - Business Process	Level 1	Level 1	-Reinspection of UT scan area on a pressure vessel due to error in interpretation of job requirement	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	20 Plant Hydrogen Recovery		
1894282	4/11/2010	LI	LI - Permit Exceedance	Level 1	Level 1	Hydro Flaring during 20 plant startup:	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	20 Plant Hydrogen Recovery		
1739459	11/30/2009	LI	LI - Equipment Failure	Level 1	Level 1	TOP INVESTIGATION--50SB PACKING FAILURE	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	20 Plant Hydrogen Recovery		
1926279	5/15/2010	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	H2S sensor 69AI202 was activated near V-2070. AO-4 Operator and Head operator observed liquid on pu	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	20 Plant Hydrogen Recovery		
2035299	9/23/2010	NLI	NLI - Safety Systems and Relief Devices	No Level Selected	Level 2	Multi-Lin system S/D K-2600 69TI2600 Trip High Motor winding alarm.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	25 Plant Utilities		
2029528	9/18/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	TOP INVESTIGATION--	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	25 Plant Utilities		
2000268	8/9/2010	LI	LI - Product Mis-Delivery	Level 1	Level 2	A Nalco chemical shipment of EC9254A was misdelivered by the bulk carrier into the Nalco Nexguard 22	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	25 Plant Utilities		
2000268	8/9/2010	LI	LI - Product Contamination (Int)	Level 1	Level 2	A Nalco chemical shipment of EC9254A was misdelivered by the bulk carrier into the Nalco Nexguard 22	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	25 Plant Utilities		
1552745	7/10/2009	NLI	NLI - Permit Exceedance	No Level Selected	Level 2	8 plant exceeded the total allowed selenium to the bio reactor.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1786310	12/10/2009	NLI	NLI - Non Compliance - Water	No Level Selected	Level 1	In the early morning of 12/10, steam was lossed to E-817 reboiler to C-810 H2S stripper column. Thi	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1569443	7/28/2009	NLI	NLI - Employee Injury	No Level Selected	Level 1	8 Plant Field Operator was requested by OWS#1 to Block in H2 to C-820 and lower the column pressure.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1856686	3/1/2010	NLI	NLI - Product Contamination (Int)	No Level Selected	Level 1	Loss: High pH in sour water leading to elevated levels of Selenium in stripped sour water from 8 and	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1987430	7/23/2010	NLI	NLI - Product Quality (Int)	No Level Selected	Level 1	At approx 7:15 AM the feed composition in 8-plant changed, first dropping about 1% NH3 concentration	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1985475	7/20/2010	NLI	NLI - Non Compliance - Water	No Level Selected	Level 1	8 Plant WWT routed back to tankage. C-810 lost dT indication between Tray 4 & 10, it rapidly decreas	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1985475	7/20/2010	NLI	NLI - Product Quality (Int)	No Level Selected	Level 1	8 Plant WWT routed back to tankage. C-810 lost dT indication between Tray 4 & 10, it rapidly decreas	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1931541	5/20/2010	LI	LI - MVC - Contractor	Level 1	Level 1	Contractor EE was parked his truck an F-550 next to a 1500 Pickup Truck. After picking up the perm	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
2004605	8/15/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	K-840-A lube oil alarm S/D activated and shut down the compressor resulting in routing overhead NH3	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1621410	8/6/2009	LI	LI - Product Quality (Int)	Level 1	Level 1	Isomax Propane went off test while switching Propane driers.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1892442	4/7/2010	LI	LI - Product Quality (Int)	Level 1	Level 2	8 Plant SSW routed off-test due to high ammonia content at bioreactor. SSW was black in color and b	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1979978	7/15/2010	LI	LI - Product Contamination (Int)	Level 1	Level 1	Summary:	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1932315	3/19/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Contract EE was being monitored (industrial hygiene personal air monitoring) for hexavalent chromium	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1798440	1/25/2010	LI	LI - Equipment Failure	Level 1	Level 1	TOP INVESTIGATION-V-820 LEAK-An operator noticed an odor as he was walking through his plant at Sout	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
2025789	9/12/2010	LI	LI - Product Quality (Int)	No Level Selected	No Level Selected	8 PLANT ROUTED OFF TEST DUE TO UNSTABLE OPERATION IN C-820	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1871606	3/19/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Employee was posting as a firehole watch for welding job on V-800 in 8 plant. Employee was stationc	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
2004356	8/13/2010	LI	LI - Product Quality (Int)	Level 1	Level 1	8-Plant C-810 column upset 6:30PM 8/13. DP rose, NH3 indication percentage swung by 1%. Column was	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	8 Plant Sour Water Plant		
1575878	8/1/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 1	Welder while setting up for a job and pulling leads in the general vicinity of V-910, felt some int	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1698806	10/30/2009	NLI	NLI - Operational Leak	No Level Selected	Level 2	TOP Investigation: K940 OIL LEAK TO SEWER	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1761331	12/15/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Firewater supply line (10 inch) to 8,9 and 10 Plant has a 1 -2 inch hole in line. Located Overhead	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1853620	3/4/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	The electric shop was performing PM on MK-960 in South Isomax. The covers were remove to access the	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1890567	4/5/2010	NLI	NLI - Plant Run Out/Slow Down	No Level Selected	Level 1	Console operator requested Booster compressor loading status and routing status of LSFO hydrogen in	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1927921	5/14/2010	NLI	NLI - Non Compliance - Air	No Level Selected	Level 1	Operator was blowing level down from V-930 and watching level indication when he got a call from O	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1889638	4/3/2010	LI	LI - Equipment Damage	Level 3a	Level 3a	TapRoot - S/D of K-930, K-940, & K-960 H2 Boosters due to 1st Stage Cylinder Damage	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1576919	8/2/2009	LI	LI - Contractor First Aid	Level 1	Level 2	While exiting a scaffold after installing a valve for V-9010, EE rolled his right ankle on the un-ev	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1892757	4/8/2010	LI	LI - Equipment Failure	Level 1	Level 1	TOP Investigation: Leaking valve flanges (H2 Service) on K-920.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1677412	10/16/2009	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	While attempting start on K-920, had a no start (2 times). Created work request and during the elect	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1564200	7/25/2009	LI	LI - Equipment Failure	Level 1	Level 1	OAt around 14:30 operations noticed a loud knock coming from K-950. Further investigation revealed t	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1691813	10/27/2009	LI	LI - Days Away From Work Case	Level 2	Level 2	Operator was performing housekeeping after a job at T900 in South Isomax. He was placing locks back	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1766670	12/18/2009	LI	LI - Equipment Failure	Level 1	Level 1	Operator was making rounds when he noticed leaking at K-910 #5 Cylinder Third stage at a bleeder val	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1647426	8/27/2009	LI	LI - Plant Run Out/Slow Down	Level 2	Level 2	Broken isolation valve on the 2nd stage suction of K-960 lead to shutting down both K-950 and K-960	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1896798	4/13/2010	LI	LI - Equipment Failure	Level 1	Level 1	At approximately 8:30 pm last night the CFD responded to S. Isomax Booster Deck K-940 after a 1 1/2"	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
5972	11/13/2009	LI	LI - Equipment Failure	Level 1	Level 1	At 14:00 the south Isomax HO informed the STL of a jacket water leak in the temporary aluminum retu	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
990	1/19/2010	LI	LI - Equipment/Unit Trip	Level 2	Level 2	TOP INVESTIGATION--Lost 9 PLANT BOOSTER COMPRESSORS	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
317	4/27/2010	LI	LI - Permit Exceedance	Level 1	Level 1	Flaring Incident from V-930.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
5733	2/28/2010	LI	LI - Equipment Failure	Level 1	Level 1	Operations was aware that K-930 #1cyl had valves that were getting hot when unloaded and were leakin	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1575577	7/31/2009	LI	LI - Contractor First Aid	Level 1	Level 2	Employee bent over staging bar to put pick up a box of studs. Felt a pop on his right side of rib ca	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1892471	4/6/2010	LI	LI - Equipment Failure	Level 1	Level 1	Steam hose leaked during use on the booster deck while Contractor EE was cleaning parts.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1582269	7/18/2010	LI	LI - Equipment Failure	Level 2	Level 2	K-920 2nd stage #4 cyl. valves failed 9:58am 7/18. Was over 360 deg. per 63I9204. Reversed Flow c	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1537048	7/2/2009	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	When loading H2 compressor K-930, the 2nd stage PRD lifted due to the D/S discharge block being froz	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	9 Plant Booster Compressors		
1853965	3/4/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	Due to communication error the dollar plate on E-333A was taken off, therefore making the area an Ar	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1853965	3/4/2010	NLI	NLI - General Liability	No Level Selected	Level 1	Due to communication error the dollar plate on E-333A was taken off, therefore making the area an Ar	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1882374	3/25/2010	NLI	NLI - Incorrect Volume	No Level Selected	Level 1	C-335 had much leftover packing due to incorrect drawing dimensions and overloaded sacks from the ma	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1882374	3/25/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	C-335 had much leftover packing due to incorrect drawing dimensions and overloaded sacks from the ma	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1951800	6/14/2010	NLI	NLI - Incorrect Product	No Level Selected	Level 2	TOP INVESTIGATION--ARSENIC INJECTION--On 6/14/2010 at 09:00am, an area operator was instructed to in	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1631764	9/14/2009	LI	LI - Plant Run Out/Slow Down	Level 1	Level 1	Original estimate for crimping F-305B four leaking tubes was not met, causing an extended delay of H	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1631764	9/14/2009	LI	LI - Business Interruption	Level 1	Level 1	Original estimate for crimping F-305B four leaking tubes was not met, causing an extended delay of H	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1858840	3/8/2010	LI	LI - MVC - Contractor	Level 1	Level 1	MVC, Contractor vs Contractor. A forklift being driven by a Koch EE, backed up and made contact with	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1858891	3/10/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Employee was removing demister pad from inside V-320 in A train. Demister pad was damaged and stuck	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1890745	4/5/2010	LI	LI - Equipment Failure	Level 2	Level 2	A-Train/F-305 C Cell tube leak.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1918902	4/21/2010	LI	LI - Non-Compliance Government Requirement	Level 1	Level 1	The following is copied from the 5-Why Investigation:	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1862897	3/12/2010	LI	LI - Contractor First Aid	Level 1	Level 1	3 Contract EE's employees were chipping trays and corners inside of C-335 arsenic regulated area at 1	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1820803	2/10/2010	LI	LI - Equipment Failure	Level 3a	Level 3b	On February 10, the South Isomax Head Operator discovered a pinhole Hydrogen leak on the 10-inch elb	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1864569	3/14/2010	LI	LI - Equipment Damage	Level 1	Level 1	Spectrum Heat Treating were in the process of heat treating the pig tails on F-305, and during the P	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1835287	9/14/2009	LI	LI - Non-Compliance Company Policy	Level 1	Level 1	While ceramic fiber barrier tape was hung for the F-305B tube crimping work, several people were obs	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
2036665	9/25/2010	LI	LI - Equipment Failure	Level 1	Level 1	South Isomax MEA pump P-332A unexpectedly shutdown resulting in a temporary loss of ~ 70mmscfd of hyd	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1851623	3/3/2010	LI	LI - MVC - Contractor	Level 1	Level 1	Contract EE from one company, struck another Contract companies vehicle causing a minor dent near th	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1777320	1/2/2010	LI	LI - Equipment Failure	Level 3a	Level 3a	At 09:10 A train Operator was checking F-305 furnace and noticed that there was something not right.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1976736	7/9/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	K-300A Amps had started increasing at 20:30, OWS#2 console operator contacted the AO-3 area Operator	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1856726	3/8/2010	LI	LI - Contractor First Aid	Level 1	Level 1	While climbing to the top of C-335, EE raised the ladder drop bar to exit onto the deck and released	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1781899	1/8/2010	LI	LI - First Aid	Level 1	Level 2	While the EE was performing his duties the EE stood up without seeing an obstruction and jammed his	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1628233	9/13/2009	LI	LI - Equipment Failure	Level 3a	Level 3a	Sequence of events:	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen A Train		
1702639	11/2/2009	NLI	NLI - Product Unavailable	No Level Selected	Level 1	Ordered MEA when 6 inches left in the MEA supply tank. B Train lean MEA concentration was less than	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen B Train		
2023668	9/8/2010	NLI	NLI - Incorrect Product	No Level Selected	Level 1	R-365 Feed Vent pressure control valve 62PV366 had failed in the open position. Trouble shooting had	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen B Train		
1920532	5/5/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Near loss/ safety item, slipping hazard due to underground H2O leak south of B train furnace near st	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen B Train		
1876362	3/23/2010	LI	LI - Equipment Failure	Level 1	Level 1	B Trn K-361E Shutdown: At 23:59 hrs K361E forced induced fan shutdown. Several attempts to restart	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen B Train		
1975750	7/8/2010	LI	LI - Equipment Failure	Level 1	Level 1	New packing was installed in the field on P-361 and didn't have sufficient water leakage for lubrica	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen B Train		
1958461	6/21/2010	LI	LI - Equipment/Unit Trip	Level 2	Level 2	Boiler Feed water pump TP-360A on Hydrogen B-train had a governor failure with B-train Mp-360 BFW p	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen B Train		
1881535	3/28/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	TOP INVESTIGATION--FURNACE TRIP--During the start-up stage of the Hydrogen 2B Train (on Mar 28, 2010	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen B Train		
1781108	1/6/2010	LI	LI - First Aid	Level 1	Level 1	B Train First Aid to Elbow; EE struck right elbow on permanent ladder structure (steel bracket suppo	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen B Train		
1775161	12/29/2009	LI	LI - Equipment Failure	Level 3a	Level 3a	Operations contacted Inspection group for help finding a vacuum air leak on F-355C skin. After visua	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen B Train		
1782541	1/8/2010	LI	LI - Equipment Failure	Level 1	Level 1	At 3A.M. Friday night shift the AO2 operator notified the H.O. that P382 outboard pump seal was leak	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen B Train		
1848644	3/2/2010	LI	LI - Plant Run Out/Slow Down	Level 1	Level 1	Loss: B-Train tripped causing reduction in rates at several plants in Hydro. Also, some minimal fl	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen B Train		
1848644	3/2/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	Loss: B-Train tripped causing reduction in rates at several plants in Hydro. Also, some minimal fl	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Hydrogen B Train		
1903662	4/21/2010	LI	LI - Non-Industrial	Level 1	Level 1	Operator reported to work. Informed colleague that he was not feeling well and wanted to visit the c	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Old Control House (S.Iso)		
1920807	5/5/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	While making rounds on Sunday morning 08:00 09May2010, the ops saw that V-150 had a level of about 5	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Other (S.Iso)		
1874183	3/22/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	Contractor was walking along the North Isomax Flare pipeway, carrying a rolled up choker when he ste	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Other (S.Iso)		
1988045	7/17/2010	NLI	NLI - Non Compliance	No Level Selected	Level 1	During A molecular seal steam out of the NISO flare, with steam ring control valves at 10% output(Tr	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Other (S.Iso)		
1871883	3/20/2010	LI	LI - Contractor Medical w/o lost time	Level 2	Level 2	Employee was cleaning around the weld bay before the work day began, in reaching for a Piece of Pipe	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Other (S.Iso)		
0854	3/19/2010	LI	LI - Contractor Medical w/o lost time	Level 2	Level 2	P2S contractor lacerated his upper left thumb knuckle while grinding on a 1" line at the flare V-281	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Other (S.Iso)		
3205	1/17/2010	LI	LI - Product Quality (Int)	Level 2	Level 2	On January 17, 2010, at 8AM, propane at the LPG Spheres tested positive for H2S. The SISO C3 Treate	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Other (S.Iso)		
69024	4/1/2010	LI	LI - Non-Industrial	Level 1	Level 1	Contractor complained that a pre exisisting condition was bothering him to his supervisor and chevro	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Other (S.Iso)		
1845377	3/2/2010	LI	LI - Equipment Damage	Level 1	Level 1	A fold up mirror for the Chevron 28 ton DeMag crane suffered damage when it came in contact with the	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Other (S.Iso)		

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	LEVEL6
1550585	7/15/2009	LI	LI - MVC - Contractor	Level 1	Level 1	EE was moving a Genie Aerial man-lift in a lowered position when the boom came into contact with a	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Other (S.Iso)		
1616612	8/17/2009	LI	LI - NOV - Air	Level 1	Level 1	Investigate smoking flare. No flaring indications were seen (high flare header pressure or flow to t	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Other (S.Iso)		
1925873	5/14/2010	LI	LI - Non-Industrial	Level 1	Level 1	At the beginning of dayshift, Operator told STL that he had irritation to his eyes that started whil	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Other (S.Iso)		
1578684	8/4/2009	LI	LI - Contractor First Aid	Level 1	Level 1	While working on a 10 ft. section of 3" conduit that had a 90 deg radius on one end, the worker was	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	Other (S.Iso)		
1552325	7/15/2009	NLI	NLI - General Liability	No Level Selected	Level 1	While contract employee was doing his VOC inspection route that took him on top of V-141 in the SDA,	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
72458	2/2/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Contract Employee was drilling holes in the pipe rack for cable tray supports behind PH1 Power Cente	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
352	11/18/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	TOP INVESTIGATIATION--E120A GUARD ISSUES--On November 18th, 2009, during a Joint Jobsite Visit (JJSV),	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
395	12/15/2009	NLI	NLI - Operational Leak	No Level Selected	Level 1	While cleaning burners on F-120, mechanics had reinstalled a burner after cleaning and was performin	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
358	5/1/2010	LI	LI - Equipment Failure	Level 1	Level 1	Incident: Flaring from SISO with extinguishing of pilots on the flare.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
1543885	7/9/2009	LI	LI - Equipment Failure	Level 1	Level 1	TOP INVESTIGATION--SDA/C-123 High Level, Loss of Anti-Foam Injection Feed Pulled to 120 Module	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
1623541	9/8/2009	LI	LI - Equipment Failure	Level 1	Level 1	MP-125A lost suction, interruption in flow lead to a drop in DAO feed to TKC. Took several hours to	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
1623541	9/8/2009	LI	LI - Business Loss	Level 1	Level 1	MP-125A lost suction, interruption in flow lead to a drop in DAO feed to TKC. Took several hours to	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
1725210	11/19/2009	LI	LI - First Aid	Level 1	Level 1	TOP INVESTIGATION--EMPLOYEE SPRAYED WITH PRODUCT	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
1563500	7/24/2009	LI	LI - Contractor First Aid	Level 1	Level 1	While cleaning up at the job site at the end of the shift, the mechanic encountered a particle in h	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
1664430	10/6/2009	LI	LI - Fire/Explosion	Level 1	Level 1	While disassembling P-143A 13 stage pump at machine shop, liquid dripping from pump caught fire.	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
1664070	7/25/2009	LI	LI - Equipment Failure	Level 1	Level 1	At 08:45 a Pentane leak was discovered on E-130E inlet line down stream of the inlet block. Operatio	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
1664790	10/6/2009	LI	LI - First Aid	Level 1	Level 1	First Degree Burn to Neck @ SDA: While conducting routine pump checks (P-104), Operator sustained b	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
1940901	5/29/2010	LI	LI - Incorrect Volume	Level 1	Level 1	HIGH LIQUID LEVEL IN V-282 (Eleven Hours).	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
1963848	6/25/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	F-135 tripped on loss of flow. P-135 pump cavitated causing P-135A to aps on. Both pumps running an	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
1609474	8/27/2009	LI	LI - Spill	Level 2	Level 3a	TOP INVESTIGATION--Asphalt Leak from C-123/LT-123 at SDA Plant	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SDA Unit		
1578406	7/7/2009	LI	LI - Equipment Damage	Level 1	Level 2	K-300s' spillback cooler E-300 leaked natural gas into the cooling water side, indicating a tube-to-	Richmond Refinery	Hydro Processing (Rich)	South Isomax (Rich)	SNR Unit		
1800642	2/10/2010	NLI	NLI - Non Compliance	No Level Selected	Level 2	Per the National Board Inspection Code RC-1130 pressure tests for repairs are to be witnessed by a	Richmond Refinery	Maintenance Facilities (Rich)	Boiler Shop			
2008326	8/19/2010	LI	LI - First Aid	Level 1	Level 1	TOP INVESTIGATION-PIPE SPOOL FELL ON FOOT--On Aug 19, 2010 mechanics had completed welds on an 8" di	Richmond Refinery	Maintenance Facilities (Rich)	Boiler Shop			
1725644	11/15/2009	LI	LI - Non-Compliance Company Policy	Level 1	Level 1	TOP INVESTIGATION--UNAUTHORIZED PERSONNEL USING EQUIPMENT	Richmond Refinery	Maintenance Facilities (Rich)	Boiler Shop			
1897449	4/14/2010	LI	LI - First Aid	Level 1	Level 1	EE was walking past the door way between the Boiler shop & CTR. This area is usually breezy when the	Richmond Refinery	Maintenance Facilities (Rich)	Boiler Shop			
1786597	1/13/2010	LI	LI - First Aid	Level 1	Level 1	EE was lifting bleeder blinds to a cart after welding piping to them. He had done 6 of them when he	Richmond Refinery	Maintenance Facilities (Rich)	Boiler Shop			
1779081	12/23/2009	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	Radiographic film showing a 0.07" remaining thickness steam line connection to a washdown station in	Richmond Refinery	Maintenance Facilities (Rich)	Central Maintenance Building			
1779081	12/23/2009	NLI	NLI - Business Process	No Level Selected	Level 1	Radiographic film showing a 0.07" remaining thickness steam line connection to a washdown station in	Richmond Refinery	Maintenance Facilities (Rich)	Central Maintenance Building			
1930118	5/19/2010	LI	LI - MVC - Company	Level 1	Level 1	Collision with metal guard rail on Main st, outside the Central Maintanence Parking lot. Pulled the	Richmond Refinery	Maintenance Facilities (Rich)	Central Maintenance Building			
1931433	7/28/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	A PMI machine with radiation sources was found missing at the Richmond facility. The machine was los	Richmond Refinery	Maintenance Facilities (Rich)	Central Maintenance Building			
1912432	4/4/2010	LI	LI - Notice of Violation	Level 1	Level 2	Missing Niton PMI analyzer (s/n 13354) having a sealed source containing Americium 241 at 30 millicu	Richmond Refinery	Maintenance Facilities (Rich)	Central Maintenance Building			
1912432	4/4/2010	LI	LI - Non-Compliance Government Requirement	Level 1	Level 2	Missing Niton PMI analyzer (s/n 13354) having a sealed source containing Americium 241 at 30 millicu	Richmond Refinery	Maintenance Facilities (Rich)	Central Maintenance Building			
1912432	4/4/2010	LI	LI - Employee Theft (Merchandise)	Level 1	Level 2	Missing Niton PMI analyzer (s/n 13354) having a sealed source containing Americium 241 at 30 millicu	Richmond Refinery	Maintenance Facilities (Rich)	Central Maintenance Building			
1912432	4/4/2010	LI	LI - Criminal Activity	Level 1	Level 2	Missing Niton PMI analyzer (s/n 13354) having a sealed source containing Americium 241 at 30 millicu	Richmond Refinery	Maintenance Facilities (Rich)	Central Maintenance Building			
1684348	10/14/2009	LI	LI - Non-Industrial	Level 1	Level 1	Employee had been removing Christmas decorations from overhead shelves in his Garage on Sunday, Octo	Richmond Refinery	Maintenance Facilities (Rich)	Central Maintenance Building			
1995836	7/7/2010	LI	LI - Contractor First Aid	Level 1	Level 1	A contractor Janitor was getting off shift and when walking thru parking lot to get to vehicle to le	Richmond Refinery	Maintenance Facilities (Rich)	Central Maintenance Building			
1833985	2/10/2010	NLI	NLI - Employee Injury	No Level Selected	Level 1	When scheduled for a manlift training, I was also suppose to get a safety harness from the Central T	Richmond Refinery	Maintenance Facilities (Rich)	Central Tool Room			
1856822	3/8/2010	LI	LI - MVC - Contractor	Level 1	Level 1	MVC, Contractor vs Contractor, Timco EE while backing out of a parking stall, made contact with a ve	Richmond Refinery	Maintenance Facilities (Rich)	Central Tool Room			
1851384	3/3/2010	LI	LI - MVC - Contractor	Level 1	Level 1	TOP INVESTIGATION--TRUCK HIT PEDESTRIAN--Early morning on March 3rd, a contractor parked their vehic	Richmond Refinery	Maintenance Facilities (Rich)	Central Tool Room			
1851384	3/3/2010	LI	LI - Contractor First Aid	Level 1	Level 1	TOP INVESTIGATION--TRUCK HIT PEDESTRIAN--Early morning on March 3rd, a contractor parked their vehic	Richmond Refinery	Maintenance Facilities (Rich)	Central Tool Room			
1929986	5/19/2010	LI	LI - First Aid	Level 1	Level 1	Toolkeeper HM was issuing filler metal when he noticed his right arm near his elbow was bleeding a l	Richmond Refinery	Maintenance Facilities (Rich)	Central Tool Room			
1630407	2/18/2010	LI	LI - First Aid	Level 1	Level 1	EE was picking up rental equipment. After attaching to truck, he was kicking the chalk block out fro	Richmond Refinery	Maintenance Facilities (Rich)	Central Tool Room			
1983228	7/19/2010	LI	LI - First Aid	Level 1	Level 1	While working at the tool repair bench, the mechanic dropped a hammer, when stepping back to pick up	Richmond Refinery	Maintenance Facilities (Rich)	Central Tool Room			
2018265	8/31/2010	LI	LI - Medical w/o Lost Time	Level 2	Level 2	A Chevron employee heard high pressure air escaping from the regulator safety valve of a breathing a	Richmond Refinery	Maintenance Facilities (Rich)	Central Tool Room			
1749279	12/7/2009	LI	LI - First Aid	Level 1	Level 1	Employee reported to supervisor that he developed a small rash on forearm. Employee was sent to cli	Richmond Refinery	Maintenance Facilities (Rich)	Electrical Shop			
1817529	2/4/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Employee was walking to exit gate 91 at the end of the workday, when he stepped in a hole and fell.	Richmond Refinery	Maintenance Facilities (Rich)	Gate 91 - Contractor Facilities			
1679220	10/16/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	While working in the carpenter cabinet shop a carpenter was operating a hand held electric jigsaw. T	Richmond Refinery	Maintenance Facilities (Rich)	GMG Facility			
1758210	12/14/2009	LI	LI - Equipment Damage	Level 1	Level 1	Sometime between 0830 and 0930 the SawStop table saw brake was activated. The GMG supervisor was not	Richmond Refinery	Maintenance Facilities (Rich)	GMG Facility			
1793073	1/20/2010	LI	LI - Equipment Damage	Level 1	Level 1	An employee was loading 2 each 1-5/8" X 7' pipes into the back of a picup truck by hand. One of the	Richmond Refinery	Maintenance Facilities (Rich)	GMG Facility			
1946759	6/7/2010	LI	LI - First Aid	Level 1	Level 1	Employee picked up a small bag of insulation to put into the dumpster and experienced some discomfor	Richmond Refinery	Maintenance Facilities (Rich)	GMG Facility			
57391	9/30/2009	LI	LI - Contractor First Aid	Level 1	Level 1	EE was finished with lunch break and felt a burning sensation. Went to the paint shop eye wash stall	Richmond Refinery	Maintenance Facilities (Rich)	GMG Facility			
7350	4/14/2010	LI	LI - Non-Industrial	Level 1	Level 1	BRAND EMPLOYEE COMPLAINED OF A MILD SWELLING AND TIGHTNESS IN BOTH HANDS AFTER HANDLING	Richmond Refinery	Maintenance Facilities (Rich)	GMG Facility			
1946	8/17/2009	LI	LI - Criminal Activity	Level 1	Level 1	Brand Safety rep reported a color printer missing from thier office sometime between 2:30pm 8/14/09	Richmond Refinery	Maintenance Facilities (Rich)	GMG Facility			
53139	1/20/2010	LI	LI - First Aid	Level 1	Level 2	Door struck EE right ankle. EE was entering the I&E shop. EE opened door and let go of door knob to	Richmond Refinery	Maintenance Facilities (Rich)	I&E Shop			
1929591	5/18/2010	LI	LI - Non-Compliance Government Requirement	Level 1	Level 1	On May 18 we discover the cal gases we where using to calibrate the Fuel Drums V-475 and V-701 H2S a	Richmond Refinery	Maintenance Facilities (Rich)	I&E Shop			
1817919	2/8/2010	LI	LI - First Aid	Level 1	Level 1	Electrician was sent to remove a tag on the control station for the overhead crane. The tag was loc	Richmond Refinery	Maintenance Facilities (Rich)	I&E Shop			
1912949	4/29/2010	LI	LI - First Aid	Level 1	Level 2	A Instrumentation Mechanic was performing a test of a Natural Gas Regulator in the Instrumentation	Richmond Refinery	Maintenance Facilities (Rich)	I&E Shop			
2017036	8/30/2010	LI	LI - First Aid	Level 1	Level 1	A electrician was inspecting a transformer skid in the electric shop, during the inspecting he opene	Richmond Refinery	Maintenance Facilities (Rich)	I&E Shop			
1607150	7/16/2009	LI	LI - Non-Industrial	Level 1	Level 1	Non Industrial -Informational, on the morning of July 16 2009, a Chevron employee called in to repor	Richmond Refinery	Maintenance Facilities (Rich)	I&E Shop			
1891291	3/15/2010	NLI	NLI - Paperwork Incorrect/Not Sent	No Level Selected	Level 1	Chevron ee's payroll entered into SAP incorrectly and/or late resulting in inaccurate pay checks.	Richmond Refinery	Maintenance Facilities (Rich)	IMPACT Building			
2019076	8/31/2010	LI	LI - Non-Industrial	Level 1	Level 1	While working at his office station, Contract EE became ill. EMT's were notified, and after evaluati	Richmond Refinery	Maintenance Facilities (Rich)	IMPACT Building			
1943693	6/2/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	BRAND CARPENTERS ARE REPAIRING THE FLOOR IN THE MACHINE SHOP. THEY WERE AUDITED BY A	Richmond Refinery	Maintenance Facilities (Rich)	Machine Shop			
1943693	6/2/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	BRAND CARPENTERS ARE REPAIRING THE FLOOR IN THE MACHINE SHOP. THEY WERE AUDITED BY A	Richmond Refinery	Maintenance Facilities (Rich)	Machine Shop			
1858686	3/17/2010	LI	LI - MVC - Company	Level 1	Level 1	RTD EE, while backing the crane truck into the Machine shop crane bay, made contact with the bay rol	Richmond Refinery	Maintenance Facilities (Rich)	Machine Shop			
2023170	9/7/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	While grinding a shaft on the shaft grinder, the wheel started to vibrate on the return of the 6th p	Richmond Refinery	Maintenance Facilities (Rich)	Machine Shop			
2013057	8/25/2010	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Installation of P-466A delayed due to piston being damaged while machining.	Richmond Refinery	Maintenance Facilities (Rich)	Machine Shop			
2013057	8/25/2010	NLI	NLI - Business Interruption	No Level Selected	Level 1	Installation of P-466A delayed due to piston being damaged while machining.	Richmond Refinery	Maintenance Facilities (Rich)	Machine Shop			
1724547	11/18/2009	LI	LI - MVC - Personal Use	Level 1	Level 1	Chevron EE driving to work hit some black ice and lost control of company passenger vehicle. Vehicle	Richmond Refinery	Maintenance Facilities (Rich)	Machine Shop			
2034228	9/27/2010	LI	LI - Fire/Explosion	Level 1	Level 1	TOP INVESTIGATION--DUMPSTER FIRE--At approximately noon on September 27th, 2010, a small smoldering	Richmond Refinery	Maintenance Facilities (Rich)	Machine Shop			
1815109	2/4/2010	LI	LI - First Aid	Level 1	Level 1	At approximately 3:30 pm today a machinist was drilling a bleeder blind on the horizontal boring mac	Richmond Refinery	Maintenance Facilities (Rich)	Machine Shop			
1553779	7/17/2009	LI	LI - First Aid	Level 1	Level 1	While turning a piece of material on lathe #17 in the machine shop a ball of metal chips struck out	Richmond Refinery	Maintenance Facilities (Rich)	Machine Shop			
1790740	1/18/2010	LI	LI - First Aid	Level 1	Level 1	While removing piston rod from centers, the EE was supporting the rod with his right hand.When the	Richmond Refinery	Maintenance Facilities (Rich)	Machine Shop			
1873770	7/6/2010	LI	LI - First Aid	Level 1	Level 1	While EE was working on a VOC leak on the E-1434 PRD he went to his tool box to get a tool and while	Richmond Refinery	Maintenance Facilities (Rich)	North Yard Maintenance			
1862653	3/12/2010	LI	LI - Equipment Damage	Level 1	Level 1	This incident occured in front of the P2S weld bay at the #1parking lot used for the North Isomax Sh	Richmond Refinery	Maintenance Facilities (Rich)	North Yard Maintenance			
1866666	3/16/2010	LI	LI - Non-Industrial	Level 1	Level 1	While EE was driving a pick truck on Pole street near the Poly Plant going to the Alky Plant he felt	Richmond Refinery	Maintenance Facilities (Rich)	North Yard Maintenance			
1927440	2/16/2010	LI	LI - First Aid	Level 1	Level 2	Record keeping purpose only, no injury at this time - Hearing shift.	Richmond Refinery	Maintenance Facilities (Rich)	North Yard Maintenance			
1889676	3/23/2010	LI	LI - Security Incident	Level 1	Level 1	Two contract employees were searched because of a third party report of deadly weapon posession. Th	Richmond Refinery	Maintenance Facilities (Rich)	North Yard Maintenance			
1834187	2/18/2010	LI	LI - MVC - Contractor	Level 1	Level 2	Contract employee drove to Chevron north yard parking lot to pick up another employee. After pickin	Richmond Refinery	Maintenance Facilities (Rich)	North Yard Maintenance			
2028537	9/15/2010	LI	LI - Non-Industrial	Level 1	Level 1	Employee was volunteering at the Bay Area Rescue Mission as part of the Chevron Week of Caring team	Richmond Refinery	Maintenance Facilities (Rich)	Other (M&R)			
1947601	5/12/2010	LI	LI - Business Process	Level 1	Level 1	In early May 2010 Pass Control started a ticket (SR201085183I) with BRES IT Support reporting proble	Richmond Refinery	Maintenance Facilities (Rich)	Other (M&R)			
1861311	3/11/2010	LI	LI - Equipment Damage	Level 1	Level 1	E 333C rolled off of rollers at Hydroblast Pad. Bundle had been placed on the rollers at the end of	Richmond Refinery	Maintenance Facilities (Rich)	Other (M&R)			
1854256	2/24/2010	LI	LI - First Aid	Level 1	Level 1	Record keeping purpose only, no injury at this time - Hearing shift	Richmond Refinery	Maintenance Facilities (Rich)	Other (M&R)			
1744874	11/17/2009	LI	LI - First Aid	Level 1	Level 2	Record keeping purpose only, no injury at this time - Hearing shift.	Richmond Refinery	Maintenance Facilities (Rich)	Other (M&R)			
1925206	5/9/2010	LI	LI - Abnormal Supply Occurrence	Level 1	Level 3a	Catalyst for the upcoming TKC catalyst change was inspected for quality. Sacks at the catalyst ware	Richmond Refinery	Maintenance Facilities (Rich)	Other (M&R)			
1856547	3/3/2010	LI	LI - Equipment Damage	Level 1	Level 1	TOP INVESTIGATION--EXCHANGER PARTS WERE SENT TO RECLAMATION--On March 3, 2010, parts (bundle,	Richmond Refinery	Maintenance Facilities (Rich)	Other (M&R)			
1942811	5/25/2010	LI	LI - Non-Industrial	Level 1	Level 1	Record keeping purpose only, no injury at this time - Hearing shift	Richmond Refinery	Maintenance Facilities (Rich)	Other (M&R)			
1980416	6/21/2010	LI	LI - Non-Industrial	Level 1	Level 1	Record keeping purpose only, no injury at this time - Hearing shift	Richmond Refinery	Maintenance Facilities (Rich)	Planning & Scheduling Facility			
1999872	8/6/2010	LI	LI - Business Interruption	Level 1	Level 1	On 8/6 the Weekend Maintenance Crew was scheduled to install P-455A. The Mechanics found that the g	Richmond Refinery	Maintenance Facilities (Rich)	Planning & Scheduling Facility			
1648241	9/27/2009	LI	LI - First Aid	Level 1	Level 2	While doing the hot alignment on TP-713A in TKC-7 at North Isomax. The mechanic reached out to tight	Richmond Refinery	Maintenance Facilities (Rich)	RMC			
1763910	12/17/2009	LI	LI - General Liability	Level 1	Level 1	After unloading three new air conditioner units off of the truck, the forklift operator was attempt	Richmond Refinery	Maintenance Facilities (Rich)	RTD			
1849300	3/1/2010	LI	LI - MVC - Contractor	Level 1	Level 1	AT APPROXIMATELY 7:10 AM ON MONDAY, MAR. 1, A FIRST STUDENT CONTRACT DRIVER HAD A MINOR	Richmond Refinery	Maintenance Facilities (Rich)	RTD			
1731729	11/24/2009	LI	LI - First Aid	Level 1	Level 1	RTD Driver was throwing tie-down strap over load on truck and felt a small pain in his elbow. Report	Richmond Refinery	Maintenance Facilities (Rich)	RTD			
1633614	9/16/2009	LI	LI - First Aid	Level 1	Level 1	Crane Operator was looking up trying to inspect crane for assembly, Stumbled and fell over a piece o	Richmond Refinery	Maintenance Facilities (Rich)	RTD			
1594876	8/17/2009	LI	LI - Non-Compliance Company Policy	Level 1	Level 1	RTD EE was observed by the refinery manager using a cell phone while driving.	Richmond Refinery	Maintenance Facilities (Rich)	RTD			
1740888	11/29/2009	LI	LI - Operational Leak	Level 1	Level 1	The fuel truck driver was making his rounds filling equipment near the north isomax cooling water to	Richmond Refinery	Maintenance Facilities (Rich)	RTD			
1685186	8/11/2009	LI	LI - Equipment Damage	Level 1	Level 1	At approximately 0100 11 Aug 09 a PPS employee (Wharf Security Driver) was pumping gas at RTD pump	Richmond Refinery	Maintenance Facilities (Rich)	RTD			
1847551	3/2/2010	NLI	NLI - Employee Injury	No Level Selected	Level 1	Going to locker in morning, slipped on wet floor, and fell. EE cleaned up water, and left note for j	Richmond Refinery	Maintenance Facilities (Rich)	South Yard Maintenance			
06358	11/5/2009	LI	LI - MVC - Company	Level 1	Level 1	While backing out of parking space bumper made contact with another vehicle.	Richmond Refinery	Maintenance Facilities (Rich)	South Yard Maintenance			
4778	11/4/2009	LI	LI - First Aid	Level 1	Level 1	EE was lifting a 10lb tool bag from the back of his work truck and felt a sharp pain in his shoulder	Richmond Refinery	Maintenance Facilities (Rich)	South Yard Maintenance			
18333	9/2/2009	LI	LI - First Aid	Level 1	Level 1	Mechanic was installing a twin seal valve @ #7 Pump Station when he inadvertently set his right fore	Richmond Refinery	Maintenance Facilities (Rich)	South Yard Maintenance			
1919135	5/5/2010	LI	LI - Equipment Failure	Level 1	Level 1	Release latch on seatbelt in a company van failed to release. The belt was cut to release occupant	Richmond Refinery	Plant Protection	Drill Grounds			
1731702	11/24/2009	LI	LI - Non-Industrial	Level 1	Level 1	A P2S employee was in the connex lunch room eating lunch when he apparently had a seizure. The two e	Richmond Refinery	Plant Protection	Drill Grounds			

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	LEVEL6
1598912	8/14/2009	NLI	NLI - Business Process	No Level Selected	Level 1	An emergency occurred in an operating plant requiring emergency response. At approximately 15:45 hr	Richmond Refinery	Plant Protection	Firehouse			
1650503	9/24/2009	NLI	NLI - Business Process	No Level Selected	Level 1	Chevron Fire Department employed the external refinery alert system to summon volunteer firefighters	Richmond Refinery	Plant Protection	Firehouse			
1849711	2/26/2010	LI	LI - MVC - Company	Level 1	Level 1	While employees were cleaning a large industrial garage concrete floor, a small golf cart-type vehic	Richmond Refinery	Plant Protection	Firehouse			
1770216	12/23/2009	NLI	NLI - General Liability	No Level Selected	Level 1	The crew computer work stations desk set up has a pinch point concern between the high/low desk and	Richmond Refinery	Plant Protection	Firehouse			
1835273	2/2/2010	LI	LI - Equipment Failure	Level 1	Level 1	Monitor on emergency vehicle positioning gears are stripped, causing the monitor not to seat when ch	Richmond Refinery	Plant Protection	Firehouse			
1999253	6/7/2010	LI	LI - Equipment Damage	Level 1	Level 1	Shore power cord damaged. CartDriver was in the process of pulling the golf cart out of the engine b	Richmond Refinery	Plant Protection	Firehouse			
1832288	2/20/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	During a scheduled line tender switch the firehouse lost power (NLI 1832210). The firehouse generat	Richmond Refinery	Plant Protection	Firehouse			
1858933	3/17/2010	LI	LI - Business Interruption	Level 1	Level 1	GFCI main breaker for the Firehouse opened when a breaker for an air conditioner condenser was close	Richmond Refinery	Plant Protection	Firehouse			
1830531	8/23/2009	LI	LI - Equipment Damage	Level 1	Level 2	The rear step on M-608 is damaged and gives away when stepped on...it could result in a personal in	Richmond Refinery	Plant Protection	Firehouse			
1884481	3/30/2010	LI	LI - Equipment Failure	Level 1	Level 1	All data on both Quikfel machines in dispatch were erased by an unknown method.	Richmond Refinery	Plant Protection	Firehouse			
2033358	9/21/2010	LI	LI - Non-Industrial	Level 1	Level 1	EE with medical issue trans to Kaiser via AMR for follow up.	Richmond Refinery	Plant Protection	Firehouse			
1832210	2/20/2010	LI	LI - Business Interruption	Level 1	Level 1	Loss of electrical power to the Firehouse	Richmond Refinery	Plant Protection	Firehouse			
1830910	2/17/2010	LI	LI - Non-Industrial	Level 1	Level 1	Chevron employee medical illness. None work related	Richmond Refinery	Plant Protection	Firehouse			
1899778	4/18/2010	LI	LI - Non-Compliance Company Policy	Level 1	Level 1	While responding to the report of a car coming into the Rod & Gun area through 34 gate without stopp	Richmond Refinery	Plant Protection	Firehouse			
1583582	8/8/2009	LI	LI - Equipment Failure	Level 1	Level 1	Personnel was sprayed with raw sewage. Due to the safety sensitive nature of this failure lanet #8	Richmond Refinery	Plant Protection	Firehouse			
2033321	9/22/2010	LI	LI - First Aid	Level 1	Level 1	EE jumped when field mouse ran over their foot, EE had pain in lower back	Richmond Refinery	Plant Protection	Firehouse			
1675804	10/13/2009	NLI	NLI - MVC - Contractor	No Level Selected	Level 1	Railserve was shoving cars through crossing at Main and Petrolia. Railserve safety truck was blo	Richmond Refinery	Plant Protection	Other			
2006697	8/18/2010	LI	LI - Equipment Damage	Level 1	Level 1	Person(s) unknown cut perimeter fence to access refinery and contractor laydown yards. These person	Richmond Refinery	Plant Protection	Other			
2006697	8/18/2010	LI	LI - Criminal Activity	Level 1	Level 1	Person(s) unknown cut perimeter fence to access refinery and contractor laydown yards. These person	Richmond Refinery	Plant Protection	Other			
1835353	3/29/2010	LI	LI - Business Interruption	Level 1	Level 1	While attempting to download information from the voice data recording system, it was discovered tha	Richmond Refinery	Plant Protection	Other			
1960421	6/17/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Officer received 1" long laceration to right index finger due to using a chair that the padding had	Richmond Refinery	Plant Protection	Other			
1891287	3/30/2010	LI	LI - MVC - Contractor	Level 1	Level 1	While conducting a vehicle patrol @ 115 Lot Contract Security Officer fell asleep and sideswipe two	Richmond Refinery	Plant Protection	Other			
1561342	7/19/2009	LI	LI - First Aid	Level 1	Level 2	Record keeping purpose only - hearing shift	Richmond Refinery	Plant Protection	Other			
1808732	1/30/2010	LI	LI - MVC - Contractor	Level 1	Level 2	Security vehicle was entering 580 west on Castro Street when it came in contact with another vehicle	Richmond Refinery	Plant Protection	Other			
1904351	4/22/2010	LI	LI - Non-Industrial	Level 1	Level 1	While conducting interior structure fire fighting training at an off site location a fire brigade me	Richmond Refinery	Plant Protection	Other			
1881522	3/27/2010	LI	LI - Non-Industrial	Level 1	Level 1	EE notified me of non work related issue. EE stated he had been seen by emergency room doctor and wi	Richmond Refinery	Plant Protection	Other			
1858977	3/17/2010	LI	LI - Medical w/o Lost Time	Level 2	Level 2	Worker was walking on elevated scaffolding near C-730 in North Isomax. When he approached a permit	Richmond Refinery	Plant Protection	Other			
1885600	3/3/2010	LI	LI - First Aid	Level 1	Level 1	Torn tendons result of five fire extinguisher training at Texas A&M. EE assigned to place in servic	Richmond Refinery	Plant Protection	Other			
1691309	10/20/2009	LI	LI - Quality Management System	Level 2	Level 2	A Certificate of Analysis was issued for TANK 991 2009_05145 SPCAE-CA2 on 19/Oct/2009. The volume %	Richmond Refinery	Quality Control (QCD) (Rich)	Analytical Lab			
1691309	10/20/2009	LI	LI - Product Quality (int)	Level 2	Level 2	A Certificate of Analysis was issued for TANK 991 2009_05145 SPCAE-CA2 on 19/Oct/2009. The volume %	Richmond Refinery	Quality Control (QCD) (Rich)	Analytical Lab			
1762399	12/15/2009	NLI	NLI - Business Interruption	No Level Selected	Level 1	Demurrage cost was incurred at the RIC RLW because the Barge Drakes Bay was delayed from discharging	Richmond Refinery	Quality Control (QCD) (Rich)	Analytical Lab			
1762399	12/15/2009	NLI	NLI - Late Shipment	No Level Selected	Level 1	Demurrage cost was incurred at the RIC RLW because the Barge Drakes Bay was delayed from discharging	Richmond Refinery	Quality Control (QCD) (Rich)	Analytical Lab			
1946746	5/3/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 2	TOP INVESTIGATION--CARB (California Air Resources Board) audit results performed on 10 May 2010, had	Richmond Refinery	Quality Control (QCD) (Rich)	Analytical Lab			
2019744	8/26/2010	NLI	NLI - Product Quality (int)	No Level Selected	Level 2	The LNF completed an 8 day 220R block into T-3165 on 8/26/10 night-shift. The tank was finaled for	Richmond Refinery	Quality Control (QCD) (Rich)	Analytical Lab			
1825705	2/6/2010	LI	LI - Non-Compliance Company Policy	Level 1	Level 1	Inaccurate test information for a flare event on 02/06/2010 was recorded by QCD OCD on the StarLims	Richmond Refinery	Quality Control (QCD) (Rich)	Analytical Lab			
1779376	11/13/2009	LI	LI - Notice of Violation	Level 2	Level 2	QCD Certificate of Analysis submitted for SUBCAE-D4 2009_05170 and SUBCAE-D4 2009_05171 had reported	Richmond Refinery	Quality Control (QCD) (Rich)	Analytical Lab			
1924036	4/1/2010	NLI	NLI - Paperwork Incorrect/Not Sent	No Level Selected	Level 1	Environmental report from a subcontract lab had a paperwork error. The report included analytes not	Richmond Refinery	Quality Control (QCD) (Rich)	CEL Lab			
1892374	4/8/2010	LI	LI - NOV - Price Scanning	Level 1	Level 1	Employee states that he bent down to open the bottom draw of a cabinet, when he felt a sharp pain in	Richmond Refinery	Quality Control (QCD) (Rich)	Other (QCD)			
1892374	4/8/2010	LI	LI - First Aid	Level 1	Level 1	Employee states that he bent down to open the bottom draw of a cabinet, when he felt a sharp pain in	Richmond Refinery	Quality Control (QCD) (Rich)	Other (QCD)			
1861083	3/11/2010	LI	LI - First Aid	Level 1	Level 1	Blending and Shipping Area Operator splashed motor gasoline into his eye while drawing a golden fuel	Richmond Refinery	Quality Control (QCD) (Rich)	Other (QCD)			
1975932	7/8/2010	LI	LI - Spill	Level 1	Level 1	5 gallons of Gasoline products and by-products spilled onto the ground from a 55 gallon drum used as	Richmond Refinery	Quality Control (QCD) (Rich)	Other (QCD)			
1788488	1/15/2010	NLI	NLI - Business Process	No Level Selected	Level 1	Operator was moving a quart sample of Diesel from one counter to another in room 1107, Physical lab,	Richmond Refinery	Quality Control (QCD) (Rich)	Physical Lab			
1923151	5/11/2010	LI	LI - Non-Industrial	Level 1	Level 1	At the start of dayshift, Operator reported and was observed to have discomfort in left leg and was	Richmond Refinery	Quality Control (QCD) (Rich)	Physical Lab			
1810664	2/1/2010	NLI	NLI - Air	No Level Selected	Level 1	While preparing to rack out K-10, mechanic inadvertently pushed the stop button for K-9 which shutdo	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	BioReactor		
1937141	5/14/2010	LI	LI - Non-Compliance Government Requirement	Level 1	Level 1	On May 14th 2010, HES notified the Effluent O/A that the recording chart for the DWOP water temperat	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Deep Water Outfall		
2008418	8/17/2010	LI	LI - Business Process	Level 1	Level 1	The GAC filter vessels are located just upstream of the wastewater effluent to the bay. These carbo	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Deep Water Outfall		
1996799	8/3/2010	LI	LI - Equipment Damage	Level 1	Level 1	The driver is hauling re-useable soil at #1 Ox-Pond using end dump truck when the trailer tipped ove	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Land Farms		
2011781	8/24/2010	LI	LI - Operational Leak	Level 1	Level 1	Contractors working near abandoned oil-loading facility reported oil leaking from a line. Upon arri	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Other (Environmental)		
1716598	11/10/2009	LI	LI - Community Inquiry	Level 2	Level 2	At approximately 15:00 hrs on 11/10/09, the Refinery received a call from the local Air District ins	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Other (Environmental)		
1761782	12/12/2009	LI	LI - NOV - Water	Level 1	Level 1	On Saturday 12/12/09 storm water samples were taken from the Reclamation area as required by the NPD	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Ponds		
1931588	2/10/2010	LI	LI - NOV - Water	Level 2	Level 2	Non-compliance with NPDES Permit for bypassing (about 400 bbls of hydro-test water) of the effluent	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Ponds		
1543587	7/8/2009	LI	LI - Business Interruption	Level 1	Level 2	At approximately 15:00 hrs, a sanitary sewage odor was reported in and around the Admin building cau	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Sanitary Sewer System		
1540938	7/7/2009	NLI	NLI - Spill	No Level Selected	Level 1	TOP INVESTIGATION--Spill from Vacuum Truck	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Separators		
1978269	7/8/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1		Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Separators		
1923782	5/11/2010	LI	LI - Contractor First Aid	Level 1	Level 1	TOP INVESTIGATION--Contractor electrician reported to work with concern of a very sore back on Wednes	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Separators		
1939196	3/16/2010	LI	LI - NOV - Air	Level 1	Level 1	On 3/16/10, P-202 5th pump at #2 separator failed a VOC Inspection. The VOC result was above the 50	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Separators		
1606441	8/26/2009	LI	LI - Fire/Explosion	Level 1	Level 1	Portable diesel engine driven pumps are used as part of No. 13 separator S/D. One of these pumps was	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Separators		
2020248	9/1/2010	LI	LI - Community Inquiry	Level 1	Level 1	Internal odors in the south end of the Refinery were detected around 9:00 am. At the time of the ODO	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Separators		
2034010	9/22/2010	LI	LI - First Aid	Level 1	Level 1	Shortly after completing an inspection of #2 Separator the employee felt irritation in his right eye.	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Separators		
1959422	6/22/2010	NLI	NLI - Employee Injury	No Level Selected	Level 1	While using a hammer to tap a stud out of a 16" flange the left index finger got caught between the	Richmond Refinery	Utilities & Environmental (Rich)	Environmental (Rich)	Sumps		
1595467	8/12/2009	NLI	NLI - Employee Injury	No Level Selected	Level 2	There have been several recent hot condensate burns to plant personnel in the Chevron refining syste	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1736532	11/27/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	At approximately 13:00 11/27/09 a widow at #1 Power Plant fell to the ground from about 20' do to wi	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1764334	12/16/2009	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 2	While V-701B was down and isolated for confined space entry for inspection, modification work for a	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1764334	12/16/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 2	While V-701B was down and isolated for confined space entry for inspection, modification work for a	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1919619	5/5/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	Four contract employees and their company rep were securing an abatement job at #1 Power and were go	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
2003054	8/12/2010	NLI	NLI - Lessons Learned	No Level Selected	Level 1	TOP INVESTIGATION--N2 HOSE RUPTURED--Approximately 08:30am, #1 Power Plant receives a call from the	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1588152	8/12/2009	LI	LI - Equipment/Unit Trip	Level 1	Level 1	K-3 Utilities Air compressor shutdown while performing Low Oil Pressure Alarm test.	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
2025152	9/8/2010	LI	LI - Fire/Explosion	Level 1	Level 1	At approximately 18:30 the Power Plant Boiler Operator (PPBO) smelled smoke while making rounds. Up	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1959122	6/22/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	At approximately 10:00 am #7 Boiler tripped off line. Boiler was immediately re-started with no imp	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1715567	11/11/2009	LI	LI - First Aid	Level 1	Level 1	On Wednesday, 11/11/09, employee performed a light routine of exercise that included some pushups.	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1566174	7/25/2009	LI	LI - Equipment Failure	Level 1	Level 1	#1 Boiler block valve to 800# header has a leaking bonnet.	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1821135	2/10/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	During normal Power Plant operation, it was requested to start up additional boilers due to the incr	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1821149	2/10/2010	LI	LI - Equipment Failure	Level 1	Level 2	Bonnet gasket leak on main block pressure seal valve on #4 boiler. This is a pressure sealed bonne	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1824832	2/14/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	On 14 Feb 10 the refinery steam system started to swing thru out the yard. As a result of refinery c	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1899514	4/17/2010	LI	LI - Fire/Explosion	Level 1	Level 1	At approximately 06:50 the Power Plant Boiler Operator (PPBO) smelled something burning and began to	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	#1 Power & Control House		
1548887	7/14/2009	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	STG800 500# steam safety was lifted for approx. 5 min. then reset. The steam system was unstable due	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	CoGen		
1877137	10/18/2009	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	During the process of deloading TG800 for scheduled PRD repair the faulty PRD lifted resulting in no	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	CoGen		
1670813	10/12/2009	LI	LI - Safety Systems and Relief Devices	Level 1	Level 1	TG-800 500 lb safety lifted momentarily and reset. Ops responded immediately also monitored process	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	CoGen		
1697138	10/30/2009	LI	LI - First Aid	Level 1	Level 1	The employee was trying to identify vibration source on P-2650A when he retracted his right hand bu	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	CoGen		
1898467	4/15/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	Summary:	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	CoGen		
1565097	7/24/2009	LI	LI - Plant Run Out/Slow Down	Level 1	Level 1	Co-Gen LPG vaporizer tripped on high pressure due to erratic levels and pressures. Upon investigatin	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	CoGen		
1572425	7/28/2009	LI	LI - Product Quality (int)	Level 1	Level 1	Starting on approximately the weekend of July 24th 2009 the Cogen trains HRGG-1000, 2000 started exp	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	CoGen		
1929682	5/18/2010	NLI	NLI - MVC - Contractor	No Level Selected	Level 1	while traveling south bound on petrolite approaching 4 way stop near cogen cr hse,30 yards out slowi	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	CoGen Control House		
1870790	3/18/2010	LI	LI - First Aid	Level 1	Level 1	Employee was reaching into kitchen drawer when his left hand came in contact with a knife which lace	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	CoGen Control House		
1798525	1/22/2010	NLI	NLI - Contractor Injury	No Level Selected	Level 1	While offloading a pipe spool from a Goosenock trailer at the P-3000 job site the load shifted and	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Other (Utilities)		
1792141	1/19/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	TG-800 accidentally tripped off-line during electrical troubleshooting-	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Other (Utilities)		
1595463	8/10/2009	LI	LI - Business Process	Level 1	Level 1	During a PSSR on a new condensate line, it was discovered that there was no low point bleeder on the	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Other (Utilities)		
1654154	9/29/2009	LI	LI - Business Interruption	Level 1	Level 1	480 V 67-2 Feeder went to ground on Pole 629	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Other (Utilities)		
1641674	9/22/2009	LI	LI - Business Interruption/EVR-ISD	Level 1	Level 1	The #5 Castro Fresh Water line was isolated for approximately 30 hours as a pre- S/D test for proces	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Other (Utilities)		
1875607	3/19/2010	LI	LI - First Aid	Level 1	Level 2	Record keeping purpose only, no injury at this time - Hearing shift.	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Other (Utilities)		
2043782	9/30/2010	LI	LI - Spill	Level 1	Level 1	At 14:00 hours a hose leading from a circulation pump to Tank 3128 failed, resulting in a leak of 2	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Other (Utilities)		
1879455	3/25/2010	LI	LI - Contractor First Aid	Level 1	Level 3a	Contractor EE was reshooting a clamp on a 500lb steam leak off of octane st, near P3 under bridge.	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Other (Utilities)		
1614621	8/6/2009	LI	LI - Notice of Violation	Level 1	Level 1	A contractor for the City of Richmond witnessed a Chevron-contracted sewage hauler discharging sewag	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Other (Utilities)		
1643574	9/23/2009	LI	LI - Business Interruption	Level 1	Level 1	During a pipeway inspection, the 10" "A" natural gas distribution header was discovered leaking. The	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Other (Utilities)		
1650829	9/28/2009	LI	LI - First Aid	Level 1	Level 2	Employee was dismantling a small steam sampling station on the corner of Furnace and Hydro St. A w	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Other (Utilities)		
1978558	7/13/2010	LI	LI - Equipment/Unit Trip	Level 1	Level 1	While changing a MAESTRO LEGEND User Interface Module (Display) the air compressor K-3 tripped off i	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Other (Utilities)		
1892820	4/5/2010	NLI	NLI - Additive Injection (Ext)	No Level Selected	Level 1	The biocide injection system at the RO Plant was LOTO'ed on April 5, 2010 for tie-ins at E-4040A. I	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Reverse Osmosis Plant		
1944923	6/3/2010	LI	LI - Equipment Failure	Level 1	Level 1	Loss Details:	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Reverse Osmosis Plant		
1786507	1/13/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Craftperson sustained a small puncture wound on his finger while removing some Tarp from the Weld B	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Reverse Osmosis Plant		
1556667	7/20/2009	LI	LI - Equipment Failure	Level 1	Level 1	2.5 " crack on the 16" RO Product water feed header. Spraying RO water ~5" in height.	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Reverse Osmosis Plant		
1582464	8/5/2009	NLI	NLI - Business Interruption	No Level Selected	Level 1	Breaker tripped while electricians were changing the breaker closed status indicator lamp on 12-618	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Substations		
1600648	8/3/2009	NLI	NLI - Equipment Damage	No Level Selected	Level 1	Replacement relay door for breaker 12-503 was stored in a non-climate controlled environment. When	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Substations		

CONTROL	DATE OF	FORM	LOSS TYPE	ACTUAL LEVEL	POTENTIAL LEVEL	INCIDENT DESCRIPTION	LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	LEVEL6
1989974	7/20/2010	NLI	NLI - Paperwork Incorrect/Not Sent	No Level Selected	Level 1	TOP INVESTIGATION--UNLABELED BARRELS--While conducting a Contractor Safety weekly audit on an excava	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Substations		
1989974	7/20/2010	NLI	NLI - Product Mis-Delivery	No Level Selected	Level 1	TOP INVESTIGATION--UNLABELED BARRELS--While conducting a Contractor Safety weekly audit on an excava	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Substations		
1682532	10/21/2009	LI	LI - Spill	Level 1	Level 1	The Old Quarry Substation transformer # 79 bank was stated to be removed for demo. When preparing u	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Substations		
1948958	6/2/2010	LI	LI - Product Quality (Ext)	Level 1	Level 1	A contractor while driving a 30 inch steel pipe pile with a bottom plate and tip in an overhead rest	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Substations		
1948958	6/2/2010	LI	LI - Equipment Failure	Level 1	Level 1	A contractor while driving a 30 inch steel pipe pile with a bottom plate and tip in an overhead rest	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Substations		
1963250	7/19/2010	LI	LI - Business Interruption	Level 2	Level 2	Loss of power to 480 V system at 2-A separator, 2.4 kV system at Panhes, and 480 V system at No. 4 R	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Substations		
1790729	1/18/2010	LI	LI - Business Interruption	Level 1	Level 1	12.47 kV Power Outage Bus 1 at #1 Substation - # 1 Substation is double ended so Bus 2 never lost po	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Substations		
1790735	1/18/2010	LI	LI - Business Interruption	Level 1	Level 1	Power Loss to 480 V Feeder 6-1 - pole line open wire slapped together and tripped 6-1 Breaker feedin	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Substations		
1793676	1/20/2010	LI	LI - Business Interruption	Level 1	Level 1	Loss of Power to 12.47 kV Xylene Feeder due to high winds- pole line open wire slapped together and	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Substations		
1559509	7/21/2009	LI	LI - Equipment Failure	Level 1	Level 1	Loss of electrical grid connection to MK-50, FCC, Main Train Air Blower	Richmond Refinery	Utilities & Environmental (Rich)	Utilities (Rich)	Substations		
1807427	1/29/2010	LI	LI - MVC - Company	Level 1	Level 1	Operator struck yellow pole with left front fender of a Chevron pick-up truck when entering the wash	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Wash Down Area		
1933781	5/22/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Contractor reported Sunday morning from home to his supervisor that he back discomfort. The contract	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Wash Down Area		
1569483	7/28/2009	LI	LI - Contractor First Aid	Level 1	Level 1	In the morning as the vacuum truck driver was stepping down from his truck he missed the last step a	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Wash Down Area		
1557366	7/18/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 1	Contract employee while eating her lunch, a piece of chicken stucked on her throat causing difficult	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1580818	8/5/2009	NLI	NLI - Lessons Learned	No Level Selected	Level 1	While opening the top hatch of a frac tank in order to gauge the tank two contractors' H2S monitors	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1715501	11/12/2009	NLI	NLI - Contractor Injury	No Level Selected	Level 1	After unloading several bags of dry chemical processing additive from an elevated pallet to a staging	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1793582	1/19/2010	NLI	NLI - General Liability	No Level Selected	Level 1	Near Loss:	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1906197	4/24/2010	NLI	NLI - Non-Compliance Company Policy	No Level Selected	Level 1	My partner and I went to the EOD Hazardous Waste Annex to electrically disconnect some equipment for	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1660197	10/2/2009	LI	LI - Spill	Level 1	Level 1	During the loading of diesel to a phase separator bin at the ramps ~1 gallon of diesel leaked out of	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
2020312	9/1/2010	LI	LI - Product Contamination (Int)	Level 1	Level 1	Lt. Poly originating from V-891 that was being transferred from a stainless steel temporary storage	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
2012717	8/25/2010	LI	LI - MVC - Contractor	Level 1	Level 1	Contractor was backing a tank into a berm at the north yard chem pad when he scrapped one of the yel	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1871744	3/19/2010	LI	LI - Equipment Damage	Level 1	Level 2	Bin damaged, during waste transfer. Sturgeon bin # 25927 damaged during transfer of waste from the	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1818015	2/8/2010	LI	LI - Non-Industrial	Level 1	Level 1	A contractor was unloading empty drums out of the back of a semi truck when he stated he heard a "po	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1849830	3/2/2010	LI	LI - Contractor First Aid	Level 1	Level 1	Contractor employee slipped and fell, injuring leg. At approximately 4:20pm, while walking along Cha	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1835040	4/12/2010	LI	LI - First Aid	Level 1	Level 1	The electrician lowered his tailgate of his truck to remove a wood pallet, when he lowered the tailg	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1826917	2/16/2010	LI	LI - Equipment Failure	Level 1	Level 1	Approximately 5 gallons of sulfide caustic leaked from the front flange while filling the frac tank	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1847504	3/1/2010	LI	LI - Contractor First Aid	Level 1	Level 2	EE was moving a skid from the Rain for Rent lay down yard. While the EE was doing a walk around he n	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1821142	2/10/2010	LI	LI - Spill	Level 1	Level 1	INITIAL REPORT--Less than 1 barrel of diesel/water mixture spilled to ground. At 3:45pm on a Wednes	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1577639	8/3/2009	LI	LI - Spill	Level 1	Level 2	TOP INVESTIGATION-TANK SPILL FROM MANWAY COVER AT HAZARDOUS WASTE TREATMENT YARD-The	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		
1543918	7/8/2009	LI	LI - Business Process	Level 1	Level 1	Contract employee put Non-Haz industrial debris into a HW Bin containing contaminated soil.	Richmond Refinery	Utilities & Environmental (Rich)	Haz Waste Section	Other		