Chevron Pipe Line
Global Gas
[redacted]

January 27, 2011

Redacted Version

Electronic Tra

Mr. Chris Hoidal
Director, Western R
Pipeline and Hazard ion
12300 W, Dakota Ave., Suite 110
Lakewood, CO 80228

RE: Chevron Pipe Line Company- Submittal a Revision of Restart Plan
PHMSA Correction Action Order CPF 5-2010-5032H (Item 1)

Dear Mr. Hoidal,

Chevron Pipe Line Company (CPL) is submitting a revised Restart Plan (*Plan*). The *Plan* has been revised to include the information you requested in your January 26, 2011 letter to CPL. Enclosed is a copy of CPL's revised *Plan*. The revisions to the *Plan* include the following:

- Pipeline Pig Tracking Maps and Log (included in JSA)
- Restart Communication Plan (include in JSA)
- Appendix B (PHMSA Letter 01/26/2011)

If you have questions or need further information, please contact me at

Sincerely,

Enclosures

Electronic Transmittal
cc:

Cold Start Job Safety Analysis JSA

Hanna to Salt Lake Cold Start Up JSA

Job: *Job Description*		**Date:** 1/18/2011
Company Performing Job : Control Center (CPL CC) Field Operations (CPL FO) IPWI WPFI Salt Lake Refinery (SLR)	**Analysis By :** [redacted]	**Approved By :**
PPE Required: Winter weather PPE to include FRC, Hard Hat, Safety Footwear, Safety Glasses, Hearing Protection and Gloves		**Field Team Leader :** [redacted] **Console Supervisor :** **CSR/Op. Rep. :**
10–Day Notification Required? No **JSSP Required? Yes** **Result of an IIR?**	**Job Site Visit Required? Yes** **MOC Required? No** **Action Items Complete?**	**Job Site Visit Done Prior to JSA? Yes** **MOC 1st Signature Required before step# N/a** **Lock Out Tag Out Required Yes**

– Check if 10-day maintenance notification is required
– Follow JSSP
– If applicable Make Notifications (list):
– If applicable Consider weather conditions:

Owner R- Responsible Party
P- Participant
I- Information

Hanna discharge pressure not to exceed 1480 psig

Controller reserves the right to deviate from this procedure to protect the line, the environment or personnel

Initial	Owner	Date/Time		Sequence Of Basic Job Steps		Potential Hazards		Mitigation Measures
CPL FO - R CPL CC-P IPWI-P WPFI -P SLR-I			1	Review JSA and sign off with CPL FO, CPL CC, IPWI, WPFI and communicate to SLR	1	Miscommunication	1	Develop, review, approve and signoff on JSA
				Cold Start Up Communication Plan				
CPL FO - R CPL CC-P IPWI-I WPFI -I SLR-I			2	System start up requires 96 hour window of acceptable weather for operations to commence start up and surveillance If weather conditions change once crude has been introduced into the pipeline and the pig is over Wolf Creek Pass, re-start plan will continue unless Salt Lake based personnel determine weather conditions are too adverse to have personnel driving on local roadways.	2	Poor quality weather forecast Field teams pulled from field during start up or surveillance procedure Avalanche	2	Validate weather forecast and conditions with two independent forecast services (local and NWS) Pull field teams from weather impacted remote locations, evaluate operations coninuation and gain appropriate approval. Validate no avalanche risk by reviewing local websites. Pipeline route is in an area not prone to avalanche concerns. Local Emergency services barricade roads in the event of avalanches in area.
CPL FO - R CPL CC-P IPWI-P WPFI -P SLR-I			3	Field team will remove LOTO from Hanna, Hewlett, Little Mountain, and Salt Lake Station valves. Fully open the main line valves and report status to Field Coordinator. Field Coordinator notify the CC that all main line valves are in the open position.	3	Partially closed valves that could prevent swap movement.	3	CPL will ensure valves are in the full open position

CPL FO - R CPL CC-P IPWI-P WPFI -P SLR-I			4	Prior to start up, if any N2 remains following maintenance activiites in the line, the field will purge any remaining nitrogen, by opening the inlet to the frac tanks at Salt Lake Station and depressuring the line. The control valve (PCV-218) will need to be placed in the manual control position and fully opened to 100% to allow the pipeline to be depressured through the frac tanks. The control valve will be tagged out, in the manual position to ensure it remains fully opened during the pipeline comission process until crude oil is received at the Salt Lake Station.	4	Venting of high pressure N2 to atmosphere High noise Pinch Points No flow to frac tanks.	4	Proper barricading of effected frac tank areas Monitor atmospheric conditions around frac tanks. Proper PPE Ensure PCV - 218 is in the manual position and tagged to ensure proper position throughout commission procedure.
CPL FO - R CPL CC-P IPWI-P WPFI -P			5	Once nitrogen pressure has been reduced on the pipeline between Hanna and Salt Lake, current PRVs will be removed at Little Mountain and Salt Lake and replaced with normal operations PRVs. PRV's to be re-installed - Little Mountain (170 psig) Salt Lake (500 psig) Note: Field based personnel estimate 1/2 day	5	Pinch Points Slips trips and falls. Improper PRV setting.	5	Proper PPE Eyes on path Documentation to support relief valve setting with Serial number of PRV compared prior to installation.
CPL FO - R CPL CC-P IPWI-P WPFI -P			6	Prior to scheduled start up, the field personnel will verify on site personnel can communicate to the CC from each remote valve location with adequate communication equipment. Completed in prior purge activity and documented, confirm with field team, no issues exist.	6	Improper alignment of valves preventing flow to frac tanks Overpressure of system due to blocked system.	6	Satellite phones for low signal areas,communication plan has been verified to identify problem areas FTL to ensure employees wear proper PPE and have suitable vehilce for engress/egress to valve sites. Shift rotation plan. Validate no avalanche risk by reviewing local websites. Pipeline route is in an area not prone to avalanche concerns. Local Emergency services barricade roads in the event of avalanches in area.
CPL FO - R CPL CC-P IPWI-P WPFI -P			7	Assign field personnel to monitor each valve site between Hanna and Salt Lake Station. See valve list below. Field personnel will monitor sites for 48 hours once oil has begun to flow from Hanna to Salt Lake. a. Hanna Station b. Stockmore Block Valve c. Hewletts Ranch Block Valve d. Woodland Block Valve e. Francis Block Valve f. Silver Creek Junction Block Valve g. Kimball Junction Block Valve h. Little Mountain Block Valve i. Red Butte Block Valve j. I-15 Block Valve k. Salt Lake Station If field personnel fail to contact the CC for two consective periods (ie, fails to call CC for one hour), a runner who will dispatched to the particular location to check on the person. A Runner will be stationed at both the Hanna Station and the Salt Lake Station. The Runners will also be available to provide relief for restroom	7	Fatigue, weather conditions, no egress/ingress to site, Avalanche	7	FTL to ensure employees wear proper PPE and have suitable vehilce for engress/egress to valve sites. Shift rotation plan. Validate no avalanche risk Validate no avalanche risk by reviewing local websites. Pipeline route is in an area not prone to avalanche concerns. Local Emergency services barricade roads in the event of avalanches in area.

CPL FO - R CPL CC-P IPWI-P WPFI -P SLR-I			8	Field personnel at the below sites will call the Control Center immediately in the event of evidence of a leak. Field personnel will contact the CC at 30 minute intervals to ensure connectivity and system integrity. a. Hanna Station b. Stockmore Block Valve c. Hewletts Ranch Block Valve d. Woodland Block Valve e. Francis Block Valve f. Silver Creek Junction Block Valve g. Kimball Junction Block Valve h. Little Mountain Block Valve i. Red Butte Block Valve J. I-15 Block Valve k. Salt Lake Station If field personnel fail to contact the CC for two consective periods (ie, fails to call CC for one hour), a runner who will dispatched to the particular location to check on the person. A Runner will be stationed at both the Hanna Station and the Salt Lake Station. The Runners will also be available to provide relief for restroom breaks.	8	Miscommunication, Communication Failure, Proper PPE for weather conditions. Attention to detail	8	FTL to ensure employees wear proper PPE, Satellite phones for low signal areas,communication plan has been verified to identify problem areas Experienced field personnel familiar with the line and normal start up procedures
CPL FO - R CPL CC-P IPWI-P WPFI -P SLR-I			9	If a leak is detected during field team surveillance or from SCADA indication, the Control Center will immediately initiate pipeline shut down procedures. Field personnel will immediately initiate emergency response procedures.	9	Miscommunication, Communication Failure, Attention to detail	9	Satellite phones for low signal areas,communication plan has been verified to identify problem areas Experienced field personnel familiar with the line and normal start up procedures
CPL FO - I CPL CC-R IPWI-I WPFI -I SLR-I			10	An extra Controller will be assigned to communicate with field personnel and document connectivity and system integrity condition.	10	Schedule modifications, personnel shortage, training required,	10	All stations are manned with field personnel during start up activity. Operations Represenative to work with the assigned controller on duty to handle overload on console, and inform communications/SCADA if problems arise
CPL FO - R IPWI - I WPFI - I CPL CC - I			11	The Controller will monitor each site (see list below) telemetered to SCADA from Hanna to Salt Lake Station. a. Hanna Station b. Woodlands Block Valve c. Kimball Junction Block Valve d. Little Mountain Block Valve e. Red Butte Block Valve f. Beck Street Gravitometer and Pressure g. Salt Lake Station.	11	Attention to detail, console workload, SCADA outage, communication problems	11	All stations are manned with field personnel during start up activity. Operations Represenative to work with the assigned controller on duty to ensure data transfer, handle overload on console, and inform communications/SCADA if problems arise

CPL FO - R IPWI - I WPFI - I CPL CC - I			12	The Controller will notify Salt Lake Field Team Leader and CC Team Leader immediately if communications are lost to any SCADA telemetered site. In the event of an abnormal operating condition, follow the Rangely Crude AOC process (See AOC tabs in this document).	12	Attention to detail, console workload, SCADA outage, communication problems	12	All stations are manned with field personnel during start up activity. Operations Represenative to work with the assigned controller on duty to ensure data transfer, handle overload on console, and inform communications/SCADA if problems arise
				Hanna to Salt Lake Cold Pipeline Start Up				
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			13	The Controller will verify all mainline block valves previously under LOTO (see list below) between the Hanna Pump Station and Salt Lake Station are open by calling each site. Field personnel to visually verify mainline block valve status before start up. * Hanna * Hewlett * Little Mountain * Salt Lake * Red Butte	13	Valves still in LOTO position. Unintended closed valve creates high pressure.	13	FTL to verify by sign off check list that all mainline/ valves have been opened from the LOTO state/condition. Reference attached "AOC Pressure Deviation"
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			14	Controller will notify the delivery point to verify receiving: • Crude Type • Batch Size • Customer has ability to receive entire batch size. • Customer is open and ready to receive delivery.	14	Receipt customer not ready, changed schedule, refinery emergency event.	14	CC Controller to communicate to Field Team Leader and CC Team Leader to resolve delivery schedule and availability prior to initiating pump.
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			15	Controller will notify the Salt Lake Operator to verify delivery information: • Crude Type • Batch Size • Delivery Point • Take note of Line 2 Crude Pressure at Salt Lake to be aware of a change.	15	Receipt customer not ready, changed schedule, refinery emergency event.	15	CC Controller to communicate to Field Team Leader and CC Team Leader to resolve delivery schedule and availability prior to initiating pump.
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			16	Since the Hanna Pump Station has been down greater than 24 hours, the Hanna Pump Station Operator will inspect station prior to start up taking into account that the station piping contains cold crude. See Hanna Cold Start tab in this document.	16	Frozen Lines Blockage High Pressure on start up Station Piping Leak	16	Experienced Field Team Operator on site Hanna Pump Station Cold Start Up Checklistz SOP Emergency Response Procedures
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			17	Depressure outbound trap at Hanna and load high quality MDI urethane pig with cavity back. Transmitter will be inserted into pig for tracking purposes. Load pig and open valves as per SOP.	17	Exposure to crude oil Pinch Points Eye Injuries	17	SOP for pig launch wear appropriate PPE
CPL FO -I CPL CC-R IPWI-I WPFI -I			18	CC Controller will make note of the current SCADA Analog High Alarm Limits for the following - Woodlands Line 2 upstream pressure, Kimball Junction Line 2 upstream pressure, Little Mountain Line 2 upstream pressure, ** Red Butte Line 2 upstream pressure, and Beck Street Line 2 pressure. **Red Butte Line 2 upstream pressure Analog High Alarm limits- previously monitored by SCADA may not be available for viewing during restart, due to spill remediation efforts.	18	Alarm limits recorded inaccurately	18	SCADA history contains alarm limits

CPL FO - I CPL CC-R IPWI-I WPFI -I			19	Normal operating pressures for Woodland Line 2 upstream pressure, Kimball Junction Line 2 upstream pressure, Little Mountain Line 2 upstream pressure, Red Butte Line 2 upstream pressure, and Beck Street Line 2 pressure are as follows: a. Woodland in Weber Sand = 435# b. Woodland in Condensate = 335# c. Kimball Junction in Weber Sand = 285# d. Kimball Junction in Condensate = 235# e. Little Mountain in Weber Sand = 13# f. Little Mountain in Condensate = 5# g. Red Butte in Weber Sand = 75# h. Red Butte in Condensate = 65# i. Beck Street in Weber Sand = 130# j. Beck Street in Condensate = 113#	19		19	
CPL FO - I CPL CC-R IPWI-I WPFI -I			20	Controller will set a temporary SCADA Analog High Alarm Limit 50# above the normal operating pressures at each pressure site and for each specific Crude type noted above in Step 19. a. Weber Sand for Woodland and Condensate for the remaining pressure sites.	20	Alarm limits recorded inaccurately	20	SCADA history contains alarm limits
CPL FO - P CPL CC-R IPWI-I WPFI -I SLR-I			21	Controller will contact Salt Lake Station Operator to ensure valves are open to allow flow to be received into frac tanks during commissioning activities.	21	Improper alignment of valves preventing flow to frac tanks Overpressure of system due to blocked system.	21	Documented Frac tank drawing showing proper valve line-up. Overpressure shutdowns throughout system.
CPL FO - P CPL CC-R IPWI-I WPFI- I			22	Controller will contact Hanna Station Operator to ensure monitoring of the pig trap during system start up for status and pig launch.	22	Failure to launch pig Overpressure in trap	22	Shut down system
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			23	Personnel at Hanna will start booster pump, fill station piping with crude, and launch pig. Controller will monitor system.	23	Select wrong booster	23	LOTO of other pumps.
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			24	Personnel at Hanna will start desired mainline pump(s) in order to start filling the pipeline. Controller will monitor the system.	24	Select wrong pump set. Pump sequence failure.	24	Field team member troubleshoot pump sequence. Adjust sequence to include available pumps.
CPL FO - P CPL CC-R IPWI-I WPFI -I SLR-I			25	Controller will notify the Salt Lake Station operator that the Hanna Pump Station is online.	25	Loss of communications	25	Satellite phones for low signal areas, communication plan has been verified to identify problem areas,

CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			26	Monitor swab location past each AGM and / or mainline block valve location, which are identified on the Swab Tracking tab. Trackers to contact Field Coordinator when swab has passed their location. Field Coordinator to notify Control Center when swab has passed a particular location. Field Coordinator to notify both Trackers and Control Center of estimated time of arrival for the next location. See attached tabs: Hanna-WCP, WCP - MP 151, MP 151 - SL Sta, Swab Tracking	26	Loss of communications during commissioning process Failure to locate pig in pipeline	26	Satellite phones for low signal areas, communication plan has been verified to identify problem areas. CPL will track the pig during the commissioning process
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			27	The Salt Lake Operator and Controller will maintain constant communication via phone during this phase of the procedure.	27	Loss of communications	27	Satellite phones for low signal areas, communication plan has been verified to identify problem areas,
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			28	If the temporary SCADA Analog High Alarm Limit (see Step 20) is received for any of the listed Line 2 pressure sites, Controller will immediately report to Salt Lake Field Team Leader and CC Team Leader. If deviations of pressure exceed 80% of MOP for any section of the pipeline, Controller will immediately shutdown the Hanna Station and report to Salt Lake Field Team Leader and CC Team Leader. See 80% MOP tab in this document	28	SCADA system failure. Communications Failure Controller input error	28	See attached "AOC Communications Loss" See attached "AOC Pressure Deviation" Extra controller verify alarm level input
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			29	If pipeline is shutdown due to pressure deviation, the managing supervisors (Salt Lake Field Team Leader, Operations Manager, CC Manager, VP Operations, Sr VP Operations, and PS&S VP) will determine appropriate course of action to take in order to resolve pressure deviation.	29	Miscommunication	29	Satellite phones for low signal areas, communication plan has been verified to identify problem areas. CPL Personnel will gain resolution.
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			30	Salt Lake Station personnel will monitor level in frac tanks until crude flow is routed to refinery. As a contingency, vacuum trucks will be on stand-by to empty frac tanks in case the amount of N2 containing crude exceeds the total available volumne in the frac tanks. Once crude oil arrives at Salt Lake Station, the field operator will determine by visual testing that N2 is no longer present and delivery to the refinery will be lined up. Field personnel to (1) open valve #232 which routes the crude to the refinery's tank and (2) close Valve #228 in order to block the crude flow to the frac tanks. Once valve #232 has been open and valve #228 has been closed, the tag-out on PCV-218 will be removed and PCV-218 will be placed back in "AUTOMATIC" to allow proper backpressure control (100 psig). Salt Lake Station field personnel to notify the Field Coordinator that flow has been established to refinery tankage. Field Coordinator to notify Control Center of the time flow established to the refinery tankage.	30	Loss of communications Overpressure Crude Oil leak Pinch points, trip hazards, exposure to crude Improper Control valve operation due to being left in manual position.	30	Satellite phones for low signal areas, communication plan has been verified to identify problem areas. Experienced Station Operator Proper PPE worn Verify proper control valve position with CC prior to leaving facility.
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			31	Verify normal operating conditions at all SCADA telemetered locations.	31	Pressure profile has changed. SCADA failure	31	Communicate with Field Team Leader and CC Team Leader to assess operations. See attached "AOC Communications Loss" Extra controller verify alarm level input

CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			32	Controller will return the SCADA Analog High Alarm Limits to the values noted in Step 18.	32	SCADA system failure. Communications Failure Controller input error	32	See attached "AOC Communications Loss" Extra controller verify alarm level input
CPL FO - R CPL CC-R IPWI-P WPFI -P SLR-I			33	48 hours of continuous monitoring with SCADA and field personnel surveillance at each valve site listed in Step 7.	33	Loss of communications Poor quality weather forecast Field teams pulled from field during start up or surveillance procedure Avalanche	33	Satellite phones for low signal areas, communication plan has been verified to identify problem areas. Validate weather forecast and conditions with two independent forecast services (local and NWS) Pull field teams from weather impacted remote locations, evaluate operations coninuation and gain appropriate approval Validate no avalanche risk by reviewing local websites. Pipeline route is in an area not prone to avalanche concerns. Local Emergency services barricade roads in the event of avalanches in area.
CPL FO - R CPL CC-R IPWI-I WPFI -I SLR-I			34	Resume normal Control Center operations	34		34	
			35	End	35	End	35	End