

# MOU EARLY IMPACTS EVALUATION

## LOCATION - STOCKTON, CALIFORNIA

**DESCRIPTION OF OPERATIONS** - Activities at the Yard include; receiving inbound trains, switching cars, servicing local industries by picking up and delivering freight cars, building and departing outbound trains, repairing freight cars, and servicing and repairing locomotives. Facilities within the Yard include; classification tracks, a locomotive service track, a locomotive shop, a freight car repair shop, an on site wastewater treatment plant, maintenance of way buildings and storage areas, and various buildings and facilities supporting railroad operations.

Source Area	Activity Description	Typical Loco. Model*	Option Number	Description of Option	Is the Option Feasible for UPRR? **						Go?	Notes
					Technically	Legally	Operationally	Economically	Safety	Other		
<b>1</b>	<b>Movement into &amp; out of the Yard</b>											
1a	Movement	Road fleet										
			1	Discontinue use of area	-	-	No	No	-	-	<b>NO</b>	must move into & out of yards
			2	Relocate Operation	-	-	?	?	-	-	<b>?</b>	will need to re-evaluate
			3	Dedicate Tier 2 units	Yes	Yes	LT	LT	Yes	-	<b>NO</b>	fleet will naturally turn over in time
			4	Retrofit w/ ICD's	Yes	Yes	Yes	LT	Yes	Yes	<b>LT</b>	will likely occur after LHP units
			5	Manual Shutdown	Yes	Yes	Yes	Yes	Yes	Yes	<b>YES</b>	updated training program is under way
			6	Use LNG units	No	Yes	No	No	No	No	<b>NO</b>	significant serious issues
			7	Use CARB diesel	Yes	Yes	No	-	-	-	<b>NO</b>	CARB fuel not available outside Ca
			8	Use specialty fuels	No	Yes	No	No	-	-	<b>NO</b>	I.e.-biodiesel/lubrizol; quality/supply issues
			9									
			10									
			11									
1b	Movement	Local fleet										
			1	Discontinue use of area	-	-	No	No	-	-	<b>NO</b>	must move into & out of yards
			2	Relocate Operation	-	-	?	?	-	-	<b>?</b>	will need to re-evaluate
			3	Dedicate ULEL switchers	Yes	Yes	LT	LT	Yes	-	<b>NO</b>	fleet will naturally turn over in time
			4	Retrofit w/ ICD's	Yes	Yes	Yes	Yes	Yes	Yes	<b>YES</b>	currently in process
			5	Manual Shutdown	Yes	Yes	Yes	Yes	Yes	Yes	<b>YES</b>	updated training program is under way
			6	Use LNG units	No	Yes	No	No	No	No	<b>NO</b>	significant & serious issues
			7	Use CARB diesel	Yes	Yes	No	-	-	-	<b>NO</b>	CARB fuel to be used in Ca
			8	Use specialty fuels	No	Yes	No	No	-	-	<b>NO</b>	I.e.-biodiesel/lubrizol; quality/supply issues
			9									
			10									
			11									
<b>2</b>	<b>Idling &amp; movement w/in location</b>											
2a	Idling	Road fleet										
				See Source Area 1a for options associated with movement of Road fleet locomotives.								
2b	Idling	Local fleet										
				See Source Area 1b for options associated with movement of Local fleet locomotives.								
2c	Idling	Mixed fleet										
				See Source Area 1a for options associated with movement of the mixed fleet locomotives.								
<b>3</b>	<b>Idling at Svc Trk, Modsearch, Shop &amp; Ready Tracks</b>											

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					Technically	Legally	Operationally	Economically	Safety	Other		
3a	Idling	Mixed fleet										
				See Source Area 1a for options associated with movement of Mixed fleet 1 locomotives.								
3b	Idling	Shop fleet										
				See Source Area 1a for options associated with movement of Shop fleet locomotives.								
<b>Movement between Svc Trk, Load Test, &amp; Locomotive Shop</b>												
3e	Movement	Shop fleet										
				See Source Area 1a for options associated with movement of Shop fleet locomotives.								
3f	Movement	Shop fleet										
				See Source Area 1a for options associated with movement of Shop fleet locomotives.								
<b>Testing at Svc Trk, Load Test, &amp; Locomotive Shop</b>												
3g	Testing	Test fleet										
			1	Discontinue use of area	-	-	No	No	-	-	<b>NO</b>	must move into & out of yards
			2	Relocate Operation	Yes	Yes	?	?	?	-	<b>?</b>	will need to re-evaluate
			3	Dedicate Tier 2 units	Yes	Yes	No	No	Yes	-	<b>NO</b>	tested fleet varies day to day
			4	Retrofit w/ ICD's	Yes	Yes	Yes	LT	Yes	Yes	<b>LT</b>	will likely occur after LHP units
			5	Manual Shutdown	Yes	Yes	Yes	Yes	Yes	Yes	<b>YES</b>	udpated training program is under way
			6	Use LNG units	No	Yes	No	No	No	No	<b>NO</b>	significant serious issues
			7	Use CARB diesel	Yes	Yes	No	-	-	-	<b>NO</b>	CARB fuel not available outside Ca
			8	Use specialty fuels	No	Yes	No	No	-	-	<b>NO</b>	I.e.-biodiesel/lubrizol; quality/supply issues
			7	Ins exhaust hood/scrub	No	Yes	Yes	No	?	-	<b>NO</b>	proof of concept under way at Roseville
			9	Modify test proceedure	Yes	No	?	?	-	-	<b>NO</b>	previously completed
			10									
			11									
<b>4 Flat Switching of cars</b>												
4a	Train Building	Local fleet										
			1	Discontinue use of area	-	-	No	No	-	-	<b>NO</b>	
			2	Dedicate Tier 2 units	Yes	Yes	No	No	-	-	<b>NO</b>	
			3	Dedicate Tier 2 Retrofit	No	Yes	Yes	No	-	-	<b>No</b>	GETS Kits
			4	Dedicate Green Goats	Yes	Yes	No	Yes	Yes	-	<b>YES</b>	assumes Goats will work
			5	Dedicate GSS's	Yes	Yes	Yes	Yes	Yes	-	<b>YES</b>	
			6	Dedicate CAT Switcher	Yes	Yes	Yes	Yes	Yes	-	<b>YES</b>	
			7	Retrofit w/ ICD's	Yes	Yes	Yes	Yes	-	-	<b>YES</b>	All are/will be retrofitted
			8	Manual Shutdown	Yes	Yes	Yes	Yes	-	-	<b>YES</b>	Extremely critical operation - monitor closely
			9	Use LNG units	No	Yes	No	No	?	No	<b>NO</b>	technical/safety/logistics issues
			10	Use CARB diesel	Yes	Yes	No	-	-	-	<b>NO</b>	CARB fuel to be used in Ca
			11	Use specialty fuels	Yes	Yes	No	-	-	-	<b>NO</b>	I.e.-biodiesel/lubrizol; quality/supply issues
			12									
			13									
			14									

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					Technically	Legally	Operationally	Economically	Safety	Other		
<b>5</b>	<b>Movement between Areas of the Yard</b>											
5a	Movement	Road fleet			See Source Area 1a for options associated with movement of Road fleet locomotives.							
5b	Movement	Local fleet			See Source Area 1b for options associated with movement of Local fleet locomotives.							
<b>6</b>	<b>Other</b>											
8a												
8b												
8c												
8d												

**\* Typical Locomotive Models (fleet descriptions)**

The **Road** fleet is comprised of high horsepower locomotives that pull large numbers of cars long distances between terminals/major yards.

The **Local** fleet is comprised of lower horsepower locomotives that deliver fewer cars (possibly up to 40) shorter distances between industry and terminals/major yard.

The **Mixed fleet** is comprised of both Road and Local fleets.

**Tested fleet** is comprised of both Road and Local fleets.

\*\* When evaluating the feasibility of an option, answers entered above indicate the following;

**Yes**, it appears to be feasible given current technology

**No**, it does not appear to be feasible at this time

**?** . . . . . means that the option may be possible, yet needs more thorough evaluation

**LT** . . . . . **Long Term option** that may be feasible in the future, yet is not part of this 'Early Impacts' analysis.

**All feasibility criteria must be answered 'Yes' for the option to be labeled "Yes' in the 'Go?' Column.**