

Lean for Consensus Building

A Case Study Applied to
Environmental Portfolio
Management

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**See
Understand
Act
*Together***

Acknowledgements

- Jeff Baker - Tesoro Companies Inc.
- Sue Boyle and Steve MacIntyre - H&A Lean Practitioners
- The Tesoro Consultant Team
 - Without their enthusiastic participation, none of what we will discuss could have become reality

Goals for Today

- Background, a brief introduction to Lean
 - Not something that can be done by checklist
- Case Study, applied to Environmental Portfolio Management
 - We will discuss the first of five Process Improvement Events
 - Four additional have been completed, and the team performs at least one a year to foster continuous improvement
- Quantifying the Impacts and Benefits

Lean:

Increase **Value**

Reduce **Waste**

Respect **People**



2 Themes

Value
vs.
Waste



See
Understand
Act
Together

4P

Solve Root Problems

Develop People & Partners

Right Process Right Results

Long Term Philosophy

People and Partners



Process and Tools



See & Perceive Together



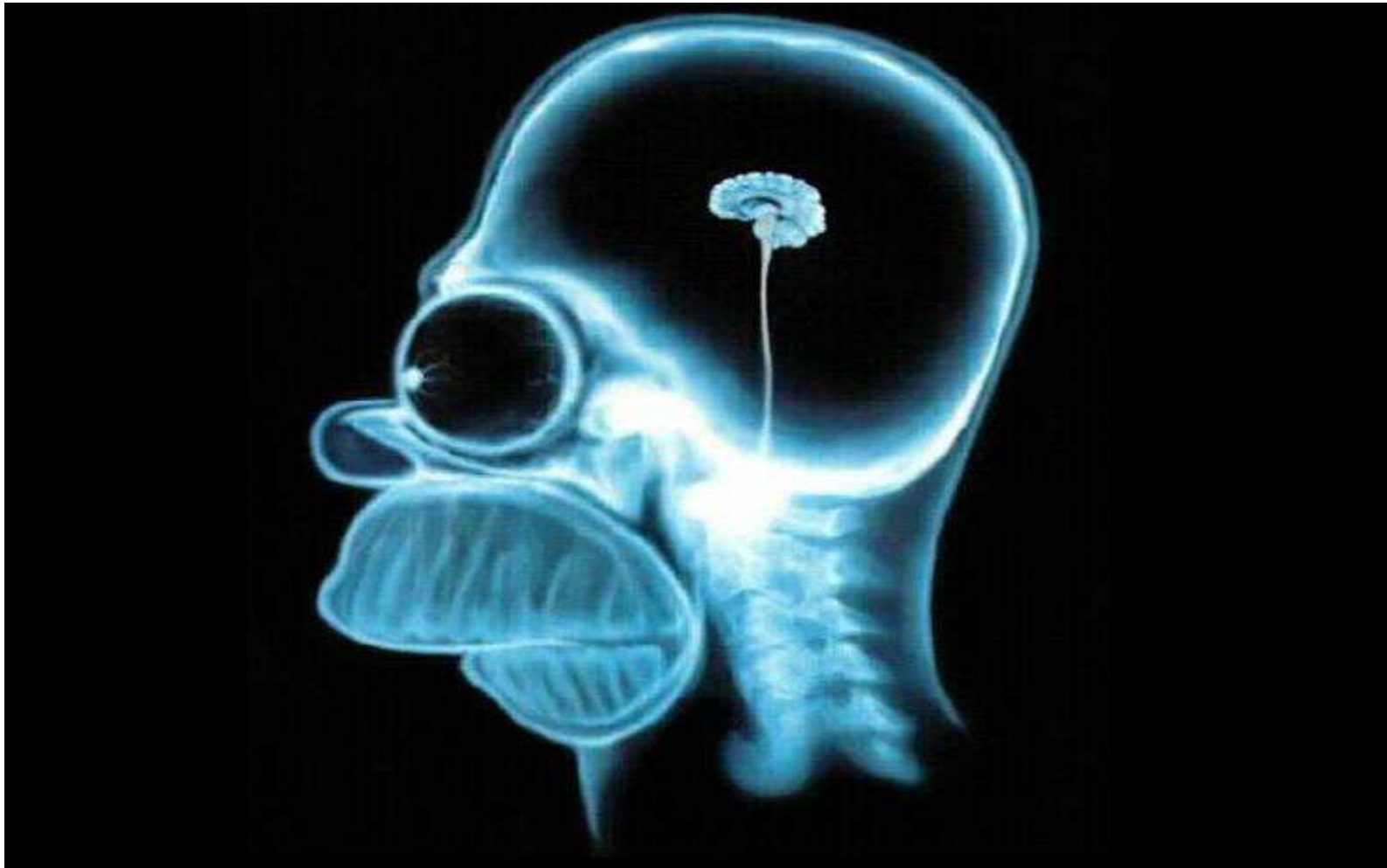


**Dissatisfaction
is the mother of**



Improvement

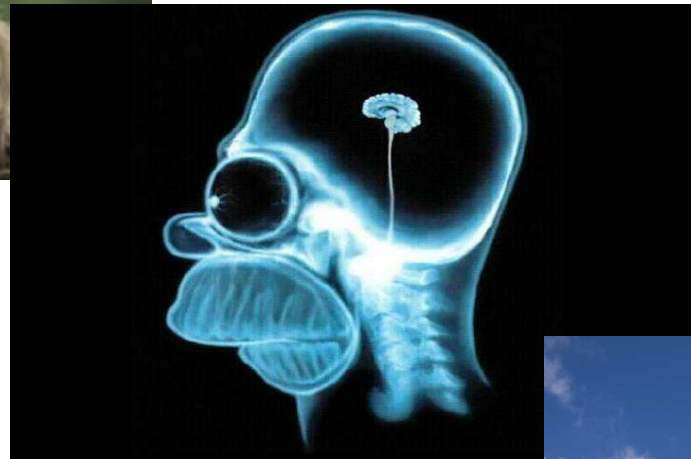
Understand & Create



Act



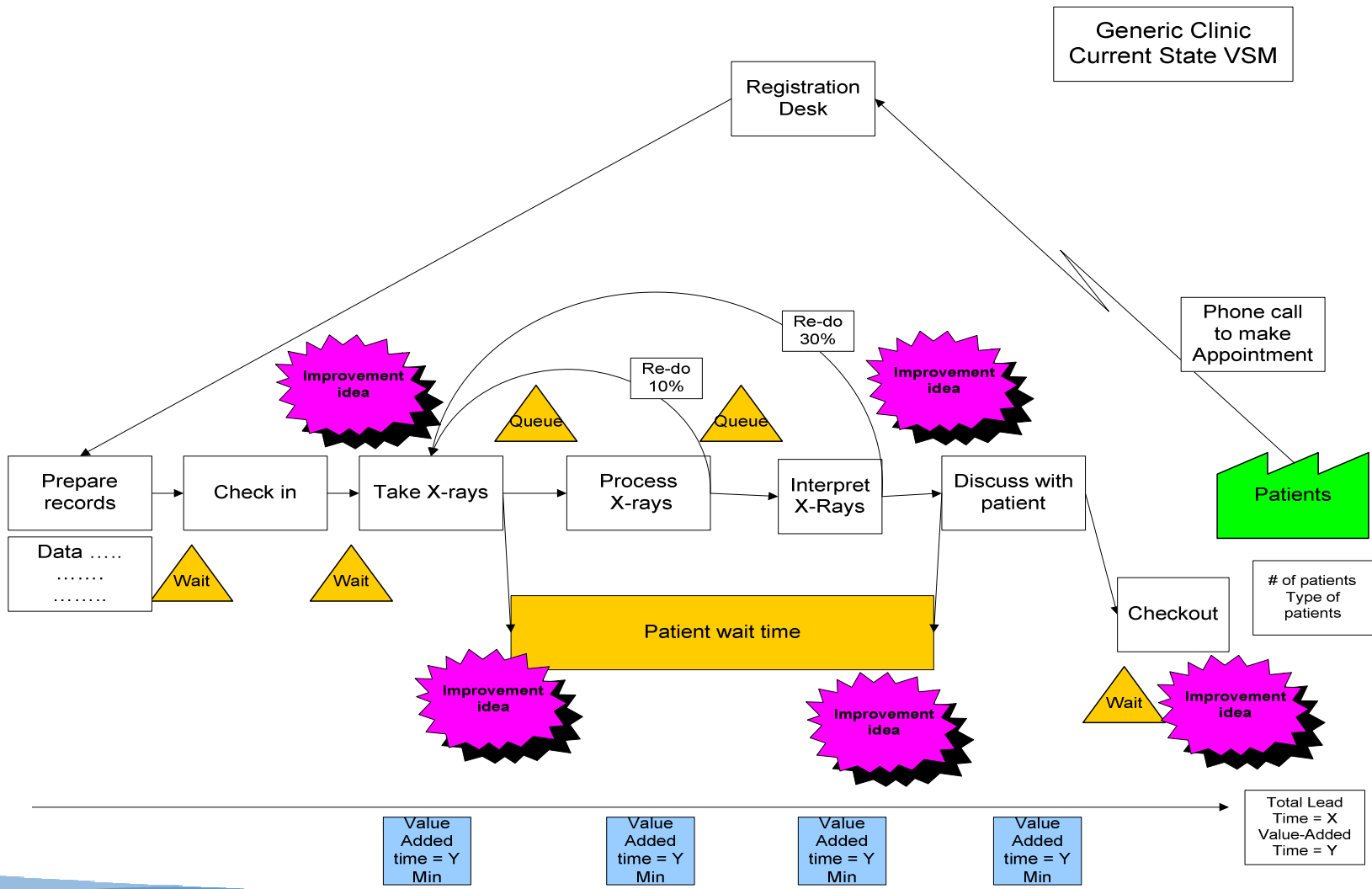
CONSENSUS: See, understand and act together



- Understand value
- Expose obstacles (wastes)
- Minimize obstacles & increase value



What if Lean were applied to Going to the doctor?



Tesoro Corporation: Lean in Action

- Tesoro manages a complex portfolio of sites
- They face the same challenges that each of us do in our work, whether site owners, consultants, suppliers or regulators



The Starting Point - Defining Success

- Value Exercise - See to better understand
- Highest Value:
 - Management of retained liabilities
 - Impact to Bottom Line
 - Progress to Closure
- Who could disagree?

Tesoro - Jeff Baker - What they value!

ceptions		Tesoro - Jeff B	
How well does H&A perform?	Value (What is the client buying?)	Client Value Level	How H&A
	Mgmt of Retained Liabilities		
	Min Reduce Risk		
	Impact to Bottom Line @ Minim		
	Site Closures - # Closure Requests		
	Standardize/Streamline Process to Closure		
	- effec communic early in process w/regul.		
	- "selling" the approach, inc trust		
	Accurate & Justified Budget Estim.		
	"Play Nice" w/ Other Const/Owners		



Key learning:

This simple poster became a key reference for the team to evaluate the VALUE of each process

But where do you really start?

Which of many key processes involved in managing a portfolio warrants attention first?

- **Ranking Exercise:**

- Value
- Muda (waste)
- Ability to eliminate waste
- Our Knowledge of the process

- **Why?**

- This decision set the stage for a series of process improvement events, each focused on systematically improving portfolio management



Analysis – Where is there Waste and Opportunity?



Key learning:
The value stream map worked well to help everyone understand the system and see lots of non-standard approaches

Collectively we discovered many opportunities To improve!

Created a Value Stream Map to learn more about:

- key processes (yellow)
 - waste (pink) MUDA
 - flow (arrows)
 - improvement ideas (purple)
- Also:
- people involved (green)
 - Documents (blue)

With the Value Stream Map we could see:

- Many observations of waste and opportunities to improve. – but still needed to determine the “right” waste to tackle first and what ideas to incorporate in the solution
- Observed lots of discontinuity in work flow. Process interruptions, miscues, redundancies, re-work
- Observed teams working hard, but not always on the “right” thing in a way that maximizes value
- Learned there were currently few standard methods to establish priorities or guide project teams, and everyone “owned” their own method.
- Observed different approaches to similar problems across the portfolio, few standard approaches

Plan for Actions



- The team agreed on “highest priorities for action”, who would lead each, who would contribute and the timing.
- We quantified the expected results in measurable criteria to set goals for real improvement



Key learning:

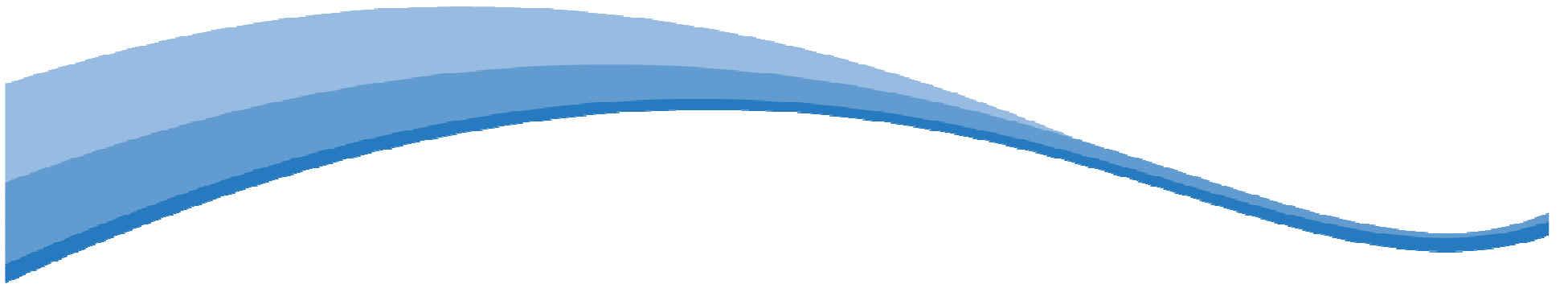
Much of what we did helped make meaning of solving problems – by depicting value and finding ways to have less stressful, better work.

That context established priorities, creating resolve and enthusiasm.

Results

- **Direction** – the future state is well defined and the team understands the value of reaching for that future
- **Focus - Priorities** are defined in the context of value – There is a much greater level of **enthusiasm** about improving – the team can see things in context
- **Communication tools** – maps and other visuals provide a good way to communicate status, needs and the degree to which goals have been achieved.

Fast Forward: Where we are today



Generic Impact Tool – Allows Analysis of the Portfolio Condition

Site Name	Lead Consultant	% Client Portion	Current Lifecycle	WEIGHTED IMPACT	IMPACT CODE	Current Fiscal Year Cost CODE	Current Fiscal Year				Next Fiscal Year Accrual (2010)	5-Year Accrual (2009 to 2013)	5 Year Cost Per Unit Impact
							Total Cost	Cost Per Unit Impact	Capital Install Costs Only	O&M Costs Only			
Site F	Orange	100%	Closure	8	1	2	\$ 40,700	\$ 5,088	\$ 10,000	\$ 30,700	\$ -	\$ 40,700.00	\$ 5,087.50
Site J	Green	100%	Remedy O&M	11	1	1	\$ 27,000	\$ 2,455	\$ -	\$ 27,000	\$ 27,000	\$ 81,100.00	\$ 7,372.73
Site H	Purple	100%	Remedy O&M	15	1	1	\$ 12,800	\$ 840	\$ 100	\$ 12,500	\$ 13,200	\$ 25,700.00	\$ 1,713.33
Site I	Green	100%	Remedy O&M	16	1	1	\$ 16,800	\$ 1,050	\$ -	\$ 16,800	\$ 16,800	\$ 50,300.00	\$ 3,143.75
Site N	Purple	100%	Closure	16	1	1	\$ 5,000	\$ 313	\$ -	\$ 5,000	\$ 5,000	\$ 10,000.00	\$ 625.00
Site B	Blue	100%	Remedy O&M	17	1	2	\$ 54,000	\$ 3,176	\$ -	\$ 54,000	\$ 45,000	\$ 99,000.00	\$ 5,823.53
Site V	White	100%	Closure	17	1	2	\$ 43,000	\$ 2,529	\$ -	\$ 43,000	\$ -	\$ 43,000.00	\$ 2,529.41
Site KK	Green	100%	Remedy O&M	18	1	1	\$ 10,300	\$ 572	\$ -	\$ 10,300	\$ -	\$ 10,300.00	\$ 572.22
Site K	Green	65%	Remedy O&M	20	1	4	\$ 129,600	\$ 6,480	\$ -	\$ 129,600	\$ 179,000	\$ 418,000.00	\$ 20,900.00
Site L	Black	100%	Remedy O&M	21	2	1	\$ 9,000	\$ 429	\$ -	\$ 9,000	\$ 9,000	\$ 37,400.00	\$ 1,780.85
Site RR	Green	100%	Remedy Selection	21	2	4	\$ 139,000	\$ 6,619	\$ 61,700	\$ 77,300	\$ 55,400	\$ 360,500.00	\$ 17,166.67
Site TT	Blue	100%	Remedy O&M	23	2	3	\$ 88,500	\$ 3,848	\$ -	\$ 88,500	\$ 86,600	\$ 435,000.00	\$ 18,913.04
Site EE	Blue	100%	Remedy O&M	24	2	3	\$ 87,000	\$ 3,625	\$ -	\$ 87,000	\$ 86,600	\$ 352,300.00	\$ 14,679.17
Site A	Blue	100%	Remedy O&M	24	2	3	\$ 110,000	\$ 4,583	\$ -	\$ 110,000	\$ 81,200	\$ 382,000.00	\$ 15,916.67
Site QQ	Orange	100%	Remedy O&M	24	2	1	\$ 23,000	\$ 958	\$ -	\$ 23,000	\$ 12,000	\$ 34,400.00	\$ 1,433.33
Site FF	Purple	100%	Remedy O&M	24	2	1	\$ 28,000	\$ 1,083	\$ 100	\$ 25,900	\$ 25,500	\$ 102,200.00	\$ 4,258.33
Site D	Yellow	33%	Remedy O&M	24	2	2	\$ 39,000	\$ 1,625	\$ 21,665	\$ 17,335	\$ -	\$ 39,000.00	\$ 1,625.00
Site O	Green	65%	Remedy O&M	25	2	5	\$ 441,300	\$ 17,652	\$ 368,000	\$ 73,300	\$ 321,000	\$ 1,144,000.00	\$ 45,780.00
Site MM	Green	100%	Remedy O&M	27	2	2	\$ 31,100	\$ 1,152	\$ -	\$ 31,100	\$ 31,000	\$ 93,300.00	\$ 3,455.56
Site VV	Orange	100%	Remedy O&M	28	3	2	\$ 52,400	\$ 1,871	\$ -	\$ 52,400	\$ 52,000	\$ 157,100.00	\$ 5,610.71
Site Q	Purple	100%	Remedy O&M	32	3	1	\$ 9,100	\$ 284	\$ 100	\$ 9,000	\$ 9,100	\$ 36,800.00	\$ 1,143.75
Site JJ	Blue	100%	Remedy O&M	34	3	4	\$ 167,000	\$ 4,912	\$ -	\$ 167,000	\$ 155,000	\$ 799,200.00	\$ 23,505.88
Site T	Orange	100%	Remedy O&M	35	3	3	\$ 72,200	\$ 2,063	\$ -	\$ 72,200	\$ 45,500	\$ 246,300.00	\$ 7,037.14
Site LL	Green	100%	Remedy O&M	36	3	3	\$ 119,100	\$ 3,308	\$ -	\$ 119,100	\$ 102,200	\$ 528,100.00	\$ 14,669.44
Site P	Red	100%	Closure	37	3	2	\$ 51,800	\$ 1,395	\$ 37,000	\$ 14,800	\$ -	\$ 51,800.00	\$ 1,394.59
Site NN	Black	100%	Remedy O&M	38	3	3	\$ 124,400	\$ 3,274	\$ 3,000	\$ 121,400	\$ 57,600	\$ 270,400.00	\$ 7,115.79
Site BB	Blue	100%	Remedy O&M	38	3	2	\$ 45,000	\$ 1,184	\$ -	\$ 45,000	\$ 40,700	\$ 128,300.00	\$ 3,376.32
Site Y	Red	100%	Remedy O&M	44	3	3	\$ 57,000	\$ 1,295	\$ 20,800	\$ 36,200	\$ 64,500	\$ 159,000.00	\$ 3,613.64
Site HH	Red	100%	Remedy O&M	45	3	4	\$ 130,000	\$ 2,899	\$ 83,500	\$ 46,500	\$ 77,700	\$ 378,000.00	\$ 8,400.00
Site R	Red	100%	Remedy O&M	46	4	2	\$ 33,300	\$ 724	\$ 2,840	\$ 30,460	\$ -	\$ 33,300.00	\$ 723.91
Site SS	Green	100%	Remedy O&M	47	4	4	\$ 177,000	\$ 3,766	\$ 30,000	\$ 147,000	\$ 220,200	\$ 858,000.00	\$ 18,255.32
Site X	Red	100%	Remedy O&M	49	4	3	\$ 82,000	\$ 1,673	\$ 13,700	\$ 68,300	\$ 98,100	\$ 180,000.00	\$ 3,673.47
Site AA	Red	100%	Remedy O&M	53	4	2	\$ 45,000	\$ 849	\$ 25,900	\$ 19,200	\$ 19,400	\$ 87,800.00	\$ 1,656.60
Site C	Grey	100%	Remedy O&M	56	4	4	\$ 129,900	\$ 2,320	\$ 34,500	\$ 95,400	\$ 145,900	\$ 337,000.00	\$ 6,017.86
Site II	White	65%	Remedy O&M	58	4	5	\$ 219,000	\$ 3,776	\$ 41,800	\$ 177,200	\$ 133,700	\$ 477,400.00	\$ 8,231.03
Site PP	Blue	30%	Remedy O&M	63	4	5	\$ 271,000	\$ 4,302	\$ -	\$ 271,000	\$ 270,500	\$ 1,353,000.00	\$ 21,476.19
Site GG	White	100%	Remedy O&M	64	4	4	\$ 128,000	\$ 2,000	\$ 3,000	\$ 125,000	\$ 120,600	\$ 349,000.00	\$ 5,453.13
Site W	Green	65%	Remedy O&M	66	4	5	\$ 384,000	\$ 5,818	\$ 222,400	\$ 161,600	\$ 203,700	\$ 977,900.00	\$ 14,816.67
Site CC	Green	100%	Remedy O&M	72	5	4	\$ 144,000	\$ 2,000	\$ 50,600	\$ 93,400	\$ 59,400	\$ 381,200.00	\$ 5,294.44
Site DD	Blue	100%	Remedy O&M	74	5	4	\$ 130,000	\$ 1,757	\$ -	\$ 130,000	\$ 100,800	\$ 503,600.00	\$ 6,805.41
Site M	Green	65%	Remedy O&M	84	5	5	\$ 496,000	\$ 5,905	\$ 82,000	\$ 404,000	\$ 278,000	\$ 956,000.00	\$ 11,380.95
Site U	Green	100%	Remedy O&M	86	5	5	\$ 264,000	\$ 3,070	\$ 30,200	\$ 233,800	\$ 206,100	\$ 1,044,000.00	\$ 12,139.53
Site Z	Green	65%	Remedy O&M	88	5	5	\$ 518,000	\$ 5,884	\$ -	\$ 518,000	\$ 318,000	\$ 1,376,000.00	\$ 15,636.36
Site E	Red	100%	Remedy O&M	165	5	3	\$ 115,000	\$ 697	\$ 30,600	\$ 84,400	\$ 80,500	\$ 389,400.00	\$ 2,360.00
Site G	Red	100%	Remedy O&M	171	5	3	\$ 88,000	\$ 515	\$ 2,500	\$ 85,500	\$ 99,700	\$ 390,800.00	\$ 2,285.38
Site S	Green	67%	Remedy O&M	183	5	5	\$ 367,000	\$ 2,005	\$ 13,500	\$ 353,500	\$ 334,300	\$ 1,239,000.00	\$ 6,770.49
Site OO	Blue	33%	Remedy O&M	360	5	5	\$ 400,500	\$ 1,113	\$ -	\$ 400,500	\$ 373,900	\$ 1,897,000.00	\$ 5,269.44
Site UU	Blue	100%	Remedy O&M	408	5	5	\$ 510,500	\$ 1,251	\$ -	\$ 510,500	\$ 493,900	\$ 2,482,000.00	\$ 6,083.33

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