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## Annual Report

For the period of 2012

GRANITE CONSTRUCTION COMPANY - COTTONWOOD, WEST HAVEN,  
*Facility Name* WELLS

1000 NORTH WARM SPRINGS ROAD SALT LAKE 84116  
*Facility Street Address* *City* *Zip*

## Project Status

On a separate sheet, summarize:

- your Clean Utah project commitments and accomplishments made to date,
- major indicators of environmental improvements (measurable ways that you are determining the environment is improving as the result of steps you are taking),
- public participation activities you have undertaken, and
- your project plans for next year, as they relate to this program.

## Certification Statement

*(to be signed by the senior facility manager)*

I certify that the information outlined in the attached annual report is correct and that this facility continues to meet all program criteria and has an active EMS, as defined by the Clean Utah program. I further certify that this facility has conducted periodic assessments of compliance with legal requirements, has corrected all identified instances of noncompliance, and is currently in compliance with all applicable federal, state, and local environmental rules and regulations.

Tom Walbum

Signed

1-25-13

Date

TOM WALBUM

Print Name

Environmental Manager

Title



**Granite Construction Company**

**2012 Environmental Improvement Project Results**

**Improvement Project #1: Cottonwood Wash Plant Facility – Operation of Belt Press and Dewatering Screen**

Targeted Reduction Goals: Baseline comparison year is 2007

- 25% reduction in wash plant water use
- 10% reduction in mobile equipment hours (including corresponding air pollutant emissions) at the facility.

**Water Usage Measurement Results - 2012**

	<b>Baseline (2007)</b>	<b>Year 3 (2012)</b>	<b>Delta (%)</b>	<b>Goal (%)</b>
<b>Wash Plant Water Usage Total</b>	12,717,632 gal	9,225,310* gal	- 27%	NA
<b>Wash Plant Production</b>	463,057 tons	165,005 tons	- 64%	NA
<b>Gallons Used Per Tons Produced</b>	27.5 gallons/ton	32.44 gallons/ton	+ 17%	- 25%

\* Assumes a 25% water loss in recirculating the water recovered and reused (3,872,392 total gallons) from belt press and dewatering screen.

**Water Usage Performance Discussion**

For the 2011 evaluation period we continue to demonstrate significant reductions in utility-provided water use associated with our washed aggregate processing. For the first evaluation period for this improvement project (2010), the percentage of gallons used of municipal-supplied water per ton of washed aggregate was 25.3% which was the performance improvement goal for this project. The 2011 results demonstrate an improvement of an overall savings and use reduction of 52%. For the 2012 period, the performance success resulted in an actual increase of 17% for the period; however, 3.8 million gallons were recovered and reused for the production period. Several factors influenced these results including the cleanliness of the aggregates (processed material had a higher quantity of fines) and the extremely dry conditions experienced during the summer months of 2012. Our opinion is that the original

performance goal of a 25% reduction in water use is more realistic under normal material processing and seasonal weather conditions.

Based on the recovery and reuse of the reclaimed water, the economic benefit from water recovery and reuse at the facility for the 2012 period resulted in an approximate cost savings of \$11,800.

### Mobile Equipment Hours and Pollutant Emissions Results

	Baseline (2007)	Year #3 (2012)	Delta (%)	Goal (%)
<b>Wash Plant Equipment Hours</b>	1,968	1,498	- 24%	NA
<b>Emissions</b>				
<b>CO</b>	0.81 tons/year	0.61tons/year	- 25%	- 10%
<b>NOX</b>	2.21 tons/year	1.68 tons/year	- 25%	- 10%
<b>PM10</b>	0.16 tons/year	0.12 tons/year	- 25%	- 10%
<b>PM2.5</b> (30% of PM10)	0.05 tons/year	0.03 tons/year	- 25%	- 10%
<b>SOX</b>	0.24 tons/year	0.18 tons/year	- 25%	- 10%
<b>VOCs</b>	0.15 tons/year	0.11 tons/year	- 25%	- 10%

### Pollutant Emissions Reduction Performance Discussion

The addition of the belt press and the wash screen has produced a significant reduction in the equipment hours required to manage the aggregate washing process and the associated slurry waste by-product. Equipment hours associated with wash water and waste management are typically not as dependent on production volumes and were therefore not normalized. For 2012, equipment hours and demand rose due to the increase of fines in the material processed and the quantity of fines waste generated at the wash plant; however, an overall reduction of equipment hours of 25% was achieved for the year.

The estimated economic benefit and cost savings attributed to less equipment hours and equipment demand was approximately \$19,800.

**Improvement Project #2 (New Project): Cottonwood Asphalt Plant Insulation – Natural Gas Conservation and Reduction of Use**

Targeted Reduction Goals: Baseline comparison year is 2009

- 8% reduction measured as natural gas consumed (Therms) per ton of asphalt produced
- Quantification of economic benefit

Beginning in 2010, Granite began implementing asphalt plant improvements focused around insulating the drum dryer and all thermal delivery piping associated with the BMG asphalt Plant. The purpose for the improvements were to reduce the consumption of natural gas, reduce the associated pollutant emissions, and to reduce the associated cost of asphalt production.

Due to the insulation improvements being conducted over a three year period, the first reporting evaluation includes averages for the three year period as compared to the baseline year of 2009. Beginning in 2013 the comparison will only include the single year data.

	<b>2009 (Baseline)</b>	<b>2010 -2012</b>	<b>Delta %</b>
<b>Therms</b>	779,138	1,594,800	-----
<b>Therms/ton</b>	1.95	1.90	- 3%
<b>\$/ton</b>	\$0.762	\$0.743	-3%
<b>Savings/ton</b>		\$0.02	
			\$5,400 annual savings

The cumulative benefit of the energy savings from 2010 through 2012 was approximately \$16,400. The resulting performance reduction was 3% for the evaluation period, which is below the targeted goal of 8%. Now that the improvements are 100% complete the evaluation for 2013 is anticipated to more reflective of the actual performance moving forward.

**Public Participation Activities**

We continue to engage the public and our neighbors to educate them regarding process improvements and new technologies we have implemented to improve our business and environmental performance.

Community outreach continues to be an important part of our business plan and philosophy as a company and community partner. During 2012 we continued our efforts to sponsor and support numerous community events and charitable organizations. Granite typically hosts a community open house to provide our neighbors the opportunity to visit our facilities to build awareness and to share information regarding the ongoing improvements that we are making to not only reduce environmental impacts, but to build and strengthen relationships in an effort to be a good neighbor.

We are committed to continuing our public participation and community involvement efforts for 2013 and beyond.

### **Clean Utah Project Plans for 2013**

The Clean Utah Project Plans for 2013 include:

- 1) (Existing Project) Continue to track and report water conservation and air pollutant emissions reductions for the belt press and dewatering screen at the Cottonwood Aggregate Facility.
- 2) (Existing Project) Cottonwood Asphalt Plant Facility. Energy conservation project to reduce natural gas consumption per ton of asphalt production by 8%. Plant improvements will include a new drum, equipped with insulation and insulation of all oil product supply lines. Installation of the drum and insulation was completed during 2011. Metrics included in this evaluation will be natural gas fuel consumption per ton of asphalt produced and economic benefit. Comparative consumption will be from previous years production and natural gas consumption.
- 3) (New Project) Cottonwood Aggregate Facility. Granite is currently establishing electrical utility power for the aggregate plant portion of the facility. This will allow for the permanent removal of two large diesel generators at the facility. This improvement project will track air pollutant emissions reduction, diesel fuel use reductions and economic benefits. The improvements will be completed in January 2013.