

Review of Fiscal and Economic Impacts of Orcem/VMT Proposal

For Michelle Pellegrin, Fresh Air Vallejo



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This is an independent review of the Fiscal and Economic Impact Study Covering Two Proposed Projects in Vallejo, California: The VMT Project and the Orcem Project by Field Guide Consulting of Amarillo, Texas and dated November 7, 2014. This report is referred to as the “FGC Study” in subsequent references. The FGC Study was performed for the Applicant and has been included prominently among the City of Vallejo’s documents relating to the proposed cement plant and marine terminal.¹

In addition to the FGC Study, numerous other sources were reviewed for background information about the project, including the applications to the City of Vallejo for both Orcem (slag cement plant) and VMT (Vallejo Marine Terminal), portions of the Draft Environmental Impact Report related to fiscal and economic impacts, company websites, and other related materials.

For the purposes of fiscal and economic impact modeling there appears to be no reason to treat Orcem and VMT as anything other than a single business entity focused on production of cement from imported slag waste. The Applicant is therefore referred to as Orcem/VMT for this analysis.

¹ The FGC Study is listed immediately following the Draft Environmental Impact Report on the City’s website at <http://www.ci.vallejo.ca.us/cms/One.aspx?portalId=13506&pageId=504593>.

The primary purpose of the marine terminal appears to be for importing slag waste via ocean barges or vessels. While Orcem/VMT alludes to other possible uses for the terminal, there is no clear business plan, no signed contracts, and no “letters of intent” from other businesses provided by Orcem/VMT as evidence for any other viable business activity other than shipping/hauling slag and slag cement. While other uses are certainly possible in the future, they appear to be entirely speculative and may not materialize. There is no evidence that the Bay Area currently lacks adequate marine terminal capacity for any cargo type.² And, there is no evidence that the proposed VMT facility will be cheaper than other existing marine facilities, or that it will offer any significant competitive advantage over existing facilities.

Fiscal Impacts

An assessment of fiscal impacts of the Orcem/VMT proposal requires an analysis of both the revenue and cost impacts on local government. Revenue impacts are compared with cost impacts to determine the net fiscal impact of the project. If the net impact is positive, it represents an overall fiscal surplus. If negative, then it causes a fiscal deficit.

While the Applicant’s FGC Study does provide an estimate of tax revenues and other revenues, it does not provide any information about the costs to local government to provide the public facilities and services required by the proposal. This is a fundamental flaw in the Applicant’s study and renders it an incomplete analysis. As a result, there is no net fiscal impact finding in the FGC Study.

Fiscal Revenues

This section evaluates potential revenues to local government. In this case, the primary local government of concern is the City of Vallejo. The revenues include taxes paid and any other payments which are not fees for services.

² The Bay Conservation and Development Commission (BCDC) reported in October of 2015 that “The Seaport Plan contains projected 2020 cargo handling capacity, or throughput capability, for each major cargo type. These projections show that the Bay Area ports can absorb considerable increases in waterborne cargo at terminals designated in the Seaport Plan based on current activity (Table 1).” See pages 6 and 7 of report at: <http://www.bcdc.ca.gov/cm/2015/2014-Maritime-Cargo-Monitoring.pdf>.

The FGC Study counts fees paid to the City as revenue and includes them as net benefits of the Orcem/VMT project. This is incorrect methodology. Fees are charges for services and most fees are designed to recover the cost associated with processing an application or providing a service (such as performing building inspections). Since fees are typically revenue neutral, they are not counted in fiscal impact studies.

Property Taxes

Property taxes will be a primary source of potential revenue from the proposed Orcem/VMT project. Property tax revenues associated with the project are based on the incremental increase in taxable property value that would result from improvements on the site. There are two property parcels on this site:

- Parcel 22 is 19.92 acres at 800 Derr Street (4.83 acres occupied by Orcem)
- Parcel 23 is 9.89 acres at 790 Derr Street.

Parcel 23 is owned by the State Lands Commission of California and is leased from the City of Vallejo, which acts as the agent/trustee for the state. Orcem/VMT pays taxes as “possessory interest” on this property.

Table 1 shows that the two properties are currently generating \$8,191 per year in property tax revenues to the City of Vallejo in their undeveloped state.

Table 1: Current 2016 Property Tax Year Revenue (pre-development)

	Appraised Value	Property Tax Rate to City ¹	Property Tax to City of Vallejo
790 Derr Avenue (possessory interest), 9.89 acres			
Value of Land	\$1,142,178	0.002462	\$2,812
800 Derr Avenue, 19.92 acres			
Value of Land	\$1,560,353	0.002462	\$3,842
Value of Improvements	\$624,141	0.002462	\$1,537
Total:	\$3,326,672		\$8,191

(1) Tax rate obtained from Rosalyn Mendoza of Solano County.

Post-development tax revenues are estimated in Table 2 based on the construction costs and equipment costs provided by Orcem/VMT in the FGC

Study. Phase 2 of the project has been cancelled. Since costs were not estimated for each phase, it is assumed that Phase 1 costs are about half of the total for both phases. Once the project is fully completed and fully operational, it would generate an increase in tax revenues of \$103,120 per year. However most of this estimate comes from taxes paid on the value of factory equipment. Equipment is depreciated rapidly over a 3- to 10-year period. Therefore after 10 years the additional property taxes paid by the project would decline to \$41,983 per year.³

By comparison, the FGC Study estimates *lower* property tax revenues to the City ranging from \$23,777 in the first year to \$31,758 in the sixth year (the last year of analysis). The calculations are not provided in the FGC Study, as they are here, so it is not possible to verify them or identify the source of the discrepancy.

Table 2: Post-Development Property Tax Revenues

	Appraised Value	Property Tax Rate	Property Tax to City of Vallejo at Completion	Property Tax to City After Equipment Depreciation in 10 Years
Land Value at 790 and 800 Derr Avenue	\$2,702,531	0.002462	\$6,654	\$6,654
Orcem's Estimated Construction Value	\$12,495,000	0.002462	\$30,766	\$30,766
Orcem's Estimated Equipment Value	\$24,830,000	0.002462	\$61,137	\$0
VMT's Estimated Phase 1 Construction Value	\$5,180,000	0.002462	\$12,754	\$12,754
VMT Phase 2 Construction - <i>Cancelled</i> (1)	\$5,180,000	NA	\$0	\$0
Total Future Taxes	\$50,387,531		\$111,311	\$50,174
Less Current Taxes Paid			-\$8,191	-\$8,191
Net Increase in Property Tax Revenues due to Orcem/VMT			\$103,120	\$41,983

Lease Value

The City of Vallejo has entered into a 66-year lease agreement for the waterfront portion of the site (Parcel 23) with Orcem/VMT under very favorable terms for the lessee. The stated amount of the lease is \$95,520 per year. However, the City is offering a partial waiver of the lease, referred to as a "capital improvement offset," amounting to 85% of the lease value up to a maximum of \$8 million in total abatement. The abatement could extend for the entire 66-year life of the lease. Therefore, the actual lease revenue to the City is 15% of \$95,520, or \$14,328 per year. This is equivalent to \$1,194 per month, or less than the rent for a small single-family house in the area.

³ Note that buildings will also be depreciated for tax purposes, however the effect on property valuation will have to be determined by the County Tax Assessor's Office and is not included here.

Given that this 10-acre waterfront parcel has a clear and substantial value, this lease agreement represents a subsidy, rather than a revenue source. While this review does not attempt to evaluate the full market value of the lease, it is assumed that the value is at least \$95,520, and that the City's abatement represents a subsidy. Therefore, the lease represents a cost to the City of \$81,192 per year in lost revenues.

Utility Sales Tax Revenue

Utility taxes were not independently evaluated in this review due to the lack of data on the likely natural gas and electrical energy usage. Instead, the unverified FGC Study numbers are included here. The FGC Study does not provide documentation for calculations or assumptions for their utility tax revenue estimate. The utility tax rate is 7.5 percent of natural gas and electricity charges and is paid to the City of Vallejo.⁴ The FGC Study reports that utility taxes would range from \$77,000 to \$250,000, once it starts operation. It would therefore represent the main revenue generator for this project. As such, it warrants further evaluation and verification.

There are a number of factors which could reduce the utility sales tax revenue estimate considerably. Because natural gas prices have remained low, these revenues may be lower than estimated. The use of renewable energy sources would directly reduce these revenues. Should Orcem/VMT decide to generate onsite power (as other local industries have done) and utilize the waste heat for their slag drying operation, electricity purchases from PG&E could be eliminated.

Fiscal Revenue Summary

The summary of fiscal revenues to the City of Vallejo presented in Table 3 includes property taxes, lease revenues (costs), and utility taxes. The project is not expected to directly generate any sales tax revenues.

⁴ See City of Vallejo Municipal Code Section 3.12.050.

Table 3: Revenue Summary

City of Vallejo

	First Year of Operation	After 10 Years
Property Tax Revenue Increase	\$103,120	\$41,983
Lease Revenue (cost)	-\$81,192	-\$81,192
Utility Tax (7.5% of nat. gas & elect. sales)*	\$76,590	\$249,930
Sale Tax	0	0
Total Revenues	\$98,518	\$210,721

*Figures for utility tax not verified due to lack of information.

These total revenue estimates are considerably lower than those estimated in the FGC Study, in spite of the fact that the property tax revenues to the City are calculated to be higher in this review. The FGC Study estimates total revenues of \$262,699 in the first year, and \$459,935 in the final year.⁵ However, there are a number of accounting errors in their report. First, the full lease amount is counted as revenue, whereas Orcem/VMT will only pay 15% of the lease amount under the lease terms. This constitutes a subsidy or cost, rather than a credit or revenue. Second, the FGC table includes fees paid as net revenues to the City, whereas they will actually be fees for services rendered by the city and should be considered revenue neutral. Lastly, the FGC Study includes figures for direct sales tax revenues to the City ranging from \$15,000 to \$70,000. While there is no documentation provided in the FGC Study for the sales tax revenue estimates, it is more reasonable to assume that they will be negligible. Therefore, the FGC Study has greatly overstated the total potential revenues to the City of Vallejo.

Fiscal Costs

As mentioned previously the FGC Study does not consider any of the costs that the City of Vallejo would incur as a result of the Orcem/VMT project. These costs would include all city services (operation and maintenance) and new facilities that would be required by the project. The most obvious cost impacts would be on the transportation system. Road damage would result from heavy trucks operating on City streets during both the construction phase and the operation of the cement plant and marine terminal. The cement plant operations alone are expected to generate 410 truck trips per day.⁶ Road repairs and upgrades could

⁵ See Table 3 of FGC Study.

⁶ Source: Page 2 of Department of Transportation referral letter of 10/15/15 (Public Agency Letters, page 36 of 43,

cost many millions of dollars. A single intersection upgrade to accommodate the increased truck traffic would likely cost more than \$500,000. The cost to re-build a single mile of four-lane roadway to accommodate heavy trucks would cost \$12 million to \$24 million.⁷ The transportation system impacts alone could easily offset the modest fiscal revenues anticipated for this project and generate a large fiscal deficit. Other City costs would include any capital cost that may be necessary to expand the water system to meet the Orcem/VMT water demands, and any additional police and fire protection services that would be required.

Direct Economic Impacts

Normally adding a new primary manufacturing industry can provide an economic boost to the local area. However, there are a number of unique factors limiting the potential economic benefits of the Orcem/VMT project to the local community. First, the Orcem project will import up to 97% of its raw materials from outside the U.S. That leaves only 3% of materials to be sourced from the U.S. It is not clear that any of these materials will be purchased from suppliers in Vallejo or Solano County. Therefore, expenditures on materials will leave the area and will have few, if any, local benefits.

The second factor limiting economic benefits is the fact that Orcem is owned by Orcem Americas, based in Woodlands, Texas. It further appears that Orcem Americas is owned by Ecocem, an Irish company. Therefore profits will leave the state, and likely leave the country, and not be reinvested in the local community.

The third factor limiting economic benefit is that VMT operations will be subcontracted to a third party specializing in marine terminal operations.⁸ Such companies are likely to be based outside of the local community. They would also be likely to have their own workers that they would relocate to Vallejo, rather than training new workers. And they would take their business profits out of the local area to wherever they are headquartered.

<http://www.cityofvallejo.net/common/pages/DisplayFile.aspx?itemId=2813225>).

⁷ Based on typical urban road construction costs of \$3 million to \$6 million per lane-mile.

⁸ Page 10 of FGC Study states: The stevedore services will be subcontracted to a terminal operator, however, for simplicity, the impacts associated with stevedore operations of the terminal are presented as part of the total VMT Project.

The fourth limiting factor is that the construction contracts for the cement factory and marina are likely to go to large regional or national construction companies that will have their own employees and will take all profit out of the area. Therefore, the primary local economic impact of the construction will be local spending by the temporary construction crews. Some construction materials may also be purchased locally. Further analysis needs to be done to determine which local materials, if any, would be supplied to the construction companies.

The fifth limiting factor is that, according to the FGC Study, \$10.3 million in plant equipment will be imported from outside the U.S. The remaining \$14.5 million in equipment would be purchase from U.S. sources. However it is unlikely that any of this plant equipment would be purchased locally.

The sixth factor limiting economic benefit is that no increase in local or regional cement demand is forecast in any of the Orcem/VMT application materials. Therefore, any increased production of slag-based cement at Orcem will merely displace cement being produced elsewhere. If there is no net increase in cement sales, then there is no net increase in business activity associated with cement sales.

Due to the limiting factors described here, it is difficult to identify any significant, direct economic benefit that the Orcem/VMT project will have for the residents and economy of Vallejo beyond creating a small number of jobs at the cement factory. Even assuming that all the cement factory jobs were to go to local residents, the overall economic impact appears to be so small as to be virtually insignificant and undetectable in a city-wide context.

Indirect and Induced Economic Impacts

Indirect and *induced* economic impacts of a new business, like the Orcem/VMT project, are assumed to be generated as a result of the direct economic impacts. Because the direct impacts are likely to be quite small (as described above), the secondary impacts will also be small. The limitations on the use of “multipliers” to estimate indirect and induced impacts is addressed below.

Use of IMPLAN Model Multipliers

In order to estimate indirect and induced economic effects, the FGC Study uses the IMPLAN input/output model to estimate a multiplier to apply to the direct effects of the Orcem/VMT project. There are numerous concerns related to the use of this model for the Orcem/VMT project. The first is that Orcem is a unique business, and the industry segment used in the FGC Study is not identical to the proposed use. The FGC Study finds that *"Sector 161: Ready mix concrete manufacturing is the most similar industry to Orcem."* However ready mix concrete is likely to be a fully domestic manufacturing operation combining Portland cement with aggregate for retail sales in the local region. Orcem would be a cement manufacturer relying primarily on imported materials for production and shipping its product over a larger region, and possibly overseas.

Use of input/output modelling applies to a local region and requires that supply equals demand and that imports equal exports. Orcem will import up to 97% of its raw materials from outside the U.S. Without matching exports, this creates an imbalance that is not addressed in the IMPLAN model. Furthermore, the model assumes that most revenues will stay within the region and recirculate. However, since Orcem is owned by a foreign corporation, profits will leave the U.S. Also, since operation of the marine terminal will be subcontracted to a third party, these revenues may also leave the area.

Both the importing of raw materials and the exporting of profits outside the region will result in depleting monetary flows in the local region that would otherwise recirculate and produce the multiplier effects. Furthermore, it is unlikely that the increased supply of slag-based cement will be matched with an increased demand for cement in the local region. Instead, it is likely to displace other types or brands of cement. Such displacement would not produce beneficial multiplier effects.

Therefore, the stated multiplier effects for this business model are dubious and may not exist. A more conservative approach in this case is to consider only the direct effects of the Orcem/VMT project which can be estimated with reasonable confidence.

Employment and Wages

The projections for employment and wages presented by Orcem/VMT appear to be overly optimistic. Both Orcem and VMT have no contractual commitment or legal obligation to produce any specific number of jobs or to provide any specific levels of compensation as part of this project. This sort of firm commitment is usually negotiated by savvy city economic development staff in exchange for subsidies or benefits, such as the \$8 million in lease waivers the city has agreed to provide. Lacking such commitments, promises of employment and high salaries are entirely speculative. It is in the Applicant's interest to inflate and exaggerate employment figures to make their project appear more beneficial and to elicit public support, especially where public subsidies, public costs, or negative impacts are involved.

In their applications to the City, Orcem/VMT has stated that there will be from 20 to 30 full-time-equivalent (FTE) employees for Orcem and up to 59 for VMT, when it is at full capacity.⁹ That represents a combined total of 79-89 FTE employment. However, Orcem/VMT has not provided information about what types of jobs they believe would be created, so it is not possible to verify their estimates by comparing them with similar businesses. Given the high figure of 59 employees for the marine terminal component, it seems likely that VMT has taken credit for trucking jobs associated with hauling that will actually be performed by independent truckers, and should therefore not be counted as direct employment.

Since the VMT component of the project has eliminated Phase 2, it will be much smaller than originally proposed and evaluated in the FGC Study. Since Phase 2 involved a second dock and a rail connection, its elimination would reduce the marine terminal's employment and construction costs by at least half.

Reasonable estimates for the Orcem plant employment appear to be in the 20 to 25 jobs range based on the Ecocem website. Ecocem is headquartered in Ireland, where it also has a slag cement operation. The website states: "we employ 27 people across Ireland and the UK."¹⁰

⁹ The FGC Study performed for Orcem/VMT claims 189 jobs would be created by 2021, but their study combines direct employment with induced and indirect employment. The only reference to direct job creation is a statement saying that "*The two projects will create and support nearly 100 new jobs once they are at full operation level in 2021....*"

¹⁰ See <http://www.ecocem.ie/about-us/>.

With the VMT component scaled back to Phase 1, employment there will be no more than 29 jobs (half of estimated peak employment). Therefore we can optimistically anticipate up to 54 jobs from this project, and realistically expect the final number to be much smaller. By comparison, an average supermarket would create 89 jobs on average.¹¹

The FGC Study claims that salaries of the Orcem/VMT workers will be \$80,445 per year. However, no evidence or validation is provided to show that wages to cement plant and dock workers will be this high. Instead, the median salary in Solano County is a more reasonable estimate. With an average wage per job of \$47,372 in Solano County (2009),¹² it is likely that salaries would be much lower than claimed by Orcem/VMT.

Depressing Effect on Property Values

The reactivation of the long-dormant General Mills site for a heavy industry like cement manufacturing will tend to have a depressing effect on nearby residential property values and rents. There are a large number of residential housing units within one-quarter mile of the Orcem/VMT site. The desirability of these housing units will likely decline as a result of the increased noise, dust, lighting, and visual impacts of this heavy industry operating on a 24-hour, year-around schedule.

There would be additional negative impacts resulting from heavy truck hauling and re-activating the dormant train tracks through residential areas. Not only will this have a depressing effect on the adjacent residential areas, but the entire town may lose real estate appeal if it becomes known as a heavy industrial area.

For this review we have not attempted to quantify the private-sector cost in terms of lost property values and rents. However, it should be pointed out that significant declines in property values will also translate into public sector costs in terms of decreasing property tax revenues.

¹¹ Number of employees per store based on data from the Food Marketing Institute.

¹² Most recent figure available on Solano County website,
https://www.solanocounty.com/about/county_facts_n_figures.asp.

Opportunity Costs

Opportunity cost represents a foregone revenue or benefit associated with a particular financial decision. For example, investing money in a real estate venture means that the money cannot be invested in an alternative investments such as another business venture.

Using the waterfront property for slag storage, cement manufacturing, and as a marine terminal for slag shipments from Asia will commit this area to a heavy industrial use involving 24-hour per day noise, lighting, dust generation, heavy equipment operations, and machinery operations. This commitment precludes other possible uses for the site which could have fewer negative impacts and potentially more beneficial impacts. Therefore, there is an opportunity cost associated with the Orcem/VMT option that should be considered.

Alternative Use of Site

The Sperry Landing proposal of 2008 provides an alternative vision for the site that includes compact mixed use development combined with a waterfront park. This proposal would include 370 residential units and an unknown amount of commercial office and retail space. The proposal was withdrawn during the 2007-09 recession, but appears to be viable under current improved economic conditions. The Napa Mill site is a similar waterfront location that has been revitalized and serves as a potential model for this location. Further analysis of alternative development options for this site is highly recommended.

Summary of Issues

The fiscal impacts considered in the FGC Study performed for Orcem/VMT presented only revenues and failed to include any of the costs to local governments. The revenue estimate in the FGC Study was more than twice as much as estimated in this review. Local government costs associated with Orcem/VMT proposal include all the City's public services and public facilities required to serve the project. Since the estimated revenues are small, it is reasonable to expect that costs to the City of Vallejo will exceed revenues, and net fiscal impacts will be negative.

The proposed Orcem/VMT project will generate such a small direct economic impact on the Vallejo area as to be virtually unnoticeable and undetectable for the City as a whole. The use of multipliers to estimate additional indirect and induced economic effects may not apply due to the unique conditions of the proposal, as described in this review. Local consideration should focus on the direct impacts. It is possible that the decreases in nearby property values resulting from heavy industry at this site could more than offset any local economic benefits from the plant's business operation, resulting in a net negative economic impact on the area.

The potential downsides of the Orcem/VMT project could be quite substantial. It is possible that heavy industry at this site could have a broader depressing effect on property values city-wide, if potential homebuyers in the region come to view Vallejo as an undesirable industrial location. The environmental and health risks associated with importing large volumes of industrial waste product appear to be largely unknown. Given the lack of substantial and sustained economic benefits to the local region, the downside risks of the Orcem/VMT project appear to be the primary consideration. Alternative uses for this waterfront site should be considered.

Qualifications of Author

Mr. Fodor is Founder and Principal of Fodor & Associates, a consulting firm based in Eugene, Oregon since 1993. The firm specializes in community planning and land use consulting, including fiscal impact analysis, growth management, land-use planning, economic forecasting, and research and analysis. He is an expert in development impact analysis. He created the Community Impact Model, a computer model that quickly estimates infrastructure and service costs for new developments of any size and mix of uses based on data from all local government in the U.S. He created a custom development impact model for the City of San Diego that models impacts of development on city services and facilities. He has analyzed and reported on the fiscal and economic impacts of development proposals in Texas, Washington, Oregon, Maryland, Idaho, and Wyoming for various clients. He conducted statewide assessments of infrastructure impacts of residential development in Oregon and Washington. He is the principal author of Fiscal and Economic Impacts of Destination Resorts in Oregon. He has provided professional keynote presentations and workshops on these topics at conferences and other events around the country.

Mr. Fodor holds a Master's degree in Urban and Regional Planning and a Master of Science degree in Environmental Studies, both from the University of Oregon. He holds a Bachelor of Science degree in Mechanical Engineering from the University of Wisconsin - Madison.