

From: [Richard T. Loewke, AICP](#)
To: [Plowman, Lisa A.](#)
Cc: [Andrea Ouse](#); IKhalsa@rwglaw.com; "[Darcey Rosenblatt](#)"; "[Clive Moutray](#)"; "[Steve Bryan](#)"; "[Matt Fettig](#)"; "[Sean Marciniak](#)"; "[Wilson Wendt](#)"
Subject: RE: Questions
Date: Wednesday, January 18, 2017 10:29:45 PM
Attachments: [Email to City of Vallejo 011016.pdf](#)
[2014-12-19 Permit Drawings - Dredging Plans and Phase Sections.pdf](#)
[VMT Orcem Vessels and Materials Images.pptx](#)
Importance: High

Lisa and Andrea,

I have prepared the responses (below in red) to your questions, as raised in Lisa's emails of 1/14/17 and 1/17/17, to assist you in ultimately providing accurate information in the Staff's report. I am, however, concerned, both from the scope of these questions and the reference to preparing a staff report ahead of completion and release of the Final EIR and EJA, that Staff may be completing its report and recommendations without first having ensured that the FEIR and EJA are complete and technically accurate. As referenced in Miller Starr Regalia's letters of 10/03/16 and Tuesday of this week (1/17/17), it is of critical importance pursuant to our contractual Reimbursement Agreement and CEQA, that the FEIR and EJA both be verified as being complete and accurate, prior to formulating any judgement or recommendation on approval or denial of the VMT and Orcem Applications. We are, of course, interested in reviewing the documents, and helping to identify any critical flaws or omissions, prior to the Staff recommendation and prior to formulation of opinions by decision makers.

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From: Plowman, Lisa A. [<mailto:maplowman@rrmdesign.com>]
Sent: Saturday, January 14, 2017 2:11 PM
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Subject: Questions

Hi Dick,

We are in the process of putting the finishing touches on the staff report and we have a few

questions we'd like VMT and Orcem to answer. Please see below:

1. Can Orcem quantify the reduction in CO₂e when green cement is processed rather than Portland cement?

Orcem's on-site milling process is primarily focused on "Mode 1" operation, involving the drying and grinding of GBFS and other additives to produce GGBFS. As stated in Ramboll-Environ's Air Quality Report, production of this "green cement" product results in an average percentage savings, when compared to portland cement production, of greater than 90%, or approximately 577,000 MTs of carbon dioxide equivalent (CO₂E) each year. As noted in the Orcem Application, processing of GGBFS also results in the elimination of all SO₂ and mercury compounds associated with the manufacture of ordinary portland cement. Beyond this, the processing of recycled GBFS into the GGBFS green cement material produces a stronger product which has a number of environmental advantages, while also avoiding the quarrying of an estimated average of 1.6 tons of natural resources such as limestone, clay and shale, which are used in the manufacture of ordinary portland cement.

The Mode 2 operations, should they occur (Orcem has already testified that it intends to operate into the foreseeable future using primarily Mode 1), would involve the grinding of clinker material (and additives) to produce portland cement. In Mode 3, GGBFS is milled on-site, and conventional portland cement is imported, to meet industry specification needs. Thus, the enormous net CO₂E reductions associated with Mode 1 operation would not be realized if the plant operates in Mode 2; however, on-site CO₂E emissions would be reduced in Mode 2 due to the much lower level of natural gas usage in drying the raw GBFS material (used in Mode 1). In Mode 3, there would be again be reduced on-site CO₂E emissions (depending on how much cement is imported and used to offset GGBFS production), as well as substantial global net CO₂E reductions (based on volume of GGBFS produced on-site).

2. The list of materials that will be imported into the VMT facility excludes Portland cement, but Mode 3 for Orcem states that Portland cement would be imported. Can you explain the inconsistency?

Your stated assumption is incorrect. As identified in our written communication of January 10, 2016 (attached), and explained in subsequently communications, portland cement is among the list of materials which Orcem expects to import through the VMT Terminal (I hope the Final EIR is not mistaken on this point). As indicated in Table 5 of the Orcem Application, up to 120,000 MT of portland cement may be imported, principally by rail (but potentially by vessel). Thus, it is possible that when Orcem needs to operate in Mode 3, it will import the

requisite portland cement through the Terminal and make it available to customers with the ground GGBFS to meet industry specifications.

3. When Portland cement is imported what form is it in? What is done to it at the facility? Is the process similar to how GGBFS is created in the mill?

See answers above. Portland cement is a finished product which would be imported only when Orcem operates in Mode 3. The portland cement would be handled, stored and transported in closed containers/packaging in the exact same manner as the GGBFS power.

4. We've gone back and forth about the difference between the raw materials imported to the site and the maximum material volumes. The EIR states that 760,000 MT of raw materials are imported in Phase 2 and also says that the maximum material volume is 900,000 MT for Phase 2. Please explain why these numbers are different.

Your stated assumptions are partially correct (and again, I hope the Final EIR has not misstated this). As stated in Table 5 of the Orcem Application, up to a maximum of 760,000 MT of raw, recycled GBFS (or clinker depending on which Mode) is imported, and ground in the Mill with the other specified additives to yield a maximum Phase 2 finished product output of 900,000 MT.

5. We'd like to include some photos of materials and equipment in the staff report in order to help the PC and public better understand the project. Can you please provide photos of the following: 40,000 MT geared ships, 70,000 MT self discharging ship, and the raw materials being imported for Orcem (gypsum, limestone, GBFS, clinker, pozzolan)? I can find photos, but I want to make sure they are accurate.

Attached please see PowerPoint with images of both typical vessels to visit the Terminal, and raw materials imported for Orcem's use in producing the GGBFS product.

6. What are the secondary by products from the production of GGBFS?

None. The GBFS material is ground, and extra moisture (water) is released as it evaporates; the other materials are then added, yielding BBGFS.

7. Please confirm the proposed fencing material to be used on-site by VMT and Orcem.

As stated in the VMT Application, new chain link fencing material is to be used to extend the existing chain link fencing to complete the perimeter security. By Federal law, this perimeter security fencing must be approved by the Department of Homeland Security through the US Coast Guard, and may include additional features such as razor wire; the final design will be submitted to the City as well for review prior to installation. The Orcem Site Boundary Fence (as shown in the detailed plans) consists of a precast masonry wall adjoining the Open Raw Materials Storage Area, along with a landscaped planter area elsewhere, which includes either a chain link or other decorative fence which is subject to review and approval by the City (see Sheet M3P2-216).

8. The EIR states that the wharf would be dredged to 38 feet below MLLW to allow for deep draft vessels. Do you know what the depth at the wharf is currently?

This is as stated on page 24 of the VMT Application (DEIR Appendix B). The McLaren Engineering Group analysis and drawings provide additional details of the existing mudline and water depth in the vicinity of the proposed Terminal, and also provide estimates of the quantity of dredged material required to achieve the 38-foot depth adjoining the Terminal (See DEIR Figure 2-8 reproduced from McLaren's analysis and 12/19/14 diagram - attached).

9. What happens to the stockpiles of raw materials (gypsum, limestone, pozzolan, GBFS) during a storm event?

The GBFS material is already "wet", is inert, and is not subject to erosion or release of any discharge when rained on. As noted in the Orcem Application and shown on Orcem's plans, the GBFS storage area is equipped with sprinklers to keep the material in a damp condition, as needed. Clinker and portland cement are only stored in a closed building (Building 8), and the GGBFS is stored in the closed Storage Silos. The Raw Material Storage Area (#9 on plans and listed in Application) is where the gypsum, pozzolan and limestone materials are to be stored; these materials are also inert, and not subject to erosion or release of any discharge when rained on (as documented in the Ramboll-Environ and AWN Reports). The Storm Water Control Plan addresses collection, pre-treatment, and discharge of storm waters from the open portions of the site in greater detail; it shows existing water depths adjoining the existing wharf (and proposed Terminal) of between approximately 26 and 36 feet.

10. Do you have a graphic/diagram that depicts the milling process?

Yes. Please see Figure 4 of the Orcem Application on page 44 (DEIR Appendix C). See also the full plan set for additional details of mill and conveyor systems.

Please let me know if you have any questions.

Thanks,

Lisa



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