

## PREFACE

March 26, 2019

In response to a request under the California Public Records Act, the City of Vallejo is exercising its discretion to make public the unfinished draft Final Environmental Impact Report (FEIR) for the VMT/Orcem project. The current version of this document is not ready for certification under the purposes of California Environmental Quality Act (CEQA). As of this date, clarification is needed as to who is the responsible party for certain indemnity and mitigation measures, and who has site control and ownership of the project site. While this clarification is obtained processing of the EIR has been paused.

As of March 26, 2019, the City, as lead agency, has determined that the VMT/Orcem project is not yet ready for approval and that the environmental documents that have been prepared do not yet achieve a compliance with CEQA (Cal. Code Regs, Titl. 14 Section 15090(a)(1)) Thus, the FEIR is not ready to be presented to the City Council for certification and project approval under CEQA (Cal. Code Regs, Titl. 14 Section 15090(a)(2)).

While the processing of the application has been paused, staff will endeavor to work with applicants to obtain an updated environmental justice analysis, and data, as well as commitments from the applicants to perform certain mitigation measure in order to present them as feasible. Feasible in this context means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors (Cal. Code Regs, Titl.14 Section 15364).

Recognizing that the applicants and the public have requested release of the draft FEIR for public viewing, the City is accommodating these requests by posting the documents here. A progress report on this project is expected to be presented to Council by April 23, 2019.

# DRAFT FEIR

FINAL

## VALLEJO MARINE TERMINAL AND ORCEM PROJECT ENVIRONMENTAL IMPACT REPORT

*Prepared for:*

**City of Vallejo**  
555 Santa Clara Street  
Vallejo, California 94590

*Prepared by:*

**DUDEK**  
1630 San Pablo Ave, Suite 300  
Oakland, CA 94612  
*Contact: Darcey Rosenblatt*

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# TABLE OF CONTENTS

<b><u>Section</u></b>	<b><u>Page No.</u></b>
<b>ACRONYMS AND ABBREVIATIONS.....</b>	<b>ACR-I</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>ES-1</b>
ES.1 Introduction.....	ES-1
ES.2 Project Location .....	ES-1
ES.3 Existing Project Site.....	ES-2
ES.4 Project Overview .....	ES-2
ES.5 Project Objectives .....	ES-4
ES.6 Summary of Impacts .....	ES-5
ES.7 Analysis of Alternatives.....	ES-41
ES.7.1 Alternatives Analyzed.....	ES-41
ES.7.2 Environmentally Superior Alternative .....	ES-42
ES.8 Areas of Controversy .....	ES-42
ES.9 Issues to be Resolved by Lead Agency.....	ES-43
<b>1 INTRODUCTION.....</b>	<b>1-1</b>
1.1 Background.....	1-1
1.1.1 The VMT Component of the Project .....	1-2
1.1.2 The Orcem Component of the Project .....	1-2
1.2 Project Purpose and Need.....	1-2
1.3 Purpose of the EIR .....	1-2
1.4 Intended Uses of the EIR .....	1-3
1.5 Scope of the EIR .....	1-4
1.6 CEQA Process .....	1-5
1.6.1 Lead and Responsible Agencies .....	1-5
1.6.2 Notice of Preparation and Responses .....	1-6
1.6.3 Draft EIR Public Review .....	1-7
1.6.4 Draft Final EIR .....	1-7
1.6.5 Final EIR.....	1-7
1.7 Document Organization.....	1-8
<b>2 PROJECT DESCRIPTION .....</b>	<b>2-1</b>
2.1 Project Location .....	2-1
2.2 Existing Project Site.....	2-1
2.3 Project Objectives .....	2-3
2.4 Proposed Project .....	2-4
2.4.1 Construction.....	2-7
2.4.2 Operation.....	2-11
2.4.3 Infrastructure.....	2-23

2.4.4 Off-Site Public Access Improvements..... 2-24

2.4.5 Optional Development Agreement and/or Community Benefits Agreement  
..... 2-25

**3 ENVIRONMENTAL ANALYSIS..... 3-1**

3.1 Aesthetics..... 3.1-1

3.1.1 Regulatory Setting ..... 3.1-1

3.1.2 Existing Conditions..... 3.1-4

3.1.3 Thresholds of Significance ..... 3.1-7

3.1.4 Impact Discussion..... 3.1-7

3.1.5 Mitigation Measures ..... 3.1-13

3.1.6 Level of Significance After Mitigation..... 3.1-14

3.2 Air Quality ..... 3.2-1

3.2.1 Regulatory Setting ..... 3.2-1

3.2.2 Existing Conditions..... 3.2-11

3.2.3 Thresholds of Significance ..... 3.2-14

3.2.4 Impact Discussion..... 3.2-16

3.2.5 Mitigation Measures ..... 3.2-42

3.2.6 Level of Significance After Mitigation..... 3.2-45

3.3 Biological Resources ..... 3.3-1

3.3.1 Regulatory Setting ..... 3.3-2

3.3.2 Existing Conditions..... 3.3-14

3.3.3 Thresholds of Significance ..... 3.3-38

3.3.4 Impact Discussion..... 3.3-39

3.3.5 Mitigation Measures ..... 3.3-66

3.3.6 Level of Significance after Mitigation..... 3.3-75

3.4 Cultural Resources ..... 3.4-1

3.4.1 Regulatory Setting ..... 3.4-1

3.4.2 Existing Conditions..... 3.4-8

3.4.3 Thresholds of Significance ..... 3.4-15

3.4.4 Impact Discussion..... 3.4-15

3.4.5 Mitigation Measures ..... 3.4-19

3.4.6 Level of Significance After Mitigation..... 3.4-24

3.5 Geology and Soils..... 3.5-1

3.5.1 Regulatory Setting ..... 3.5-1

3.5.2 Existing Conditions..... 3.5-7

3.5.3 Thresholds of Significance ..... 3.5-12

3.5.4 Impact Discussion..... 3.5-13

3.5.5 Mitigation Measures ..... 3.5-18

3.5.6 Level of Significance After Mitigation..... 3.5-19

3.6	Greenhouse Gas Emissions.....	3.6-1
	3.6.1 Regulatory Setting .....	3.6-1
	3.6.2 Existing Conditions.....	3.6-10
	3.6.3 Thresholds of Significance .....	3.6-13
	3.6.4 Impact Discussion.....	3.6-15
	3.6.5 Mitigation Measures .....	3.6-31
	3.6.6 Level of Significance After Mitigation.....	3.6-33
3.7	Hazards and Hazardous Materials .....	3.7-1
	3.7.1 Regulatory Setting .....	3.7-1
	3.7.2 Existing Conditions.....	3.7-9
	3.7.3 Thresholds of Significance .....	3.7-17
	3.7.4 Impact Discussion.....	3.7-17
	3.7.5 Mitigation Measures .....	3.7-25
	3.7.6 Level of Significance After Mitigation.....	3.7-30
3.8	Hydrology and Water Quality.....	3.8-1
	3.8.1 Regulatory Setting .....	3.8-1
	3.8.2 Existing Conditions.....	3.8-11
	3.8.3 Thresholds of Significance .....	3.8-15
	3.8.4 Impact Discussion.....	3.8-16
	3.8.5 Mitigation Measures .....	3.8-32
	3.8.6 Level of Significance After Mitigation.....	3.8-33
3.9	Land Use and Planning .....	3.9-1
	3.9.1 Regulatory Setting .....	3.9-1
	3.9.2 Existing Conditions.....	3.9-8
	3.9.3 Thresholds of Significance .....	3.9-9
	3.9.4 Impact Discussion.....	3.9-10
	3.9.5 Mitigation Measures .....	3.9-46
	3.9.6 Level of Significance After Mitigation.....	3.9-46
3.10	Noise .....	3.10-1
	3.10.1 Regulatory Setting .....	3.10-4
	3.10.2 Existing Conditions.....	3.10-9
	3.10.3 Thresholds of Significance .....	3.10-11
	3.10.4 Impact Discussion.....	3.10-13
	3.10.5 Mitigation Measures .....	3.10-56
	3.10.6 Level of Significance After Mitigation.....	3.10-60
3.11	Public Services and Recreation.....	3.11-1
	3.11.1 Regulatory Setting .....	3.11-1
	3.11.2 Existing Conditions.....	3.11-5
	3.11.3 Thresholds of Significance .....	3.11-6

3.11.4	Impact Discussion.....	3.11-7
3.11.5	Mitigation Measures .....	3.11-8
3.11.6	Level of Significance After Mitigation.....	3.11-8
3.12	Transportation and Traffic .....	3.12-1
3.12.1	Regulatory Setting .....	3.12-1
3.12.2	Existing Conditions.....	3.12-4
3.12.3	Thresholds of Significance .....	3.12-16
3.12.4	Impact Discussion.....	3.12-18
3.12.5	Mitigation Measures .....	3.12-34
3.12.6	Level of Significance After Mitigation.....	3.12-38
3.13	Utilities and Service Systems.....	3.13-1
3.13.1	Regulatory Setting .....	3.13-1
3.13.2	Existing Conditions.....	3.13-7
3.13.3	Thresholds of Significance .....	3.13-9
3.13.4	Impact Discussion.....	3.13-10
3.13.5	Mitigation Measures .....	3.13-17
3.13.6	Level of Significance After Mitigation.....	3.13-17
<b>4</b>	<b>CUMULATIVE IMPACTS .....</b>	<b>4-1</b>
4.1	Introduction.....	4-1
4.2	Methodology.....	4-1
4.2.1	Cumulative Projects List.....	4-1
4.3	Cumulative Impact Analysis.....	4-2
4.3.1	Aesthetics.....	4-2
4.3.2	Air Quality .....	4-3
4.3.3	Biological Resources .....	4-4
4.3.4	Cultural Resources .....	4-4
4.3.5	Geology and Soils.....	4-5
4.3.6	Greenhouse Gas Emissions.....	4-5
4.3.7	Hazards and Hazardous Materials .....	4-5
4.3.8	Hydrology and Water Quality.....	4-6
4.3.9	Land Use and Planning.....	4-7
4.3.10	Noise .....	4-7
4.3.11	Public Services and Recreation.....	4-8
4.3.12	Transportation and Traffic .....	4-8
4.3.13	Utilities and Service Systems.....	4-9
<b>5</b>	<b>OTHER CEQA CONSIDERATIONS .....</b>	<b>5-1</b>
5.1	Effects Not Found to be Significant.....	5-1
5.2	Significant and Unavoidable Environmental Impacts .....	5-1

5.3	Significant and Irreversible Environmental Effects.....	5-4
5.4	Growth Inducement .....	5-5
<b>6</b>	<b>ALTERNATIVES.....</b>	<b>6-1</b>
6.1	Introduction.....	6-1
6.2	Project Objectives .....	6-2
6.3	Alternatives Considered But Rejected .....	6-3
6.3.1	Alternate Site .....	6-3
6.3.2	Preservation Alternative.....	6-3
6.3.3	Reduced Truck and Rail Alternative.....	6-5
6.3.4	Reduced Scale Alternative.....	6-6
6.4	Alternatives Analysis .....	6-7
6.4.1	No Project Alternative .....	6-7
6.4.2	Revised Operations Alternative .....	6-8
6.4.3	Aesthetics.....	6-10
6.4.5	Summary of ROA Air Quality Analysis.....	6-11
6.4.7	Existing Conditions.....	6-21
6.4.8	Thresholds of Significance .....	6-22
6.4.9	Impact Discussion.....	6-22
6.4.10	CEQA Appendix G Threshold Questions.....	6-27
6.5	Summary Matrix .....	6-42
6.6	Environmentally Superior Alternative.....	6-43
<b>7</b>	<b>REFERENCES.....</b>	<b>7-1</b>
	Executive Summary .....	7-1
Chapter 1	Introduction.....	7-1
Chapter 2	Project Description.....	7-1
Chapter 3	Environmental Analysis.....	7-1
3.1	Aesthetics.....	7-1
3.2	Air Quality .....	7-2
3.3	Biological Resources .....	7-3
3.4	Cultural Resources .....	7-12
3.5	Geology and Soils.....	7-13
3.6	Greenhouse Gas Emissions.....	7-14
3.7	Hazards and Hazardous Materials .....	7-15
3.8	Hydrology and Water Quality.....	7-16
3.9	Land Use and Planning .....	7-18
3.10	Noise .....	7-18
3.11	Public Services and Recreation.....	7-19
3.12	Transportation and Traffic .....	7-20

3.13 Utilities and Service Systems..... 7-21  
 Chapter 5 Other CEQA Considerations..... 7-22  
**8 LIST OF PREPARERS..... 8-1**

**APPENDICES**

A-1 Initial Study and Notice of Preparation  
 A-2 Comments on Initial Study/NOP  
 B-1 VMT Application  
 B-2 Orcem Application  
 C Draft VMT Lighting Plan  
 D-1 Air Quality and Greenhouse Gas Emissions Report  
 D-2 Sea Level Rise Technical Memo  
 E-1 Biological Resources Assessment  
 E-2 Tree Survey  
 E-3 Biological Resources Assessment Peer Review and Update  
 E-4 Field Report: Intertidal Habitat and Marine Biota Survey  
 E-5 Technical Memo: Fish Species Inhabiting Lower Napa River and San Pablo Bay  
 E-6 Benthic Survey of Vallejo Marine Terminal LLC site  
 E-7 Technical Memo: Intertidal Habitat and Bio Community Survey at Proposed Kayak Launch Site  
 F Historical Resources Evaluation  
 G NAHC Records Search and Confidential Archaeological Resources Records Search  
 H-1 Geotechnical and Environmental Consultation  
 H-2 Preliminary Geotechnical Exploration  
 I-1 Site Investigation Report  
 I-2 Phase I Environmental Site Assessment  
 I-3 Phase II Soil and Groundwater Quality Investigation  
 I-4 Solano County Remedial Action Completion Certification  
 I-5 Final Backfill Report  
 I-6 Environmental Audit Summary  
 I-7 2007 Groundwater Monitoring Report  
 I-8 Asbestos Report  
 I-9 Hazards and Hazardous Materials Report  
 I-10 2012 Groundwater Monitoring Report  
 I-11 Covenant and Environmental Restrictions and Revised Site Management Plan  
 J-1 Stormwater Control Plan for 780 and 790 Derr Street  
 J-2 Ecocem/Orcem Hydro and Water Quality Narrative  
 J-3 Orcem Stormwater Management & Treatment Facilities Design Summary  
 J-4 Orcem Stormwater Control Plan

K-1 Environmental Noise Impact Assessment of the Proposed VMT Development, Vallejo, California

K-2 Environmental Noise Impact Assessment of the Proposed Orcem Development, Vallejo, California

K-3 Cumulative Environmental Noise Impact Assessment of the Proposed Orcem and VMT Developments

L Transportation Technical Data

M Orcem Revised Operations Alternative Air Quality and Health Risk Assessment

N Mitigation and Monitoring Reporting Program

O Vallejo Marine Terminal/Orcem Mitigation Monitoring and Reporting Program

**FIGURES**

1-1 Regional Map..... 1-11

1-2 Vicinity Map ..... 1-13

1-3 Aerial View of Project Site ..... 1-15

2-1 Former General Mills Structures ..... 2-26

2-2 Project Timeline Diagram..... 2-28

2-3 Revised VMT Project Platform Sections..... 2-30

2-4 Revised VMT Project Dredging Plan ..... 2-32

2-5 Revised VMT Project Site Plan ..... 2-34

2-6 Orcem Site Plan ..... 2-36

2-7a Orcem Site Sections B and C..... 2-38

2-7b Orcem Site Sections E, F, and G..... 2-40

2-7c Orcem Site Sections A and D ..... 2-42

2-8 Proposed Public Access Improvements ..... 2-44

2-9 Proposed Dock Removal..... 2-46

3.1-1 Photo Location Map..... 3.1-15

3.1-2 Photo Location 1 – Existing View and Visual Simulations..... 3.1-17

3.1-3 Photo Location 2 – Existing View and Visual Simulation ..... 3.1-19

3.1-4 Photo Location 3 – Existing View and Visual Simulation ..... 3.1-21

3.1-5 Photo Location 4 – Existing View and Visual Simulation ..... 3.1-23

3.1-6 Photo Location 5 – Existing View and Visual Simulation ..... 3.1-25

3.1-7 Photo Location 6 – Existing View and Visual Simulation ..... 3.1-27

3.2-1 Cancer Risk: Unmitigated Full Operations (48 Ships) ..... 3.2-47

3.2-2 Cancer Risk: Mitigated Full Operations (48 Ships)..... 3.2-49

3.3-1 Vegetative Communities..... 3.3-76

3.3-2 CNDDDB Special-Status Species Occurrences ..... 3.3-78

3.4-1 Historical Resources Survey Map..... 3.4-27

3.5-1 Site Geology and Topography ..... 3.5-23

3.7-1	Former Chemical Storage and Remediation Areas.....	3.7-33
3.8-1	Flood Hazard Zones.....	3.8-35
3.8-2	VMT Preliminary Stormwater Management Plan.....	3.8-37
3.8-3	Orcem Drainage Plan.....	3.8-39
3.10-1	Land Use Compatibility Guidelines (Community Noise).....	3.10-63
3.10-2	Noise Monitor Locations.....	3.10-65
3.10-3	Noise Sensitive Land Use Locations in the Project Vicinity.....	3.10-67
3.10-4	VMT Mobile Plant Operations Layout.....	3.10-69
3.10-5	VMT On-Site Rail Activity Areas.....	3.10-71
3.10-6	Orcem Plant Wheeled Loader Operations Area.....	3.10-73
3.10-7	Orcem On-Site Rail Activity Areas.....	3.10-75
3.10-8	Extent of Required Continuous Weld Rail (CWR) for Rail Activity Noise Mitigation.....	3.10-77
3.12-1	Project Study Area.....	3.12-39
3.12-2A	Existing Peak Hour Intersection Traffic Volumes.....	3.12-41
3.12-2B	Existing Peak Hour Intersection Traffic Volumes.....	3.12-43
3.12-3	Trip Distribution for ORCEM and VMT.....	3.12-45
3.12-4A	Vallejo Marine Terminal Project Trip Assignment.....	3.12-47
3.12-4B	Vallejo Marine Terminal Project Trip Assignment.....	3.12-49
3.12-5A	Orcem Project Trip Assignment.....	3.12-51
3.12-5B	Orcem Project Trip Assignment.....	3.12-53
3.12-6A	Combined Projects Project Trip Assignment.....	3.12-55
3.12-7A	Existing + Vallejo Marine Terminal Peak Hour Intersection Traffic Volumes.....	3.12-59
3.12-7B	Existing + Vallejo Marine Terminal Peak Hour Intersection Traffic Volumes.....	3.12-61
3.12-8A	Existing + Orcem Peak Hour Intersection Traffic Volumes.....	3.12-63
3.12-8B	Existing + Orcem Peak Hour Intersection Traffic Volumes.....	3.12-65
3.12-9A	Existing + Combined Project Peak Hour Intersection Traffic Volumes.....	3.12-67
3.12-9B	Existing + Combined Project Peak Hour Intersection Traffic Volumes.....	3.12-69
3.12-10A	Cumulative (2040) No Project Peak Hour Intersection Traffic Volumes.....	3.12-71
3.12-10B	Cumulative (2040) No Project Peak Hour Intersection Traffic Volumes.....	3.12-73
3.12-11A	Cumulative (2040) + Vallejo Marine Terminal Peak Hour Intersection Traffic Volumes.....	3.12-75
3.12-11B	Cumulative (2040) + Vallejo Marine Terminal Peak Hour Intersection Traffic Volumes.....	3.12-77
3.12-12A	Cumulative (2040) + Orcem Peak Hour Intersection Traffic Volumes.....	3.12-79
3.12-12B	Cumulative (2040) + Orcem Peak Hour Intersection Traffic Volumes.....	3.12-81
3.12-13A	Cumulative (2040) + Combined Projects Peak Hour Intersection Traffic Volumes.....	3.12-83

3.12-13B Cumulative (2040) + Combined Projects Peak Hour Intersection  
 Traffic Volumes ..... 3.12-85  
 6-1 VMT-Orcem ROA Project View 1, ORcem Modes 2-3..... 6-45  
 6-2 VMT-Orcem ROA Project View 2, Orcem Modes 2-3 ..... 6-47

**EXHIBITS**

6-3 Source Contribution to Annual NOx Emission ..... 6-14  
 6-4 Source Contributions Annual PM<sub>10</sub> Emissions..... 6-14

**TABLES**

ES-1 Summary of Potentially Significant Environmental Impacts .....ES-6  
 2-1 Existing General Mills Structures ..... 2-1  
 2-2 Proposed Orcem Buildings, Equipment, and Major Facilities ..... 2-6  
 2-3 Summary of Maximum Material Volumes and Transport Methods - VMT  
 Volumes (with Orcem Materials Included) ..... 2-9  
 2-4 Summary of Maximum Material Volumes and Transport Methods – Orcem  
 Phase 1 and Phase 2 Volumes..... 2-11  
 3.2-1 Ambient Air Quality Standards ..... 3.2-2  
 3.2-2 BAAQMD Attainment Classification..... 3.2-7  
 3.2-3 Non-criteria Pollutant Significant Emission Levels ..... 3.2-8  
 3.2-4 Top Ten Toxic Air Contaminants (TACs)..... 3.2-9  
 3.2-5 Ambient Air Quality Data..... 3.2-12  
 3.2-6 Thresholds of Significance ..... 3.2-15  
 3.2-7 VMT Construction Emissions ..... 3.2-22  
 3.2-8 Orcem Construction Emissions..... 3.2-23  
 3.2-9 Combined VMT and Orcem Average Daily Construction Emissions – 2017<sup>1</sup> .... 3.2-24  
 3.2-10 VMT and Orcem Operational Throughput ..... 3.2-26  
 3.2-11 Maximum Annual Emissions of Criteria Pollutants – VMT ..... 3.2-29  
 3.2-12 Orcem Annual Emissions of Criteria Pollutants (Phase 2)..... 3.2-31  
 3.2-13 Maximum Annual Emissions of Criteria Pollutants from the  
 Combined Operations of VMT and Orcem ..... 3.2-32  
 3.2-14 Sensitive Receptors Within 2.5 Miles of the Project ..... 3.2-35  
 3.2-15 On-Site and Near-Site Construction DPM and PM<sub>2.5</sub> Emissions ..... 3.2-36  
 3.2-16 Local Carbon Monoxide Emissions..... 3.2-38  
 3.2-17 Project Health Risks Impacts ..... 3.2-39  
 3.2-18 Cumulative Health Risks ..... 3.2-41  
 3.3-1 Special-Status Wildlife Species with Potential to Occur On or  
 Near the Project Site ..... 3.3-18

3.3-2	Special-Status Fish and Marine Mammal Species That May Occur Within the Waters of the Study Area .....	3.3-30
3.3-3	In-Water Acreage of the Napa River Affected by the VMT Project Component.....	3.3-45
3.3-4	Environmental Work Windows for Maintenance Dredging Activities Established in the Long-Term Management Strategy for San Francisco Bay.....	3.3-50
3.3-5	Estimated Near-Source Underwater Noise Levels From Pile Driving .....	3.3-53
3.3-6	Estimated Vibratory and Impact Hammer Pile Driving Sound Levels and Disturbance to Criteria Levels .....	3.3-55
3.3-7	Potential Effects of Varying Noise Levels to Fish and Marine Mammals .....	3.3-56
3.3-8	Summary of NOAA Established Permanent Threshold Shift <sup>1</sup> and Temporary Threshold Shift <sup>2</sup> Sound Levels <sup>3</sup> from Underwater Noise Levels for Marine Mammals .....	3.3-56
3.5-1	Soil Types in the Proposed Project Area .....	3.5-10
3.5-2	Slope Stability and Seismic Slope Displacements.....	3.5-12
3.6-1	Greenhouse Gas Sources in California .....	3.6-11
3.6-2	VMT Construction Greenhouse Gas Emissions .....	3.6-16
3.6-3	Orcem Construction Greenhouse Gas Emissions .....	3.6-17
3.6-4	Combined VMT and Orcem Construction Greenhouse Gas Emissions.....	3.6-17
3.6-5	VMT and Orcem Operational Throughput .....	3.6-19
3.6-6	VMT Operational GHG Emissions.....	3.6-20
3.6-7	Orcem Plant Operational GHG Emissions .....	3.6-21
3.6-8	Annual CO <sub>2</sub> E Reductions Associated with Production of GGBFS by Orcem (MT).....	3.6-22
3.6-9	Annual CO <sub>2</sub> E Emissions from Combined VMT and Orcem Operations .....	3.6-23
3.6-10	Proposed Project Consistency with City of Vallejo Climate Action Plan.....	3.6-24
3.6-11	Sea Level Rise Projections for San Francisco, California (NRC 2012 Report).....	3.6-30
3.7-1	Subsurface Sediments in Mare Island Strait .....	3.7-10
3.7-2	Maximum Documented Soil Concentrations – Before and After Cleanup .....	3.7-14
3.8-1	Existing Beneficial Uses of Relevant Water Bodies.....	3.8-13
3.8-2	CWA Section 303(d) Impairments in Northern San Francisco Bay-Delta.....	3.8-14
3.8-3	Mare Island Strait Water Quality Monitoring Results.....	3.8-14
3.8-4	VMT Pre-Development and Post-Development Impervious Surfaces.....	3.8-22
3.9-1	Existing General Mills Structures .....	3.9-9
3.9-2	Consistency of the Proposed Project with Relevant Goals, Objectives, and Policies .....	3.9-12
3.10-1	EPA Noise Guidelines .....	3.10-4

3.10-2 Summary of Results for Unattended (Long-Term) Measurement Locations ..... 3.10-10

3.10-3 Summary of Results for Attended (Short-Term) Measurement Locations..... 3.10-10

3.10-4 Noise-Sensitive Locations ..... 3.10-13

3.10-5 Typical Construction Noise Levels..... 3.10-15

3.10-6 Predicted Maximum VMT Construction Noise Levels at Closest  
Sensitive Receptors ..... 3.10-16

3.10-7 Noise Levels due to VMT Operations ..... 3.10-18

3.10-8 Noise Levels Due to Off-Site Truck Trips Associated with  
VMT Operations ..... 3.10-20

3.10-9 Individual Component Noise Levels Due to VMT Rail Activity ..... 3.10-21

3.10-10 Total Noise Levels due to VMT Rail Activity..... 3.10-22

3.10-11 Noise Levels from All VMT Operations Activity (Combined)..... 3.10-23

3.10-12 Significance Determination for Noise Levels from All VMT  
Operations Activity (Combined)..... 3.10-24

3.10-13 Predicted Maximum Orcem Construction Noise Levels at Closest  
Sensitive Receptors ..... 3.10-26

3.10-14 Noise Levels due to Orcem Fixed and Mobile Plant Operations – Phase 1 ..... 3.10-28

3.10-15 Noise Levels due to Orcem Fixed and Mobile Plant Operations – Phase 2 ..... 3.10-29

3.10-16 Noise Levels due to Orcem Vessel Unloading Activity ..... 3.10-29

3.10-17 Noise Levels due to Truck Movements Associated with Orcem  
Operations – Phase 1 ..... 3.10-30

3.10-18 Noise Levels due to Truck Movements Associated with Orcem  
Operations – Phase 2 ..... 3.10-31

3.10-19 Individual Component Noise Levels due to Orcem Rail Activity ..... 3.10-32

3.10-20 Total Noise Levels Due to Orcem Rail Activity..... 3.10-33

3.10-21 Noise Levels from All Orcem Operations Activity Plus Truck Movements  
(Combined) – Scenario A ..... 3.10-35

3.10-22 Significance Determination for Noise Levels from All Orcem  
Operations Activity Plus Truck Movements (Combined) – Scenario A ..... 3.10-37

3.10-23 Noise Levels from All Orcem Operations Activity Plus Truck  
Movements Plus Vessel Unloading (Combined) – Scenario B ..... 3.10-38

3.10-24 Significance Determination for Noise Levels from All Orcem  
Operations Activity Plus Truck Movements Plus Vessel  
Unloading (Combined) –Scenario B..... 3.10-40

3.10-25 Noise Levels from All Orcem Operations Activity Plus Truck  
Movements Plus Vessel Unloading, Plus Rail (Combined) – Scenario C..... 3.10-41

3.10-26 Significance Determination for Noise Levels from All Orcem  
Operations Activity Plus Truck Movements Plus Vessel Unloading,  
Plus Rail (Combined) –Scenario C ..... 3.10-43

3.10-27	Predicted Maximum VMT and Orcem Construction Noise Levels at Closest Sensitive Receptors .....	3.10-44
3.10-28	Combined Noise Levels from All VMT and Orcem Operations Activity .....	3.10-46
3.10-29	Significance Determination for Combined Noise Levels from All VMT and Orcem Operations .....	3.10-48
3.10-30	Typical Construction Ground Vibration Levels .....	3.10-49
3.10-31	Orcem Plant Exhaust Stack Mitigation Requirements.....	3.10-58
3.10-32	Mitigated Noise Levels from All VMT Operations Activity (Combined) .....	3.10-60
3.12-1	Signalized Intersection LOS Criteria .....	3.12-8
3.12-2	Unsignalized Intersection LOS Criteria.....	3.12-8
3.12-3	Volume-to-Capacity (V/C) Thresholds for Project Impacts (Signalized Intersections).....	3.12-9
3.12-4	Existing Peak Hour Intersection LOS.....	3.12-10
3.12-5	Freeway LOS Definitions .....	3.12-12
3.12-6	Existing Freeway Operations.....	3.12-13
3.12-7	Existing Grade Crossings.....	3.12-15
3.12-8	Vallejo Marine Terminal Trip Generation.....	3.12-19
3.12-9	Orcem Trip Generation .....	3.12-20
3.12-10	Existing Plus Project Peak Hour Intersection Service Levels .....	3.12-21
3.12-11	Rail Crossing Evaluation .....	3.12-23
3.12-12	Existing Plus Project Freeway Operations.....	3.12-24
3.12-13	Year 2040 Peak Hour Intersection LOS <sup>1</sup> .....	3.12-26
3.12-14	Cumulative (Year 2040) With Project Freeway Operations.....	3.12-29
6.1	Cancer Risk in a Million.....	6-19
6.2	Ambient Air Quality Data.....	6-21
6.3	ROA On-Road Truck Revisions .....	6-23
6.4	ROA Ship Revisions.....	6-24
6.5	ROA Rail Revisions.....	6-25
6.6	ROA On-Site Equipment Revisions .....	6-25
6.7	ROA Health Risk Assessment Revisions .....	6-26
6.8	Material Throughput and Activity: Maximum Combined Scenario for Criteria Pollutants .....	6-27
6.9	Emissions Summary: Maximum Combined Scenario .....	6-31
6.9	Emissions Summary: Maximum Combined Scenario .....	6-34
6.11	ROA Health Risks Impacts.....	6-37
6-12	Summary of Impacts from Alternatives.....	6-42

## ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
°F	degrees Fahrenheit
AB	Assembly Bill
<u>ACM</u>	<u>Asbestos-containing materials</u>
AFY	acre-feet per year
<u>AMSL</u>	<u>above mean sea level</u>
ATS	Active Treatment System
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BCDC	Bay Conservation and Development Commission
BMPs	best management practices
CAA	Clean Air Act (federal)
CAAQS	California Ambient Air Quality Standards
CalOSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CA-MUTCD	California Manual of Uniform Traffic Control Devices
CAP	Clean Air Plan
CARB	California Air Resources Board
CARE	Community Air Risk Evaluation
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code Federal Regulations
CGS	California Geological Survey
CH <sub>4</sub>	methane
City	City of Vallejo
CMP	Congestion Management Plan
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNG	compressed natural gas
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> E	carbon dioxide equivalent
CO-CAT	Coastal and Ocean Working Group of the California Climate Action Team
CPUC	California Public Utilities Commission
CREATE	Chicago Rail Efficiency and Transportation Efficiency
CRHR	California Register of Historical Resources
<u>CUPA</u>	<u>Certified Unified Program Agency</u>
CWA	Clean Water Act
CWR	Continuous Welded Rail

## ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
cyd	cubic yards
CZMA	Coastal Zone Management Act
dB	decibel
<u>DFEIR</u>	<u>Draft Final Environmental Impact Report</u>
<u>DHS</u>	<u>California Department of Health Services</u>
DPM	diesel particulate matter
DPS	distinct population segment
dscf	dry standard cubic foot
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMP	fishery management plan
FOS	factor of safety
FTA	Federal Transit Administration
GBFS	granulated blast furnace slag
GGBFS	ground granulated blast furnace slag
GHG	greenhouse gas
GVRD	Greater Vallejo Recreation District
GWP	global warming potential
HAG	hot air generator
HARP	Hotspots Analysis Reporting Program
HCM	Highway Capacity Manual
HFC	hydroflourocarbon
HI	Hazard Index
<u>HMBP</u>	<u>Hazardous Materials Business Plan</u>
Hz	hertz
I-780	Interstate Highway 780
I-80	Interstate Highway 80
IEP	Interagency Ecological Program
IGP	Industrial General Permit
kHz	kilohertz
LAFCO	Solano County Local Agency Formation Commission
lbs/year	pounds per year
L <sub>dn</sub>	day-night sound level
L <sub>eq</sub>	equivalent sound level
L <sub>max</sub>	maximum sound level
L <sub>min</sub>	minimum sound level
LID	Low Impact Development
LOS	level of service
LTMS	Long-Term Management Strategy
<u>LUST</u>	<u>Leaking Underground Storage Tank</u>

## ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MLLW	mean lower low water
MMPA	Marine Mammal Protection Act
MMT	million metric tons
mph	miles per hour
<u>MMRP</u>	<u>Mitigation and Monitoring Reporting Program</u>
MRP	Municipal Regional Permit
MMscf	million standard cubic feet
<u>MSDS</u>	<u>materials safety data sheets</u>
MT	metric tons
MTSA	Maritime Transportation Security Act
N <sub>2</sub> O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
nm	nautical mile
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	National Oceanic and Atmospheric Administration Marine Fisheries Service
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSL	noise-sensitive location
O <sub>3</sub>	ozone
Orcem	Orcem California Inc.
OSHA	Occupational Safety and Health Administration
PAH	polycyclic aromatic hydrocarbons
<u>PCB</u>	<u>polychlorinated biphenyls</u>
PCE	passenger car equivalents
PFC	perfluorocarbon
PGA	peak ground acceleration
PG&E	Pacific Gas and Electric
ppt	parts per trillion
PPV	perturbation projection vector
PSD	Prevention of Significant Deterioration
PSHA	probabilistic seismic hazard assessment
QSD/QSP	Qualified SWPPP Developer/Qualified SWPPP Practitioner
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
REL	reference exposure level
<u>ROA</u>	<u>Revised Operations Alternative</u>
ROG	reactive organic gas
RPS	Renewable Portfolio Standard

## ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
RWOCB	Regional Water Quality Control Board
SAFE Port Act	Security and Accountability for Every Port Act
SAV	submerged aquatic vegetation
SB	Senate Bill
SF <sub>6</sub>	sulfur hexafluoride
SFBAAB	San Francisco Bay Area Air Basin
SHPO	State Historic Preservation Office
SLR	sea level rise
<u>SMP</u>	<u>Site Management Plan</u>
SR	State Route
SRI	solar reflectance index
SSMP	Sanitary Sewer Management Plan
STA	Solano Transportation Authority
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
TMDLs	total maximum daily loads
TOG	total organic gas
tpy	tons per year
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
<u>USGS</u>	<u>U.S. Geological Survey</u>
UWMP	Urban Water Management Plan
v/c	volume-to-capacity
VFD	Vallejo Fire Department
VMT	Vallejo Marine Terminal LLC
VPD	Vallejo Police Department
VRM	vertical roller mill
VCUSD	Vallejo City Unified School District
VSFCD	Vallejo Sanitation and Flood Control District
WDRs	Waste Discharge Requirements
WTP	water treatment plant
WWTP	Wastewater Treatment Plant

## EXECUTIVE SUMMARY

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### ES.1 INTRODUCTION

The City of Vallejo (City) has prepared this Environmental Impact Report (EIR) to provide the public and responsible agencies information about the potential adverse effects on the local and regional environment associated with the proposed Vallejo Marine Terminal (VMT) and Orcem Project, collectively referred to as the proposed project. This Final EIR has been prepared pursuant to the California Environmental Quality Act (CEQA) of 1970 (as amended), codified at California Public Resources Code Section 21000 et seq., and the CEQA Guidelines in the California Code of Regulations, Title 14, Section 15000 et seq.

The Draft EIR was circulated for public review and comment for a period of 60 days, pursuant to CEQA Guidelines Section 15105. During this period, the general public, organizations, and public agencies can submit comments to the lead agency on the Draft EIR's accuracy and completeness. ~~Release of the Draft EIR marked the beginning of a 60-day public review period pursuant to CEQA Guidelines Section 15105.~~ The public review period for the Draft EIR was from September 3, 2015, to November 2, 2015. The City received 543 separate pieces of communication about this project, including Open City Hall entries and speakers in two public hearings, which translated into approximately 2,600 individual comments and a Response to Comments document that is posted on the City's website.

Following the public review period, the City prepared a Draft Final EIR in early 2017, which included responses to all written comments received during the Draft EIR public review period, ~~and additions~~ All additions or strikeouts in this document are based on changes and clarifications that have occurred since 2017. The Vallejo General Plan 2040 was adopted in August 2017, and the General Plan 2040 Land Use Map was adopted in November 2017. The Draft Final EIR was based on the previous General Plan adopted in July 1999. This document, where necessary and appropriate, updates any policies pertaining to land use that may have changed in the recently updated General Plan. Thus changes in this document primarily stem from analysis of the new Vallejo General Plan, changes to previously proposed off-site access mitigation, and revisions to the project alternatives. made in response to comments on the Draft EIR. The City may use this ~~Draft~~ Final EIR to approve or disapprove the proposed project, make findings regarding identified impacts, and if necessary, adopt a Statement of Overriding Considerations regarding these impacts.

### ES.2 PROJECT LOCATION

The site of the proposed project occupies a total of 31.4 acres located at 790 and 800 Derr Street in the southwestern portion of the City of Vallejo, California, fronting the Mare Island Strait (see Figures 1-1 and 1-2). This combined project site is regionally accessible to vehicular traffic from Interstate Highways 80 (I-80) and 780 (I-780) via State Highway 29 (SR-29 or Sonoma

Boulevard), Curtola Parkway and Lemon Street, to Derr Street. It is also accessible for rail transportation via the Union Pacific rail line network operated by California Northern Railroad that extends along the Vallejo waterfront, as well as for shipping transportation via the adjoining proposed deep-water terminal included as part of the VMT component of the project.

### **ES.3 EXISTING PROJECT SITE**

The project site contains the former General Mills deep-water terminal and buildings associated with the former General Mills plant. The General Mills plant closed in 2004, and the project site has since remained vacant.

VMT owns a majority of the 31.4-acre project site and has a long-term lease with the City of Vallejo (City) for the remainder of the site (APN 0061-160-230). Orcem would lease a 4.88-acre portion of the site for its proposed operations, while VMT would operate on the remaining 26.52 acres. VMT could potentially lease additional portions of the site to other operations in the future, which may require subsequent environmental review. The project site is currently secured by a fence which extends around nearly the entire land portion of the VMT project site.

### **ES.4 PROJECT OVERVIEW**

The VMT project component would reestablish industrial uses on 26.52 acres, designated as the VMT Site located at 790 and 800 Derr Street. The VMT component would involve the removal of a deteriorated timber wharf and construction of a modern deep-water terminal, including wharf improvements, laydown area, and trucking and rail connections, primarily servicing the import and export of bulk and break-bulk commodities. Construction of the terminal would require fill and dredging activities in the water. Some construction elements, such as demolition of the former General Mills Warehouse Building and connected Bakery Bulkhouse, and construction of rail improvements, are tied to market demand. In addition to the construction and operation of this modern terminal, the VMT component would also reuse several of the existing buildings formerly occupied by General Mills. Buildings and structures to remain would be used by VMT for administrative office and commercial office uses consistent with the City's Intensive Use zoning district standards.

As an operational deep draft facility (allowing vessels with a vertical distance between the waterline and the bottom of the ship of approximately 38 feet), the VMT Terminal is anticipated to handle a wide range of commodities including the following:

- Feed grains
- Manufactured steel
- Timber/lumber

- Rock, aggregate, ores, and related materials (including granulated blast furnace slag (GBFS), portland cement clinker material (clinker), pozzolan, gypsum, limestone, and related materials used by Orcem)
- Project-based break-bulk items (In shipping, break bulk cargo or general cargo are goods that must be loaded individually, and not in intermodal containers nor in bulk as with oil or grain. Ships that carry this sort of cargo are called general cargo ships.)~~e.g., heavy lift transport, large construction assemblies~~)
- Other bulk and break-bulk commodities
- Marine construction materials
- Portland cement
- Gypsum

Remaining portions of the severely damaged and decayed wharf structure would be carefully removed as part of the VMT component of the project because the structure is not physically suitable or economically feasible for reuse or repair. The remnants of the old creosote wooden wharf which have undergone repair, replacement, and partial removal over the years have experienced substantial decay over the past century and in the last decade in particular. The new deep-water terminal would be constructed at this location. The wharf would include a pile-supported structural concrete deck, associated mooring and fender systems for docking vessels, and related improvements for deep-water marine transportation operations.

The Orcem component of the project would involve construction and operation of an industrial facility for the production of a high performance, less polluting alternative for the traditional portland cement material used in most California construction projects. The production of ground granular blast furnace slag (GGBFS) is considered to be less polluting than the production of portland cement because it is produced using GBFS, a by-product of steel-iron manufacturing. The Orcem component would involve construction of approximately 73,000 square feet of buildings, equipment, and enclosures, together with outdoor storage areas, on a 4.88-acre portion of the former General Mills plant site leased from VMT. Eight of the buildings and equipment previously used by General Mills within the Orcem Site would be demolished in order to accommodate construction and operation of the proposed GGBFS and related cement products production facility. The Orcem component would be constructed in phases to coincide with the growth in demand for Orcem's products. Orcem would import most of the raw materials used in the proposed plant via the proposed wharf on the adjoining VMT Site. As discussed in Section 2.2, the Orcem component of the project would operate as a General Industrial Use because it does not involve use of radioactive materials, petroleum refining, or the manufacture of explosives, and would not result in high levels of sewage discharge.

## ES.5 PROJECT OBJECTIVES

The project objectives are as follows:

- Establishment of the VMT Terminal as a key site of multi-modal and intermodal transportation and logistics, thereby enhancing Vallejo's role in the regional and international trade economy and providing a means for locally manufactured products to be transported and distributed, increasing the viability of and the potential for attracting further manufacturing operations to Vallejo.
- Maximize the potential for the manufacture of GGBFS, a product that helps to meet the needs of the construction industry for high-performance, environmentally favorable concrete and sustainable building materials, by providing for an efficient scale of production at a plant that would operate around the clock as a multi-modal receiving, storage, processing, and distribution facility.
- To provide management and skilled labor employment opportunities for local and regional residents in the construction phases, as well as the long-term operations of commercial and industrial uses on the project site.
- To generate various tax revenues including property taxes and assessments, possessory interest tax, and utility user fees.
- To reestablish and optimize the industrial use of this centrally located marine industrial property through removal of those remaining components of the severely damaged timber wharf and construction of a modern deep-water terminal.
- To maximize accommodations for shipping and receiving of a wide range of products through the VMT Terminal, including loading and unloading of vessels of up to 70,000 metric tons in size with draft of up to 38 feet through the wharf. The improvements would help to further develop Vallejo's capabilities for water-based shipping, in connection with the Port of Oakland.
- To maximize throughput capacity through the implementation of intermodal upgrades designed to optimize cargo handling operations as well as modern design initiatives enabling the most efficient use of the ground area and taking advantage of existing truck, rail, and shipping access for import and export of raw materials and finished products.
- ~~• To establish the VMT Terminal as a key site of multi-modal and intermodal transportation and logistics, thereby enhancing Vallejo's role in the regional and international trade economy.~~
- ~~• To provide a means for locally manufactured products to be transported and distributed, increasing the viability of and the potential for attracting further manufacturing operations to Vallejo (in addition to Orcem).~~

- ~~To establish an around-the-clock multi-modal receiving, storage, processing, and distribution facility focused on the manufacture of ground granulated blast furnace slag (GGBFS), a product that helps to meet the needs of the construction industry for high-performance, environmentally preferable concrete and sustainable building materials.~~
- To reliably provide competitively priced and environmentally preferable cement products and offer blended GGBFS cements and non-GGBFS cementing products, in order to provide a complete line of competitive products that meet long-term client and project needs, and to have the ability to respond to potential worldwide shortages of GGBFS supplies, thereby assuring sustainability of Orcem’s operation over time.
- To follow the federal Short Sea Shipping Highway Initiative where possible by focusing on short sea shipping opportunities that move cargo by coastal and inland waterway barges, reducing both truck and rail environmental impacts.

## **ES.6 SUMMARY OF IMPACTS**

Table ES-1 presents a summary of the potentially significant environmental impacts that could result from the project, the proposed mitigation measures, and the level of significance of the impact after the implementation of the mitigation measures.

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<i>Aesthetics</i>		
<p>Impact 3.1.1: The proposed project would involve 24-hour operations that would require extensive lighting for safety and security. These new sources of light and glare could adversely affect views in the project area, and the impact would be significant.</p>	<p>MM-3.1-1: Final <u>design of project lighting will be such that all permanent lighting and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of project facilities, vicinity, and nighttime sky is minimized.</u> Final lighting plans for the VMT and Orcem projects shall be submitted to and reviewed by the City of Vallejo during the Site Development Review process and shall be approved by the City prior to issuance of a building permit. <u>Lighting shall be designed so exterior light fixtures are warm lights (around 3000 K), hooded, with lights directed downward or toward the area to be illuminated, and so that backscatter of the nighttime sky is minimized.</u> The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary. All lighting shall be of minimum necessary brightness consistent with worker safety. High illumination areas not occupied on a continuous basis shall have <u>switches or motion detectors to light the area only when occupied.</u> The City shall verify that the final lighting plans include provisions to ensure that outdoor lighting is designed so that potential glare or light spillover to surrounding properties is minimized through appropriate site design and shielding of light standards, consistent with the preliminary plans. The plans shall also demonstrate that the use of reflective exterior materials is minimized and that proposed reflective material would not create additional daytime or nighttime glare. Measures identified in the final lighting plans shall be incorporated into construction plans and implemented by the construction contractor.</p>	<p>Less than significant</p>
<i>Air Quality</i>		
<p>Impact 3.2-2: Operation of the proposed project result in an exceedance of the Bay Area Air Quality Management District (BAAQMD) NO<sub>x</sub> threshold, which would conflict with the Clean Air Plan's goal of bringing the air basin into attainment for ozone since NO<sub>x</sub> is a precursor to the development of ozone. Impacts would be significant.</p>	<p>MM-3.2-1: The proposed project will use 100% 2010 or newer model year heavy duty diesel trucks at the start of facility operations.</p>	<p>Significant and unavoidable</p>
<p>Impact 3.2-3: The proposed project would not include the</p>	<p>See MM-3.2-1 above.</p>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation									
<p>applicable control measures from the Clean Air Plan.</p>	<p>MM-3.2-2: <u>The following shall be implemented as part of MM-3.2-2:</u></p> <ol style="list-style-type: none"> <li>1. <u>Once vessel calls reach 16 per year, compressed natural gas (CNG) fuel shall be used in the following: Orcem and VMT front-end loaders and Orcem excavator. All other equipment (i.e., Orcem conveyors and hoppers, VMT forklifts) shall use B20 fuel.</u></li> <li>2. <u>Once vessel calls reach 30 per year, the following equipment shall be electrified: Orcem conveyors and hoppers and VMT forklifts. Orcem and VMT front-end loaders and Orcem excavator shall continue to use CNG per MM-ROA-2a.</u></li> <li>3. <u>Once vessel calls reach 34 per year, all requirements of MM-ROA-2b shall apply plus 80% of all ship calls shall use shore-side power for auxiliary engines while at berth or use an alternative, CARB-certified capture and control emission technology. At the time of this evaluation, two such systems had been approved by CARB: Advanced Cleanup Technologies' Advanced Marine Emissions Control System (AMECS) and Clean Air Engineering's Marine Exhaust Treatment System (CAEM).</u></li> </ol> <p><u>Vessel calls per year shall mean the total number of vessel calls in a calendar year, not the average number of annual vessel calls from the start of the project.</u></p> <p><u>Mitigated cancer risk for various scenarios are presented in Table 3.2 19, along with the maximum vessel calls per year allowable under each scenario before additional mitigation is required. Mitigation Measures in Table 3.2 19 are intended to allow a choice of technologies based on the most cost effective measures available at the time of implementation. Table 3.2 19 was changed in response to DEIR comments as shown below.</u></p> <table border="1" data-bbox="569 1143 1635 1408"> <thead> <tr> <th data-bbox="569 1143 942 1240">Annual Number of Vessel Calls<sup>1</sup></th> <th data-bbox="942 1143 1293 1240">Mitigation Measure</th> <th data-bbox="1293 1143 1635 1240">Maximum Residential Cancer Risk (in a million)<sup>2</sup></th> </tr> </thead> <tbody> <tr> <td data-bbox="569 1240 942 1312">0-16</td> <td data-bbox="942 1240 1293 1312">20% biodiesel in all/remaining equipment<sup>3</sup></td> <td data-bbox="1293 1240 1635 1312">9.94</td> </tr> <tr> <td data-bbox="569 1312 942 1408">17-20</td> <td data-bbox="942 1312 1293 1408">20% biodiesel in all/remaining equipment<sup>3</sup>; And 100% biodiesel in conveyors and hoppers.</td> <td data-bbox="1293 1312 1635 1408">9.86</td> </tr> </tbody> </table>	Annual Number of Vessel Calls <sup>1</sup>	Mitigation Measure	Maximum Residential Cancer Risk (in a million) <sup>2</sup>	0-16	20% biodiesel in all/remaining equipment <sup>3</sup>	9.94	17-20	20% biodiesel in all/remaining equipment <sup>3</sup> ; And 100% biodiesel in conveyors and hoppers.	9.86	
Annual Number of Vessel Calls <sup>1</sup>	Mitigation Measure	Maximum Residential Cancer Risk (in a million) <sup>2</sup>									
0-16	20% biodiesel in all/remaining equipment <sup>3</sup>	9.94									
17-20	20% biodiesel in all/remaining equipment <sup>3</sup> ; And 100% biodiesel in conveyors and hoppers.	9.86									

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures			Level of Significance After Mitigation
	21-31	20% biodiesel in all remaining equipment <sup>2</sup> ; and Orcem natural gas fueled front end loaders.	9.98	
	32-35	20% Biodiesel in all/remaining equipment <sup>2</sup> ; and  100% biodiesel in conveyors and hoppers;  and Orcem natural gas fueled front end loaders. OR	9.79	
		20% Biodiesel in all/remaining equipment <sup>2</sup> ;  VMT natural gas fueled front end loaders; and  Orcem natural gas fueled front end loaders.	9.82	
	36-40	VMT natural gas fueled front end loaders;  Orcem natural gas fueled front end loaders; and Electrified conveyors and forklifts.	9.92	

	<p>41–48</p>	<p>VMT natural gas fueled front end loaders;</p> <p>Orcem natural gas fueled front-end loaders;</p> <p>Electrified conveyors and forklifts; and</p> <p>CARB approved capture and control system to treat emissions from auxiliary engines on ocean-going vessels.</p>	<p>6.58–6.54<sup>4</sup></p>	
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Source: Appendix D-1.

Notes:

<sup>1</sup>— Annual number of vessel calls is the maximum number of vessel calls per year.

<sup>2</sup>— Due to the relative contributions from different sources (on-site equipment, ship hoteling, trucks, etc.), the location of the maximally exposed individual may vary with the number of ship calls and mitigation measures. The values presented here represent the maximum residential risk for each scenario.

<sup>3</sup>— If other mitigation measures indicating a higher percentage of biodiesel or use of CNG or electrification are selected, use of 20% biodiesel is assumed for remaining equipment.

<sup>4</sup>— Mitigated cancer risk may vary slightly depending on the CARB approved capture and control system selected. At the time of this response two such systems were approved by CARB: Advanced Cleanup Technologies' Advanced Marine Emissions Control System (AMECS) and Clean Air Engineering's Marine Exhaust Treatment System 1 (CAEM).

Emissions associated with mitigated equipment scale with the number of vessel calls, depending on whether Orcem or VMT operate the equipment. For example, in the mitigation scenarios evaluated in Table 3.2-19, only the number of VMT vessel calls is adjusted, thus only diesel emissions from VMT equipment are affected.

In addition to MM-3.2-1 and MM-3.2-2, and MM-3.2-3, the following project design features would be implemented to ensure fugitive dust measures are implemented during project operation:

PDF-AQ-1: *Process plant and material storage buildings*—All air in contact with raw material or finished product, such as air from storage buildings, silos, and elevators, is treated by bag filters or other types of filter prior to discharge to the atmosphere, with a not to exceed limit value of 2.5 mg/Nm<sup>3</sup> (0.0011 grains/dry standard cubic foot (dscf)) PM<sub>2.5</sub>.

PDF-AQ-2: *Truck filling with finished product*—Filling of the Orcem component finished products takes place in an enclosed area using tanker trucks, isolated from the external environment with air discharged through bag filter to atmosphere, with a not to exceed limit of 2.5 mg/Nm<sup>3</sup> (0.0011 grains/dscf) PM<sub>2.5</sub>.

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures		Level of Significance After Mitigation
	<p>PDF-AQ-3: <i>Railcar filling</i>—Filling of Orcem rail tanker cars takes place in an enclosed area, isolated from the external environment with air discharged through bag filter to atmosphere, with a not to exceed limit of 2.5mg/Nm<sup>3</sup> (0.0011 grains/dscf) PM<sub>2.5</sub>.</p> <p>PDF-AQ-4: In addition to BAAQMD best management practices related to fugitive dust control, the following measures are required to be implemented to further reduce potential impacts related to fugitive dust during project operations:</p>		
	Potential Source of Air Emissions	PDF-AQ-4: Operational Measures to Ensure Impacts are Minimized	
	Grab crane on ship transfers GBFS to mobile hopper	Watering of material transfer point to ensure adequate moisture content giving a control effectiveness of 95% (SCAMQD 2007).	
	Hopper drop to conveyor	Watering of material transfer point to ensure adequate moisture content and aspirated hopper discharging through filter giving a control effectiveness of 95% (SCAMQD 2007).	
	Conveyor drop to conveyor	Watering of material transfer point to ensure adequate moisture content giving a control effectiveness of 95% (SCAMQD 2007).	
	Conveyor drop to mound in GBFS storage area	Watering of material transfer point to ensure adequate moisture content giving a control effectiveness of 95% (SCAMQD 2007).	
	Front loader excavation of stockpile	Watering of material transfer point to ensure adequate moisture content giving a control effectiveness of 95% (SCAMQD 2007).	
	Loading of hopper by front loader	Watering of material transfer point to ensure adequate moisture content and aspirated hopper discharging through filter giving a control effectiveness of 95% (SCAMQD 2007).	

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures		Level of Significance After Mitigation
	Raw material storage piles	Frequent watering of storage pile and three-sided enclosure for two of the three stockpiling areas giving a control effectiveness of 90% – 97.5% (SCAMQD 2007, EPA AP-42).	
	Industrial Paved Road (finished product)	Watering three times daily giving a control effectiveness of 80% (SCAMQD 2007).	
Source: Appendix D-1			
Impact 3.2-4: The proposed project would exceed the BAAQMD threshold for NO <sub>x</sub> emissions. Cumulative impacts due to NO <sub>x</sub> emissions during operations would therefore be significant.	See MM-3.2-1 and MM-3.2-2 above.  MM-3.2-3: The highest available U.S. Environmental Protection Agency (EPA) tier off-road equipment engines shall be purchased or leased at the time of equipment acquisition. The potential for purchase of electric off-road equipment shall be evaluated at the time of purchase or lease and provided to the lead agency under the Mitigation Monitoring and Reporting Program (MMRP). It is not anticipated that portable diesel generators will be used during routine activities. Portable diesel generators may be used during the initial phase of construction until Pacific Gas & Electric (PG&E) completes new electric service installation. Portable diesel generators may be used during unanticipated events or repairs. If such events arise, diesel generators shall be registered under the California Air Resources Board's (CARB's) Portable Equipment Registration Program (PERP).		Significant and unavoidable
Impact 3.2-6: The combined project operations would exceed the BAAQMD threshold for cancer risk. Impacts would be significant.	See MM 3.2-2 and MM 3.2-3.		Less than significant.
<i>Biological Resources</i>			
Impact 3.3-1: Construction of both the VMT and Orcem project components could disturb breeding and nesting behaviors of special-status species of birds as well as common raptor and passerine species protected by the Migratory Bird Treaty Act. If project implementation disturbs an active	MM-3.3-1: Should construction activities begin during the nesting season (February 15 through August 31), a qualified biologist shall conduct appropriate pre-construction surveys for any raptor or other nesting migratory bird nests within or immediately adjacent to the project site no more than 30 days before any construction activity commences. The pre-construction surveys shall follow accepted survey protocols for nesting birds. The purpose of the surveys shall be to determine if active nests of special-status birds or migratory birds are present in the disturbance zone or within 500 feet of the disturbance zone boundary. If active nests are found, the biologist shall consult with the California Department of Fish and Wildlife (CDFW) to determine the appropriate buffer depending upon the species. Limits of construction to avoid impacts to an active nest during construction activities shall be established in the field with flagging, fencing, or other appropriate barriers and construction		Less than significant

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<p>nest, it would constitute a significant impact.</p>	<p>personnel shall be instructed on the sensitivity of nest areas. The qualified biologist shall serve as a construction monitor during those periods when construction activities are to occur near active nest areas to avoid inadvertent impacts to these nests. If construction activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than 7 days elapse between the survey and ground-disturbing activities. If an osprey nest within the project footprint requires removal, it shall be removed outside of the nesting season (September 1 through February 14) or when all young of the year have fledged, as determined by the qualified biologist in consultation with CDFW. If alternative nesting sites are not available within 500 feet of a removed raptor nest, the applicant shall determine, with input from CDFW, location and feasibility of constructing of an artificial nesting platform in the vicinity.</p>	
<p>Impact 3.3-2: While it is unlikely that the <b>Townsend's big-eared bat</b> or roost sites would be found on the project site, disturbance of roost sites would be a significant impact.</p>	<p>MM-3.3-2: Within 6 months and no earlier than 30 days prior to initiation of construction activities, or such other period as may be approved in writing by CDFW, a habitat assessment shall be conducted by a qualified biologist, approved by the CDFW, to determine if suitable bat habitat or <b>active roosts of Townsend's big-eared bat</b> are present on or within 300 feet of the construction area. Surveys shall include the structure(s) planned for removal. <b>If Townsend's big-eared bat</b> habitat is present or it is detected roosting in any of the sites planned for removal, the project applicant shall consult with the CDFW to develop a bat avoidance and protection plan. The avoidance and protection plan will identify specific work windows and humane eviction methods that may avoid sensitive life stages including hibernation and active maternity colonies, appropriate disturbance buffers, and identify appropriate additional avoidance and minimization measures, if applicable. Under no circumstance shall an active roost be directly disturbed, and construction within 300 feet shall be postponed or halted, until the roost is naturally vacated, as determined by a qualified biologist. If bats do not vacate the roost voluntarily, and the roost site must be removed, the project applicant shall implement humane eviction methods in accordance with the avoidance and protection plan developed in consultation with CDFW and secure any necessary permit for incidental take of the bat.</p>	<p>Less than significant</p>
<p>Impact 3.3-3: Removal of the estimated 444 creosote pilings at the VMT Site could result in the release of toxic polycyclic aromatic hydrocarbons (PAHs) from creosote piling fragments if the pilings are not removed properly, which would result in a significant impact.</p>	<p>MM-3.3-3: Creosote Piling Removal Plan: Prior to removal of any pilings from the VMT Site or the City of Vallejo Municipal Marine, VMT shall develop a Piling Removal Plan that begins with an inventory of all existing pilings at the wharf, documents their individual condition, and suitability for removal using Best Management Practices (BMPs). The Plan shall address, but not be limited to the following:</p> <ul style="list-style-type: none"> <li>• Use of vibratory hammers (timbers jaws) as the primary method of removal for all wood pilings whose wood cores have not rotted away, making use of a vibratory hammer impracticable. If use of a vibratory hammer is not practicable for more than 20% of the pilings, the applicant shall provide verifiable documentation for which piles cannot be removed using a vibratory hammer. A demonstration effort</li> </ul>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>may be required to validate the applicant's justification for not being able to use vibratory removal equipment.</p> <ul style="list-style-type: none"> <li>• Use of direct pull with a cable or chain and crane to remove pilings.</li> <li>• Other feasible methods that remove the pilings in their entirety or with as little shredding of the pilings as possible.</li> <li>• Use of excavators to remove deteriorated creosote wood pilings shall only be used where it would be ineffective to use vibratory hammers or other cited methods.</li> <li>• Use of a floating boom, designed for deployment in high energy environments. The floating boom shall be used during all piling removal as well as dredging activities if excavators are needed to remove the wood pilings, leaving sections of the pilings in the Bay sediments which would be removed during dredging.</li> <li>• Proper use and deployment of boom anchors to ensure that the boom remains open and recovers all floating debris, especially during removal of the outer rows of pilings.</li> <li>• Regular removal of all collected debris within the boom on a regular schedule (minimum hourly). The boom shall be cleaned of all debris at the end of the day prior to shut down.</li> <li>• Use of a skiff or chase boat to recover any floating debris that falls outside or escapes the containment boom.</li> <li>• Proper onshore retention and disposal of creosote wood pilings and debris and the proper disposal of all pilings and debris.</li> </ul> <p>This plan shall conform to all U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), Bay Conservation and Development Commission (BCDC), and City of Vallejo permit conditions and be reviewed and approved by the City of Vallejo and a third-party independent environmental mitigation monitor.</p>	
<p>Impact 3.3-4: During proposed deconstruction and construction activities at the VMT Site construction debris could be introduced, including contaminant containing concrete, brick and asphalt materials, creosote wood, hydrocarbons, building materials and wrapping, and sediment runoff into the Napa River and the</p>	<p>MM-3.3-4: Construction/Deconstruction Pollution Prevention Plan: Prior to any deconstruction of the existing wharf, removal of any pilings, removal or burial of existing shoreline armoring/riprap, and construction of the new wharf, VMT shall prepare and implement a Construction/Deconstruction Pollution Prevention Plan. This plan shall detail all steps to be taken, including selection of equipment, operational procedures, on-site monitors, etc. that will be employed to ensure that no construction or deconstruction debris is accidentally deposited or remains in Napa River or Bay-Delta waters and therein pose a threat to special-status fish species, marine mammals, and any Bay-Delta ecosystems. This plan shall conform to all USACE, RWQCB, BCDC, and City of Vallejo permit conditions and be reviewed and approved by the City of Vallejo and a third-party independent environmental mitigation monitor. The plan shall include but not be limited to:</p>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<p>greater Bay-Delta ecosystem. The deliberate or accidental discharge of construction and deconstruction materials into project site waters could result in a significant impact.</p>	<ul style="list-style-type: none"> <li>• Training of all personnel engaged in construction/deconstruction activities as to the importance of preventing any materials, especially hydrocarbon containing materials from entering the water.</li> <li>• Measures to be implemented to prevent foreign materials (e.g., wood scraps, wood preservatives, fuels, lubricating oils, hydraulic fluids, other chemicals, etc.) from entering the Napa River or other Bay-Delta waters. This requirement shall include, but not be limited to:               <ul style="list-style-type: none"> <li>○ Installation of secondary containment around all vehicle fueling and servicing locations on site.</li> <li>○ Abundant on-site closable trash containers in which all packaging materials and trash can be placed. Frequent removal and replacement of all trash containers shall occur to ensure that adequate empty containers are on site at all times.</li> <li>○ Provision of labeled and separate containers for different types of recyclable materials (metals, plastic, other) and trash (hazardous and non-hazardous).</li> <li>○ Effective on-site stormwater containment during all construction and deconstruction activities that prevents any on-site water from reaching Bay and River waters.</li> <li>○ All equipment and materials shall be temporarily or permanently stored or placed a sufficient distance away from the waterfront to prevent accidental releases of fuels, lubricants, fluids, packaging, etc. from quickly reaching the Napa River before corrective actions can be implemented.</li> </ul> </li> <li>• For any work on or beneath fixed decking, heavy-duty mesh containment netting or other engineering approach shall be maintained below all work areas where construction discards or other debris could enter the water.</li> <li>• A floating containment boom, netting, or functional equivalent shall be placed around all active portions of a construction/deconstruction site where any floating debris could enter the water. Similar containment shall be placed around any locations where creosote wood pilings are being removed. Deployment anchors shall be used with all booms to ensure that the boom remains open and capable of collecting any floating debris.</li> <li>• All floating booms or similar containment devices used to collect floating debris as well as any temporary decking or netting placed under overwater structures shall be cleaned daily or more frequently if significant debris is being collected. During active creosote piling removal, the boom shall be cleaned hourly of any collected debris.</li> <li>• In addition to providing booming, a small, motored skiff/chase boat shall be on site to chase and recover any floating debris that escapes the containment booming.</li> </ul>	

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> <li>• Use of a grizzly screen on the dredge spoil barges during all dredging activity to separate any pieces of creosote pilings removed from the Bay floor that were broken off below the seafloor during removal.</li> <li>• Adequate spill prevention measures shall be in place to prevent the transfer of any hydrocarbon materials from entering the water while equipment is being used during construction and deconstruction, as well as when being serviced and/or parked.</li> <li>• Provisions shall be made to ensure that no external wrapping, internal packing materials, strapping, pallets, boxes, crates, drums, or other associated waste material from staged on-site construction materials can enter the Napa River or Bay-Delta waters.</li> </ul>	
<p>Impact 3.3-5: Based on the potential for underwater noise generated from impact hammer pile driving of 24-inch concrete and 30- and 36-inch steel pipe pilings for the construction of the wharf, the potential impact to special-status fish species, including salmon, steelhead, sturgeon, and especially longfin and delta smelt and Sacramento splittail, would be significant.</p>	<p>MM-3.3-5: Impact Hammer Pile Driving Noise Reduction for Protection of Fish: Prior to the start of construction, VMT shall develop a National Oceanic and Atmospheric Administration Marine Fisheries Service (NOAA) Fisheries-approved sound attenuation reduction and monitoring plan. This plan shall provide information on the final design of the new wharf, the effects on dolphins, and piling installations, detailing that the minimum number, size, and material for all pilings is being used to meet project engineering requirements as well as generate the lowest levels of underwater noise possible. The plan shall also detail sound attenuation system, detail methods used to monitor and verify sound levels during pile driving activities, and all BMPs to be taken to reduce impact hammer pile-driving sound in the marine environment to an intensity level of less than 183 decibels (dB). The sound monitoring results shall be made available to the NOAA Fisheries and the CDFW. The plan shall incorporate but not be limited to the following BMPs:</p> <ul style="list-style-type: none"> <li>• All impact pile driving for 24-inch concrete and 30-inch steel pilings, shall be conducted in strict accordance with the Long-Term Management Strategy (LTMS) work windows, during which periods the presence of special-status species in the project site is expected to be minimal.</li> <li>• VMT shall make every effort possible to restrict pile driving activities during approved LTMS work windows.</li> <li>• VMT shall consult with both NOAA Fisheries and CDFW concerning the potential for take of special-status species as a result of pile driving activities and obtain incidental take authorization from NOAA Fisheries and/or CDFW, as necessary and/or required based on agency consultations, to address potential impacts on delta and longfin smelt, Sacramento splittail, Chinook salmon, steelhead trout, and green sturgeon, and to implement all requested actions included in the incidental take permits to avoid impacts.</li> <li>• Steel sheet pile will be installed using vibratory hammers and the use of impact hammers kept to the bare minimum.</li> </ul>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> <li>• If exceedance of noise thresholds established and approved by NOAA Fisheries occurs, a contingency plan using bubble curtains or an air barrier will be implemented to attenuate sound levels to below thresholds.</li> <li>• The hammer will be cushioned using a minimum 12-inch-thick wood cushion block during all impact hammer pile driving operations. Cushion blocks will be replaced frequently to maintain maximum sound reduction.</li> <li>• Other BMPs will be implemented as appropriate to reduce underwater noise levels to acceptable levels.</li> </ul>	
<p>Impact 3.3-6: There would be a potential for noise disturbance from proposed pile driving activities to affect marine mammals if conducted when the probability of sea lions and harbor seals being present is highest. Depending on when pile driving activities would be conducted for the VMT project component, the potential effects of underwater noise from pile driving on marine mammals could be significant.</p>	<p>MM-3.3-6: Pile Driving Noise Reduction for Protection of Marine Mammals: As part of the NOAA Fisheries-approved sound attenuation-monitoring plan required in MM-3.3-5, VMT shall take actions in addition to those listed in MM-3.3-5 to reduce the effect of underwater noise transmission on marine mammals. These actions shall include at a minimum:</p> <ul style="list-style-type: none"> <li>• A 1,600-foot (500-meter) safety zone shall be established and maintained around the sound source, for the protection of marine mammals in the event that sound levels are unknown or cannot be adequately predicted.</li> <li>• Work activities shall be halted when a marine mammal enters the 1,600-foot (500-meter) safety zone and shall cease until the mammal has been gone from the area for a minimum of 15 minutes.</li> <li>• A <b>“soft start” technique shall be employed in all pile driving, giving marine mammals</b> an opportunity to vacate the area.</li> <li>• Sound levels below 90 A-weighted decibels (dBA) shall be maintained in air when pinnipeds (seals and sea lions) are present.</li> <li>• An NOAA Fisheries-approved biological monitor will conduct daily surveys before and during impact hammer pile driving to inspect the work zone and adjacent Bay waters for marine mammals. The monitor will be present as specified by NOAA Fisheries during the impact pile-driving phases of construction.</li> </ul>	<p>Less than significant</p>
<p>Impact 3.3-7: The potential for impacts on sensitive species from artificial night lighting on the new wharf and dike, as well as from improved shoreside facilities and buildings, would result in a significant impact.</p>	<p>MM-3.3-7: Wharf Lighting: VMT shall update the preliminary lighting plan to specifically include wharf lighting that minimizes to the maximum extent practicable and with regard to operational and personnel safety, artificial lighting installed on and adjacent to the VMT wharf. This plan shall include but not be limited to:</p> <ul style="list-style-type: none"> <li>• Use of fully shielded, downward casing, low-voltage, sodium, LED, or non-yellow-red spectrum lights that are well shielded to restrict the transmittance of artificial light over the water.</li> <li>• Restriction of artificial lighting to those areas of the wharf and adjacent staging areas that require lighting.</li> <li>• Directing all wharf and near wharf lighting to illuminate only the wharf and ground and not adjacent Napa River waters or the sky.</li> </ul>	<p>Less than significant</p>
<p>Impact 3.3-8: Wharf maintenance or pile replacement would have</p>	<p>See MM-3.8-1.</p>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<p>similar potential effects and affected special-status species as initial site dredging, piling removal, and replacement, as well as expected recovery of marine biota following the activity. Although the application of BMPs, including adherence to LTMS acceptable work windows, would reduce the potential impact to special-status species, the impact would be significant without mitigation.</p>		
<p>Impact 3.3-9: The staging or stockpiling of potentially toxic deconstruction debris and materials such as concrete, asphalt, contaminated sediments or other contaminant-containing materials, such as asbestos, that are awaiting disposal or reuse, as well as stockpiling new construction materials and equipment near or adjacent to the waterfront could result in the accidental release of these materials into the Napa River and the Bay-Delta ecosystem, therein posing a significant threat and a significant impact to special-status species and the Bay-Delta ecosystem in general.</p>	<p>See MM-3.3-4.</p>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<p>Impact 3.3-10: Use of an impact hammer for pile driving of new 24-inch concrete and 30- and 36-inch steel piles can be expected to result in underwater noise levels that can result in permanent auditory damage to migrating fish, especially delta and longfin smelts, Sacramento splittail, and juvenile steelhead and salmon. This impact would be significant.</p>	<p>Refer to MM-3.3-5 above.</p>	<p>Less than significant</p>
<p>Impact 3.3-11: The proposed project could increase the risk of spreading non-native marine species attached to wood pilings or rock armoring/riprap being removed as part of the VMT wharf and construction activities. Spread of non-native species would be a significant impact.</p>	<p>MM-3.3-9: Invasive Marine Species Control: Prior to any in-water deconstruction activities at the VMT Site, VMT shall develop and implement an Invasive Species Control Plan. The plan shall be prepared in consultation with the RWQCB, the U.S. Coast Guard, and California State Lands Commission Marine Invasive Species Program personnel. Provisions of the plan shall include but not be limited to the following:</p> <ul style="list-style-type: none"> <li>• Environmental training of construction personnel involved in the removal of pier pilings or intertidal or subtidal shoreline armoring/riprap to inform them about invasive marine species in San Francisco Bay that might be attached to removed structures.</li> <li>• Actions to be taken to prevent the release and spread of marine invasive species, especially algal species.</li> <li>• Procedures for the safe removal and disposal of any invasive taxa observed on the removed structures prior to disposal.</li> <li>• A post-construction report identifying what, if any, invasive species were found attached to be removed equipment and materials and the treatment/ handling of identified invasive species.</li> </ul>	<p>Less than significant</p>
<p>Impact 3.3-12: The proposed project would result in the loss of Bay–Delta subtidal and intertidal habitat from infill of the Napa River for the wharf construction. The placement of fill within the Bay–Delta will result in potential lost foraging habitat and reduced</p>	<p>MM-3.3-10: Mitigation for Bay–Delta Fill: As part of the project permitting efforts with BCDC, the RWQCB, and CDFW, VMT will identify, execute, and/or fund sufficient mitigation activities that will adequately compensate for the placement of new Bay–Delta fill on subtidal and intertidal areas of the Napa River Project site. <u>All mitigation proposed as compensatory mitigation would be subject to specific success criteria, success monitoring, long-term preservation, and long-term maintenance and monitoring pursuant to the requirements of the Mitigation Rule. All compensatory mitigation will fully replace lost function through the mechanisms discussed below, which will result in restoration and/or creation of habitat with at least as much function and value as those of the impacted habitat. In some cases, the mitigation habitat will afford significantly higher function and value than</u></p>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<p>migration corridors for special-status fish species, a significant impact.</p>	<p><u>that of impacted habitat. Compensation ratios are driven by type, condition, and location of replacement habitat as compared to type, condition, and location of impacted habitat. Compensatory mitigation usually includes restoration, creation, or rehabilitation of aquatic habitat. Typically, impacted habitat will be replaced in-kind, although impacts on some habitat types will be mitigated out-of-kind with higher functioning habitat types such as riparian wetland, marsh, and/or seasonal wetland. Compensatory mitigation will be accomplished by one, or a combination of, the following methods:</u></p> <ul style="list-style-type: none"> <li>● <u>Purchase credits for restored/created/rehabilitated habitat;</u></li> <li>● <u>On-site (adjacent to the project footprint) restoration or rehabilitation;</u></li> <li>● <u>On-site (adjacent to the project footprint) creation of aquatic habitat;</u></li> <li>● <u>Off-site restoration or rehabilitation of similar habitat;</u></li> <li>● <u>Off-site creation of aquatic habitat; and/or</u></li> <li>● <u>Payment into a Fee-in-Lieu program.</u></li> </ul> <p>The amount and level of mitigation will be in accordance with mitigation efforts as outlined in the Bay Plan, CDFW regulations for impingement of onshore operations on migration corridors, and the Porter–Cologne Act.</p>	
<i>Cultural Resources</i>		
<p>Impact 3.4-1: The proposed project would result in a significant impact to historic architectural resources due to the potential for damage to the administration building and garage during construction.</p>	<p>MM-3.4-1a: A historic preservation plan shall be prepared and implemented to aid in preserving those historic resources proposed to be retained within the original Sperry Mill site. These include the administration building and garage, the <b>manager's</b> house, and the barn, all of which shall be protected from direct or indirect impacts during construction activities (i.e., due to damage from operation of construction equipment, staging, material storage, and vibrations).</p> <p>If deemed necessary upon further condition assessment of the buildings, the plan shall include the preliminary stabilization, prior to construction, of deteriorated or damaged materials or systems that may be hazardous.</p> <p>At a minimum, the plan shall include:</p> <ul style="list-style-type: none"> <li>● A requirement for the placement of perimeter fencing and/or signs around the historical resources to identify them as sensitive resources to be avoided;</li> <li>● Guidelines for operation of construction equipment adjacent to historical resources;</li> </ul>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> <li>• Guidelines for storage of construction materials away from the resources;</li> <li>• Requirements for monitoring and documenting compliance with the plan; and</li> <li>• Education/training of construction workers about the significance of the historical resources around which they would be working. The training program shall be prepared by a historical architect and approved by Planning Division staff.</li> </ul> <p>The plan shall be prepared by a qualified architectural historian or historical architect who meets the Secretary of Interior's Professional Qualification Standards (36 CFR, Part 61). The plan shall be reviewed and approved by Planning Division staff. The project sponsor shall ensure that the contractor follows these plans. The protection plan, specifications, monitoring schedule, and other supporting documents shall be incorporated into the building permit application plan sets.</p> <p>MM-3.4-1b: Prior to construction, a historical architect and a structural engineer shall undertake an existing condition study of the administration building and garage. The purpose of the study would be to establish the baseline condition of the structures prior to construction. The documentation shall take the form of written descriptions and visual illustrations, including those physical characteristics of the resource that convey its historical significance and that justify its inclusion on, or eligibility for inclusion on, the California Register of Historical Resources. The documentation shall be reviewed and approved by Planning Division staff.</p> <p>The historical architect shall make periodic site visits to monitor the condition of the resource, including monitoring of any instruments such as crack gauges. The historical architect shall consult with the structural engineer to ensure that character-defining features are protected, especially if any problems with character-defining features of the historic resource are discovered. If in the opinion of the monitoring team, substantial adverse impacts to the historic resource related to construction activities are found during construction, the monitoring team shall so inform the project sponsor or designated representative responsible for construction activities. <b>The project sponsor shall adhere to the monitoring team's recommendations for corrective measures,</b> including halting construction in situations where construction activities would imminently endanger the historic resource. The monitoring team shall prepare site visit reports and submit them for review and approval by Planning Division staff.</p> <p>MM-3.4-1c: Upon completion of construction activities at the proposed project site, the qualified architectural historian or historical architect shall document (e.g., with photographs and other appropriate means) the level of <b>success in meeting the Secretary of the Interior's Standards for the Treatment of Historic Properties</b> and in</p>	

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>preserving the character-defining features of the identified historic resources. The documentation shall be submitted to Planning Division staff for review and approval.</p> <p>The project sponsor shall ensure that repairs occur in the event of damage to the historic resources during <b>construction. Repair work shall comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties</b> and shall restore the character-defining features in a manner that does not affect the eligibility of the historic property for the California Register of Historical Resources. All repairs shall be reviewed by Planning Division staff in consultation with the architectural historian or historical architect.</p>	
<p>Impact 3.4-2: Implementation of the proposed project would result in a significant impact on historic architectural resources due to the loss of integrity of <del>the a potential</del> Sperry Flour Mill Historic District associated with demolition of the flour mill, grain silos, and dock.</p>	<p>MM-3.4-2a: Prior to the issuance of demolition or site permits, the project sponsor shall undertake Historic American Building Survey (HABS) documentation of the subject property, structures, objects, materials, and site features. The documentation shall be undertaken by a qualified professional who meets the standards for history, <b>architectural history, or historic architecture (as appropriate), as set forth by the Secretary of the Interior's Professional Qualification Standards (36 CFR, Part 61)</b>. The documentation shall consist of the following:</p> <p>Measured Drawings</p> <p>The project sponsor shall engage the services of an architectural historian to conduct research to find plans and drawings of the structures on the project site which comprise the historic resources, most importantly those of the flour mill and grain silos. If plans are found and can be made available for reproduction, they shall be reproduced on archival materials, either archival bond paper or mylar.</p> <p>If suitable plans are not available, an architectural historian or historical architect shall prepare sketch plans for the flour mill building. One sketch plan shall be made of the ground floor (including the warehouse). Another plan shall be made of one floor of the tower portion of the flour mill. In addition, sketch floor plans shall be made of the administration building and garage.</p> <p><b>An architectural historian or historical architect shall prepare a site plan, including the manager's house and grounds.</b> Site plans prepared by the project sponsor can be used as a base.</p> <p>Photography</p> <p>Large format negatives shall be required. Photography shall be undertaken by a qualified professional with demonstrated experience in Historic American Buildings Survey photography and shall follow the HABS/HAER/HALS Photography Guidelines (National Park Service, Heritage Documentation Programs, 2011). Digital prints shall be acceptable.</p> <p>Photography shall include context photographs, site features, and all structures on the project site that comprise the historic resources. The photographer shall consult with the architectural historian engaged in the measured drawings and historical report about the type and number of views required for the documentation of the <del>potential</del> historic district.</p>	<p>Significant and unavoidable</p>

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Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Historical Report</p> <p>An architectural historian shall prepare a written Narrative Report based on HABS Guidelines for Preparing <b>Written Historical and Descriptive Data. Carey and Company’s previous report (2008) and the revised evaluation</b> for this historic resources evaluation can be used in the preparation of the Narrative Report. The architectural historian shall make an effort to locate and conduct an oral history interview with Floyd Miller, who provided assistance with the 2008 report.</p> <p>All documentation shall be submitted for review and approval by Planning Division staff prior to the issuance of final building occupancy permits. The final documentation shall be disseminated to the John F. Kennedy Library, Northwest Information Center, Sonoma State University (California Historical Resource Information System), and Vallejo Naval and Historical Museum.</p> <p>MM-3.4-2b: The project sponsor shall install permanent interpretive exhibits at the Vallejo Naval and Historical Museum that provide information to visitors and occupants regarding the history of the Sperry Flour Mill. The interpretive exhibit shall utilize images, narrative history, drawings, or other archival resources. The interpretive exhibits may be in the form of, but are not necessarily limited to plaques or markers, interpretive display panels. The interpretive exhibits shall be installed at a pedestrian friendly location, and be of adequate size to attract <b>the interested public. The project sponsor’s consultant shall submit conceptual and final designs to Planning Division staff for review and approval.</b></p>	
<p>Impact 3.4-3: There is potential for the inadvertent discovery of unknown archaeological resources during ground-disturbing activities associated with project construction which could lead to a significant impact to archaeological resources.</p>	<p>MM-3.4-3 : In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed project or the off-site improvements, all construction work occurring within 100 feet of the find shall immediately stop until a qualified <b>archaeologist, meeting the Secretary of the Interior’s Professional Qualification Standards</b>, can be retained to evaluate the significance of the find and determine whether additional study is warranted. Depending on the significance of the find under the California Environmental Quality Act (CEQA) (14 CCR 15064.5(f); California Public Resources Code, Section 21082), the archaeologist may record the find and allow work to continue. If the discovery proves significant under CEQA, additional work such as preparation of an archaeological treatment plan, testing, or data recovery may be warranted.</p>	<p>Less than significant</p>
<p>Impact 3.4-4: There is potential for the inadvertent discovery of unknown archaeological resources during ground-disturbing activities associated with the off-site improvements, which could lead to a</p>	<p>Refer to MM-3.4-3 above.</p>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
significant impact to archaeological resources.		
Impact 3.4-5: Construction and excavations for structures on the site could result in incidental disturbance to native sedimentary rock and, although low, potential remains for deep excavations to uncover significant fossils, which would result in a significant impact.	MM-3.4-4: If potential fossils are discovered by construction crews, all earthwork or other types of ground disturbance within 50 feet of the find shall stop immediately until a qualified professional paleontologist can assess the nature and importance of the find. Based on the scientific value or uniqueness of the find, the paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the fossil. If treatment and salvage is required, recommendations shall be consistent with Society of Vertebrate Paleontology 1995 guidelines and currently accepted scientific practice, and shall be subject to review and approval by the City. Work in the affected area may resume once the fossil has been assessed and/or salvaged and the City—in consultation with the professional paleontologist—has provided written approval to resume work.	Less than significant
Impact 3.4-6: Although the potential for human remains on the project site and within the off-site improvement areas is very low, in the event that human remains are found during project construction, impacts would be potentially significant.	MM-3.4-5: In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are encountered by project personnel, the County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the County Coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the Native American Heritage Commission (NAHC) in Sacramento within 48 hours. In accordance with California Public Resources Code Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendent (MLD) of the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative shall then determine, in consultation with the property owner, disposition for the human remains.	Less than significant
Impact 3.4-7: Although the potential for human remains within the off-site improvement areas is very low, in the event that human remains are found during implementation of the off-site improvements, impacts would be potentially significant.	Refer to MM-3.4-5 above.	Less than significant

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<i>Geology and Soils</i>		
<p>Impact 3.5-1: Although project plans include provisions of retaining walls to protect the site, proper design of remedial systems would require more detailed study as design of the project proceeds to final stages. Therefore, impacts would be significant prior to mitigation.</p>	<p>MM-3.5-1: Maintenance of Adequate Slope Stability. Prior to approval of final project designs, the applicants shall: (a) Prepare and submit for review construction-level plans for the catchment and retaining wall to be placed at the toe of the slope on the Orcem Site; and (b) Prepare and submit for review construction-level plans and a supplemental soil engineering review to demonstrate that proposed final design slopes on the VMT Site would maintain adequate factors of safety under both static and pseudo-static conditions. The supplemental investigation shall include additional exploratory borings, trenching, laboratory testing, and geologic analyses, as necessary, to ensure the analysis is based on the proper distribution and characteristics of earth materials, and adequately informs the final designs of proposed retaining walls. The acceptable level of stability (i.e., seismic and static factor of safety (FOS) values) shall be determined by the geotechnical consultant in consultation with the City of Vallejo Building Division; but in no case shall be below a static FOS of 1.5 or a pseudo static FOS of 1.15. All slope stability evaluations shall be prepared and stamped by a registered geotechnical engineer or engineering geologist, and reviewed and approved by the City of Vallejo Building Division prior to approval of final building plans.</p>	<p>Less than significant</p>
<i>Greenhouse Gas Emissions</i>		
<p>Impact 3.6-1: The proposed project would exceed the BAAQMD CEQA level of significance of 10,000 metric tons carbon dioxide equivalent (MT CO<sub>2</sub>E) per year. Impacts would be significant.</p>	<p>MM-3.6-1: The following measures are required to be implemented to reduce greenhouse gas (GHG) emissions associated with operation of the proposed project:</p> <ul style="list-style-type: none"> <li>• Fuel used in all on-site equipment shall initially consist of 20% biodiesel (a fuel blend of 20% biodiesel in 80% petroleum diesel). As production increases, the biodiesel content of the fuel shall be increased as feasible. The applicants shall conduct annual reviews regarding the availability of technically equivalent or better technologies and report to the City. If the technology is determined to be feasible in terms of cost and technical and operational feasibility, the applicants shall implement such technology.</li> <li>• Fuel supply shall consist of compressed natural gas for forklifts and front-end loaders.</li> </ul>	<p>Significant and unavoidable</p>
<p>Impact 3.6-2: It cannot be guaranteed that the proposed project would be consistent with the overarching objective of the City's Climate Action Plan (CAP) to achieve the reduction targets as established for 2020 and 2035 because the City's adopted CAP</p>	<p>MM-3.6-2a: Orcem and VMT shall encourage employee commute alternatives such as carpooling and biking options by providing information to employees about alternative transportation, providing subsidized bus passes, and including employee showers on site. As part of this effort, Orcem and VMT shall implement an employee worker ridership program to encourage alternative work commute options to reduce single-occupancy vehicle trips during project operation. A commute program manager shall be designated to provide information to employees using the Bay Area Air Quality Management District 511 services (accessed at <a href="http://www.511.org">www.511.org</a>) or a similar Bay Area transit information provider.</p>	<p>Significant and unavoidable</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<p>does not cover marine and rail operations. Impacts could be considered significant.</p>	<p>The program shall include a provision to notify all future employees of the worker ridership program prior to the start of project operations and shall notify employees of the 511 RideMatch Service (available at <a href="https://www.ridematch.511.org/SanFrancisco/TDMRegistration.jsp?idScreen=REGISTRN1">https://www.ridematch.511.org/SanFrancisco/TDMRegistration.jsp?idScreen=REGISTRN1</a>) or similar communication method, to ensure personnel can identify potential carpooling program participants. All Orcem and VMT employees shall be encouraged through the program to create an account with 511 (at <a href="https://my511.org/">https://my511.org/</a>) or create an account with a similar transit information provider. Personal accounts will allow employees to log their commute activity, identify rideshare options, use alternative transportation features and trip planning services, and other features to encourage alternative commute methods. Additional resources Orcem and VMT may utilize for the implementation of an alternative commute program can be found at: <a href="http://rideshare.511.org/employers/downloads.aspx">http://rideshare.511.org/employers/downloads.aspx</a>.</p> <p>MM-3.6-2b: Orcem and VMT shall either eliminate the use of turf in landscaping, or landscape the site with native vegetation and minimize the use of turf, in order to reduce the need for gas-powered lawn and garden equipment.</p> <p>MM-3.6-2c: Orcem and VMT shall use drought-tolerant plant types, where landscaping is proposed, in order to minimize the use of water.</p> <p>MM-3.6-2d: Orcem and VMT shall use greywater, recycled water, and rainwater catchment systems for irrigation, if feasible, for proposed landscape areas. If at least one of these alternative water sources are not employed, Orcem and VMT shall demonstrate infeasibility to the City.</p>	
<p>Impact 3.6-3: It cannot be guaranteed that the proposed project would be consistent with the overarching objective of the <b>City's CAP to achieve the</b> reduction targets as established for 2020 and 2035, or the <b>state's</b> GHG reduction goals for 2030 and 2050 <b>because the City's adopted</b> CAP does not cover marine and rail operations. Impacts would be significant.</p>	<p>See MM 3.6-2a through 3.6-2d above.</p>	<p>Significant and unavoidable</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<p>Impact 3.6-4: The VMT project component would be subjected to buoyancy/uplift forces during extreme tidal events, as well as daily submergence during high tides, as a result of projected SLR. Impacts would be significant.</p>	<p>MM-3.6-3: Structural members associated with the VMT deep-water terminal construction, including wharf improvements and other components that would be affected by sea level rise, shall be designed to resist extreme tidal event loads and continual salt water submergence to the satisfaction of the City engineer.</p>	<p>Less than significant</p>
<p><i>Hazards and Hazardous Materials</i></p>		
<p>Impact 3.7-1: Construction of the proposed project would require the temporary use of hazardous materials, such as diesel fuels, lubricants, solvents, and asphalt. Although adherence to the construction specifications and applicable regulations regarding hazardous materials would reduce impacts during construction of the proposed project, impacts would be significant without proper mitigation.</p>	<p>MM-3.7-1a: Hazardous materials shall not be disposed of or released onto the ground, the underlying groundwater, or any surface water. Totally enclosed containment shall be provided for all trash. All construction waste, including trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials, shall be removed to a waste facility permitted to treat, store, or dispose of such materials.</p> <p>MM-3.7-1b: A Hazardous Materials Management Plan shall be prepared to discuss hazardous materials management, handling, storage, disposal, and emergency response planning to be implemented during construction. <u>Hazardous materials used and stored on site for the proposed construction activities — as well as hazardous wastes generated on site as a result of the proposed construction activities — shall be managed according to the specifications outlined below.</u></p> <p><u>Hazardous Materials and Hazardous Waste Handling: A project-specific hazardous materials management and hazardous waste handling program shall be developed prior to initiation of the project. The program will include the following components: (1) proper hazardous materials use, storage, and disposal requirements as well as hazardous waste management procedures; (2) the program shall identify types of hazardous materials to be used during the project and the types of wastes that would be generated; and (3) all project personnel shall be provided with project-specific training to ensure that all hazardous materials and wastes associated with the project are handled in a safe and environmentally sound manner and disposed of according to applicable rules and regulations. Specifically, employees handling wastes shall have or receive hazardous materials training and shall be trained in hazardous waste procedures, spill contingencies, waste minimization procedures and treatment, storage and disposal facility (TSDF) training in accordance with current OSHA Hazard Communication Standard and Title 22 CCR.</u></p>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><u>Transport of Hazardous Materials: Hazardous materials that would be transported by truck include fuel (diesel fuel and gasoline) and oil and lubricants for equipment. Containers used to store hazardous materials would be properly labeled and kept in good condition. Written procedures for the transport of hazardous materials used would be established in accordance with U.S. Department of Transportation and California Department of Transportation (Caltrans) regulations. A qualified transporter would be selected to comply with U.S. Department of Transportation and Caltrans regulations.</u></p> <p><u>Fueling and Maintenance of Construction Equipment: Written procedures for fueling and maintenance of construction equipment would be prepared prior to construction. Procedures will require the use of drop cloths made of plastic, drip pans, and trays to be placed under refilling areas to ensure that chemicals do not come into contact with the ground. Refueling would be located in areas where absorbent pad and trays would be available. The fuel tanks would also contain a lined area to ensure that accidental spillage does not occur. Drip pans or other collection devices would be placed under the equipment at night to capture drips or spills. Equipment would be inspected daily for potential leakage or failures. Hazardous materials such as paints, solvents, and penetrants would be kept in an approved locker or storage cabinet.</u></p> <p><u>Emergency Release Response Procedures: An Emergency Response Plan detailing responses to releases of hazardous materials would be developed prior to construction activities. The plan must prescribe hazardous materials handling procedures for reducing the potential for a spill during construction, and would include an emergency response program to ensure quick and safe cleanup of accidental spills. Hazardous materials shall not be stored near drains or waterways. Fueling shall not take place within 200 feet of drains or waterways with flowing water or within 75 feet of drains or waterways that are dry. All construction personnel, including environmental monitors, would be made aware of state and federal emergency response reporting guidelines for accidental spills.</u></p> <p><u>The Plan shall be submitted to Division and Building &amp; Safety Department and the Fire Department 30 days prior to the start of construction for review and approval. Hazardous materials spill kits shall be maintained on site for small spills.</u></p>	
<p>Impact 3.7-2: Since the VMT component of the project would require the transportation and/or disposal of potentially contaminated</p>	<p>See MM-3.8-1.</p>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
dredged material from Mare Island Strait, impacts would be significant without mitigation.		
Impact 3.7-3: Due to the potential presence of asbestos-containing materials (ACMs), lead-based paints, polychlorinated biphenyl (PCB)-containing equipment, mercury-containing equipment, mold growth, and chemical supplies within the project site, project construction could result in a significant impact due to the transport and/or disposal of these materials.	<p>See MM-3.8-2.</p> <p>MM-3.7-2a: An abatement work plan shall be prepared in compliance with local, state, and federal regulations for any necessary removal of such materials. The work plan shall include a monitoring plan to be conducted by a qualified consultant during abatement activities to ensure compliance with the work plan requirements and abatement contractor specifications. Demolition plans and contract specifications shall incorporate any necessary abatement measures for the removal of materials containing asbestos. The measures shall be consistent with the abatement work plan prepared for the project and conducted by a licensed lead/asbestos abatement contractor. Asbestos abatement shall be conducted in coordination with the Bay Area Air Quality Management District, in accordance with District Regulation 11-2-401.3.</p> <p>MM-3.7-2b: A California Department of Health Services (DHS)-certified lead inspector shall survey the buildings for the presence of lead-based paint. Additionally, a qualified environmental specialist shall inspect the site buildings for the presence of polychlorinated biphenyls (PCBs), mercury, and other hazardous building materials prior to demolition. If found, these materials shall be managed in accordance with the Metallic Discards Act and other state and federal guidelines and regulations. Demolition plans and contract specifications shall incorporate any necessary abatement measures in compliance with the Metallic Discards Act of 1991 (Public Resource Code Sections 42160–42185), particularly Section 42175, Materials Requiring Special Handling for the removal of mercury switches, PCB-containing ballasts, and refrigerants. Lead abatement shall be conducted in accordance with California DHS requirements.</p> <p>MM-3.7-2c: A Waste Management and Reuse Plan shall be prepared to discuss the types of wastes anticipated to be generated during construction and operation, the proposed waste handling procedures, proposed waste storage locations, inspection procedures, and proposed waste disposal. The Waste Management and Reuse Plan will also discuss waste minimization and the reuse of demolished site building materials on site. The plan shall discuss estimated quantities of on-site building materials to be reused, the proposed processing of such materials, the proposed disposition of such materials, and the proposed screening and testing procedures to be used to ensure the material reuse will not impact human health or the environment. Material screening shall</p>	Less than significant

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	include visual observation for the presence of oil-stained concrete. Oil-stained concrete shall be disposed of off-site and excluded from on-site reuse.	
Impact 3.7-4: There is potential for contaminated soils or groundwater to be encountered by workers during excavation and grading on the project site. Therefore, impacts would be significant.	<p>MM-3.7-3: In the event that site grading activities will encounter evidence of contamination or other environmental concerns, a Hazardous Materials Contingency Plan shall be followed during excavation at the subject property. The plan shall (1) specify measures to be taken to protect worker and public health and safety and (2) specify measures to be taken to identify, manage and remediate wastes. The plan should include the following:</p> <ul style="list-style-type: none"> <li>• Identification of the known former storage tank and soil contamination areas.</li> <li>• Information on how to identify suspected contaminated soil.</li> <li>• Worker health and safety monitoring procedures, including monitoring for organic vapors using a photoionization detector (PID) or other organic vapor analyzer and monitoring dust levels. Organic vapor action levels will be established based on Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs). Dust action levels will be established based on use of the known arsenic soil concentrations, the PEL, and a factor of safety.</li> <li>• Procedures for temporary cessation of construction activity and evaluation of the level of environmental concern.</li> <li>• Procedures for limiting access to the contaminated area to properly trained personnel.</li> <li>• Procedures for notification and reporting, including internal management and local agencies (fire department, Department of Environmental Health, Air Pollution Control District, etc.), as needed.</li> <li>• A worker health and safety plan for excavation of contaminated soil.</li> <li>• Procedures for characterizing and managing excavated soils.</li> <li>• Procedures for certification of completion of remediation.</li> </ul>	Less than significant
Impact 3.7-5: The use of excavators, backhoes, and other mechanical means to physically grab onto and attempt to free derelict creosote pilings from the seafloor may result in the piling disintegrating into a multitude of wood fragments, exposing previously unweathered polycyclic aromatic hydrocarbons (PAH)-laden creosote to the marine environment. These construction-	See MM 3.3-3.	Less than significant

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
related effects would present a significant impact.		
Impact 3.7-6: Operations at the VMT Site would include rail, cargo ship, truck traffic, and worker vehicles, which if involved in an accident could cause the release of fuels and/or commercial products (potentially containing hazardous materials) to the environment. Therefore, impacts would be significant.	MM-3.7-4: Both the Orcem and VMT facilities shall prepare an Emergency Response Plan for project operations which establishes responsibilities, procedures, and a chain of command to follow in the event of a fire, vehicle/truck collision, train derailment, or cargo ship incident. The plan shall include general notification requirements to local and regional agencies with emergency response capabilities of the location and operational profile of the project, including address, directions, lists of hazardous materials stored on site, and access information. Information must be sufficient in detail to allow quick recognition and access in the event of an emergency. The plan shall require coordination with local first responders and emergency planning agencies (e.g., Water Emergency Transportation Authority (WETA), U.S. Army Corps of Engineers (USACE), fire department, medical facilities, City/County emergency operations center, and County hazardous materials teams) in the event of an emergency situation. The plan shall outline responsibilities and notification requirements for each type of accident or upset condition that may occur on site. The plan shall designate staff persons responsible for addressing and immediately responding to hazardous materials leaks or spills, and shall establish training and record keeping requirements to ensure such teams are qualified and trained in the California Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response Standard (HAZWOPER). The plan shall include procedures for the assessment and cleanup of any on-site spills or leaks resulting from emergency or upset conditions. Finally, Orcem and VMT personnel shall assist the Environmental Health Services Division, as the Certified Unified Program Agency (CUPA) in revising the Solano County Hazardous Materials Area Plan to address the response during the marine, truck, and rail traffic transportation of materials to or from the project location.	Less than significant
Impact 3.7-7: Operations at the Orcem Site would include truck traffic and worker vehicles, and industrial processes which if involved in an accident could cause the release of fuels and/or commercial products (potentially containing hazardous materials) to the environment. Therefore, impacts would be significant.	See MM-3.7-4 above.	Less than significant

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<p>Impact 3.7-8: The proposed removal of the deteriorated docks located at the northern end of the City of Vallejo Municipal Marina could result in the release of PAH in the water, which would constitute a significant impact.</p>	<p>See MM 3.3-3 above.</p>	<p>Less than significant</p>
<p><i>Hydrology and Water Quality</i></p>		
<p>Impact 3.8-1: Construction of the VMT component of the project would result in a significant impact due to potential impacts on marine water quality from material dredging, removal of creosote pilings, and use of Class 2 aggregate for riprap.</p>	<p>MM-3.8-1: Prior to construction of the VMT project component, the applicant shall develop a Dredged Material Management Plan to outline procedures necessary to evaluate the suitability of dredged materials for either on-site beneficial reuse or in-bay disposal at the Carquinez disposal or other approved site. The purpose of the plan shall be to ensure that dredged materials are handled in a manner that is consistent with the San Francisco Bay Long-Term Management Strategy for Dredging developed cooperatively by the U.S. Environmental Protection Agency (EPA), U.S. Army Corps of Engineers (USACE), the San Francisco Regional Water Quality Control Board (RWQCB), and the Bay Conservation and Development Commission (BCDC). The plan shall include screening and testing guidelines necessary to ensure dredged materials may be reused on-site without resulting in potentially adverse impacts on water quality and aquatic biota.</p> <p>The dredged material management plan shall be prepared and implemented by a qualified professional geochemist or water quality expert with relevant Bay-Delta project experience. In consultation with San Francisco Bay RWQCB and BCDC staff, and in consideration of the applicable water quality objectives and known water quality impairments within receiving waters, the plan shall outline the type and frequency of testing that would be required as materials are dredged out of the Bay. The plan shall develop site-specific thresholds that would indicate the material is suitable for on-site reuse using input from the San Francisco Bay RWQCB and the following document: <i>Beneficial Reuse of Dredged Materials: Sediment Screening and Testing Guidelines</i>. Testing protocols from <i>Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual (Inland Testing Manual)</i> shall also be incorporated into the plan where applicable.</p> <p>The USACE, the San Francisco Bay RWQCB, and the BCDC shall have review and approval authority over the plan. During dredging operations, the applicant shall submit monthly reports to each agency describing the volume and destination (i.e., on-site, in-bay, or ocean) of dredged materials, with testing results justifying the decision.</p>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>MM-3.8-2: Prior to construction of the wharf, the applicant shall disclose to the U.S. Army Corps of Engineers (USACE), the San Francisco Bay Regional Water Quality Control Board (RWQCB), and the Bay Conservation and Development Commission (BCDC) the source and volume of the Class II aggregate and riprap to be used in construction and backfill materials. For materials proposed to be reused from on-site demolition activities, the applicant shall demonstrate to the satisfaction of the agencies that such reuse would not result in release or leaching of contaminants into the water column. The applicant shall describe screening and testing procedures to be used to ensure that rock and aggregate materials do not contain legacy contaminants that could violate water quality objectives or result in substantial adverse impacts on aquatic biota when placed along the shoreline. All materials to be used in the construction of the wharf and shoreline backfill shall be subject to approval by the San Francisco Bay RWQCB and the BCDC.</p> <p>See MM-3.3-3 and MM-3.3-4.</p>	
<p><del>Impact 3.8-2: The proposed removal of the deteriorated docks located at the northern end of the City of Vallejo Municipal Marina could result in significant impacts to water quality related to removal of creosote pilings.</del></p>	<p><del>See MM 3.3-3.</del></p>	<p><del>Less than significant</del></p>
<p><i>Land Use and Planning</i></p>		
<p>There are several policies <del>(those of the City's and BCDC)</del> described in Section 3.9.4 that rely on compliance with BCDC policies and plans, and <del>this</del> project has been found to be potentially inconsistent with these policies pending BCDC permit issuance. Therefore, impacts would be potentially <del>significant</del> consistent awaiting final permit conditions. No mitigations measures are applicable at this time.</p>	<p>Mitigation is not available at this time for potentially inconsistent project elements, thus mitigation is not provided.</p>	<p>N/A</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<i>Noise</i>		
<p>Impact 3.10-1: The following two locations would experience an increase in noise levels that would exceed established policies and standards as a result of the VMT project component, and therefore the operational impacts would be significant: NSL5 (Colt Court Residences) NSL10 (3rd Street Residence)</p>	<p>MM-3.10-1a: <u>California Northern Railroad shall not allow the use of rail cars with worn wheels to serve the project, which the railroad has confirmed is consistent with their operating policies. These measures would reduce rail-related noise and vibration levels to less than significant levels, even with the continued presence of jointed rail tracks. VMT shall work with the California Northern Railroad to upgrade the existing track and any new track to a Continuous Welded Rail (CWR) which will remove the joints and provide a smooth continuous surface for rolling stock. Successful application of this measure would reduce the noise levels generated by rolling stock movements by 5 decibels (dB). The goal of this mitigation is to upgrade to CWR for all tracks as far as the junction with Chestnut Street to the north of the site. Figure 3.10-8 illustrates the extent of the CWR that is the goal under this mitigation.</u></p> <p>MM-3.10-1b: In order to mitigate excess noise generated by loading material into the rail and barge hoppers due to the impact of stone/gravel on the metal walls of the hopper, hoppers shall be lined with a rubber wearing sheet. Application of this measure would reduce hopper noise by 10 decibels (dB).</p> <p>MM-3.10-1c: On the basis of the review of the Draft EIR, mitigation has been incorporated to account for a shift in train arrivals and departures time. Following the preparation of the Draft EIR, the California Northern Railroad has confirmed the proposed project will be served by the normal operating hours of the railroad from 7:00 a.m. to 6:00 p.m. Monday to Friday. When railroad arrivals or departures are limited to daytime hours only, the <math>L_{night}</math> and <math>L_{dn}</math> levels would be only slightly reduced. In addition, all on-site rail loading and unloading activity shall be limited to the hours between 7:00 a.m. and <u>7:40:00 p.m. to bring the project in compliance with General Plan Policy Action NBE-5.1C.</u></p>	<p>Less than significant</p>
<p>Impact 3.10-2: The following three locations would be exposed to an increase in noise levels that exceed the applicable policies and standards as a result of the Orcem project component:</p> <ul style="list-style-type: none"> <li>• NSL2 (Seawitch Lane Residences)</li> <li>• NSL3 (Harbor Park Apartments)</li> </ul>	<p>MM-3.10-2: In order to reduce the noise impact of the plant operation, a series of improvements are required for specific items in the plant as follows.</p> <ul style="list-style-type: none"> <li>• An in-line attenuator shall be incorporated between the main fan (561-FN1) and the stack exhaust, offering minimum insertion losses as per Table 3.10-31.</li> <li>• Local screening shall be provided adjacent to the clinker store bag filter fan (513-FN1) to reduce the noise level by 19 decibels (dB).</li> <li>• Local screening shall be provided adjacent to the bag filter fan (521-FN1) to reduce the noise level by 18 dB.</li> <li>• Local screening shall be provided adjacent to the air shock (531-AB1) to reduce the noise level by 9 dB.</li> <li>• Local screening shall be provided adjacent to the main fan (561-FN1) to reduce the noise level by 9 dB.</li> </ul>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<ul style="list-style-type: none"> <li>NSL4 (Browning Way Residences)</li> </ul> <p>Therefore, operational noise impacts of the Orcem project component would be significant.</p>	<ul style="list-style-type: none"> <li>Local screening shall be provided adjacent to the bag filter fan on the intake Silo (521-FN2) to reduce the noise level by 8 dB.</li> <li>Local screening shall be provided adjacent to the air slide fans within the filter building (591-FA1, 591-FA2, 591-FA3) to reduce the noise level by 7 dB.</li> <li>Local screening shall be provided adjacent to the filter building bag filter fan (591-FN1) and the silo fan (591-FN3) to reduce the noise emission of each source by 3 dB.</li> </ul>	
<p>Impact 3.10-3: The VMT project component would generate significant groundborne vibrations as a result of rail operations due to rolling stock on the existing jointed track; this is considered a significant vibration impact.</p>	<p>See MM-3.10-1a.</p>	<p><del>Significant and unavoidable</del> <u>Less than significant</u></p>
<p>Impact 3.10-4: the following two locations would experience a significant permanent increase in the ambient noise level as a result of VMT operations:</p> <ul style="list-style-type: none"> <li>NSL5 (Colt Court Residences)</li> <li>NSL10 (3rd Street Residence)</li> </ul> <p>Therefore, the VMT project component would result in a significant impact.</p>	<p>See MM-3.10-1a, MM-3.10-1b, and MM-3-10-1c.</p>	<p>Less than significant</p>
<p>Impact 3.10-5: The following three locations would be exposed to a significant permanent increase in ambient noise levels:</p> <ul style="list-style-type: none"> <li>NSL2 (Seawitch Lane Residences)</li> </ul>	<p>See MM-3.10-2.</p>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<ul style="list-style-type: none"> <li>• NSL3 (Harbor Park Apartments)</li> <li>• NSL4 (Browning Way Residences)</li> </ul> <p>Therefore, operational noise impacts of the Orcem project component would be significant.</p>		
<p>Impact 3.10-6: Construction of the VMT project component would result in a substantial temporary increase in ambient noise levels in the vicinity of the VMT construction areas. This is considered a significant short-term, temporary, noise impact.</p>	<p>MM-3.10-3a: The following measures shall be adhered to during construction of the VMT facility.</p> <ul style="list-style-type: none"> <li>• All construction equipment must have appropriate sound-muffling devices, which shall be properly maintained and used at all times such equipment is in operation.</li> <li>• Where feasible, the project contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.</li> <li>• The construction contractor shall locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site.</li> <li>• Except as otherwise permitted, construction activities shall be restricted to the hours of 7:00 a.m. to 9:00 p.m. Monday to Saturday. Construction shall be prohibited on Sundays.</li> <li>• Large pot-holes or rough pavement along Derr Avenue and Lemon Street within 0.50 mile of the plant shall be repaired in accordance with standards as determined necessary and feasible by the Vallejo Public Works Director to reduce roadway noise from construction vehicle and equipment transport..</li> </ul> <p>MM-3.10-3b: The following measures shall be required in order to lessen pile-driving noise impacts.</p> <ul style="list-style-type: none"> <li>• Use a timber cushion block between the pile and hammer head to reduce impact noise.</li> <li>• Correct alignment of pile and rig to reduce noise from pile guides and attachments.</li> <li>• Use acoustic screens or efficient sound reducing exhausts to power units.</li> </ul>	<p>Less than significant</p>
<p>Impact 3.10-7: Construction of the Orcem project component would result in a substantial temporary increase in ambient noise levels in the vicinity of the Orcem construction areas. This is</p>	<p>MM-3.10-4: The following measures shall be adhered to during construction of the Orcem facility.</p> <ul style="list-style-type: none"> <li>• All construction equipment must have appropriate sound-muffling devices, which shall be properly maintained and used at all times such equipment is in operation.</li> <li>• Where feasible, the project contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.</li> <li>• The construction contractor shall locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site.</li> </ul>	<p>Less than significant</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
considered a significant short-term, temporary, noise impact.	<ul style="list-style-type: none"> <li>• Except as otherwise permitted, construction activities shall be restricted to the hours of 7:00 a.m. to 9:00 p.m. Monday to Saturday. Construction shall be prohibited on Sundays.</li> <li>• The project applicant shall establish and maintain a hot-line for the duration of the construction period to receive and respond to noise complaints.</li> </ul>	
Impact 3.10-8: The combined effects of construction of the VMT and Orcem project components would result in a substantial temporary increase in ambient noise levels in the vicinity of the project site. This would constitute a significant impact.	See MM 3.10-3a, MM-3.10-3b, and MM 3.10-4.	Less than significant
<i>Public Services and Recreation</i>		
No significant impacts.	No mitigation required.	N/A
<i>Transportation and Traffic</i>		
Impact 3.12-1: Construction of the proposed project would result in temporary impacts on traffic operations and non-vehicular mobility. Impacts would be significant.	<p>MM-3.12-1: The City of Vallejo shall require that a Construction Traffic Management Plan be developed as part of a larger Construction Management Plan to address potentially significant impacts during construction of the VMT and Orcem project components. As part of the plan development, the project applicants and their construction contractors shall meet with appropriate City of Vallejo departments to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of the projects and other nearby projects that could be simultaneously under construction. The project applicants shall develop the plans for review and approval by the appropriate City departments. The plans shall include at least the following items and requirements:</p> <ul style="list-style-type: none"> <li>A) A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.</li> <li>B) Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.</li> <li>C) Location of construction staging areas for materials, equipment, and vehicles at an approved location.</li> <li>D) A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an on-site complaint manager. The manager shall determine the cause of the complaints</li> </ul>	Less than significant

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>and shall take prompt action to correct the problem. A complaint manager shall be designated and their name and phone number shall be provided to Planning and Zoning prior to the issuance of the first permit issued by Building Services.</p> <ul style="list-style-type: none"> <li>E) Provision for accommodation of pedestrian flow.</li> <li>F) Provision for parking management and spaces on the project site for all construction workers to ensure that construction workers do not park in on-street spaces.</li> <li>G) Any damage to the street caused by heavy equipment, or as a result of this construction, shall be <b>repaired, at the project applicant's expense, within 1 week of the occurrence of the damage (or excessive wear)</b>, unless further damage/excessive wear may continue; in such case, repair shall occur prior to issuance of a final inspection of the building permit and in coordination with MM-3.12-4a. All damage that is a threat to public health or safety shall be repaired immediately. The street shall be restored to its condition prior to the new construction as established by the City Building Inspector and/or <b>photo documentation, at the project sponsor's expense, before the issuance of a Certificate of Occupancy.</b></li> <li>H) Any heavy equipment brought to the construction site shall be transported by truck, where feasible.</li> <li>I) No materials or equipment shall be stored on the traveled roadway at any time.</li> <li>J) Prior to construction, a portable toilet facility and a debris box shall be installed on the site, and properly maintained through project completion.</li> <li>K) All equipment shall be equipped with mufflers.</li> <li>L) Prior to the end of each work day during construction, the contractor or contractors shall pick up and properly dispose of all litter resulting from or related to the project, whether located on the property, within the public rights-of-way, or properties of adjacent or nearby neighbors.</li> </ul>	
<p>Impact 3.12-2: The proposed project would cause substantial delays and queues at rail crossings (delays of over 1 minute during peak hours, or queues that block upstream intersections during the day and early evening when traffic volumes are at or near their peak hour levels) relative to delays and queues without the</p>	<p>MM-3.12-2a: The applicants shall work with the California Northern Railroad to limit train movements through Vallejo to between 9:00 a.m. and 4:00 p.m., thus minimizing the traffic queueing associated with the train movements across the grade crossings throughout the city during peak commute hours.</p> <p>MM-3.12-2b: Prior to the issuance of permits for rail operations, the project applicants shall notify the police and fire departments of proposed rail operations and potential delays to facilitate alternative routing during emergencies.</p>	<p>Significant and unavoidable</p>

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
project. Impacts would be significant.		
Impact 3.12-3: The proposed project would cause substantial delays and queues at rail crossings (delays of over 1 minute during peak hours, or queues that block upstream intersections during the day and early evening when traffic volumes are at or near their peak hour levels) relative to delays and queues in the Cumulative No Project condition. Impacts would be significant.	See MM-3.12-2a and MM-3.12-2b above.	Significant and unavoidable
Impact 3.12-4: The proposed project would require physical improvements to Lemon Street in order to provide safe and efficient vehicle movements. This impact would be significant.	<p>MM-3.12-3: To provide for the safe movement of project trucks along with other existing pedestrian, bicycle, and vehicular traffic on Lemon Street between the project site and Sonoma Boulevard and through the intersection of Lemon Street/Sonoma Boulevard, the applicants shall retain the services of a qualified engineer to prepare a structural pavement assessment for this segment of roadway, which shall be submitted for review and approval by the City Public Works Department. <b>The assessment shall evaluate the existing pavement condition/strength against the project's demands</b> utilizing methodology acceptable to the City, and shall identify recommended improvements (for example, overlay, reconstruction, base repair, etc.) necessary to meet this demand, based on the schedule of combined VMT and <b>Orcem truck traffic. The City shall determine the project's fair-share</b> allocation of costs in relationship to overall improvement costs, and all necessary improvements shall be made prior to the issuance of a certificate of occupancy.</p> <p>In addition, the applicants shall work with the City of Vallejo Public Works Department to identify, design, and prepare a cost estimate for those physical improvements necessary to provide adequate sight distance and maneuvering capacity for trucks along this segment of roadway, including the intersection at Lemon Street/Sonoma Boulevard. The needed improvements may include for example, centerline striping, potential on-street parking changes, sidewalk gap closures <b>and widenings. The applicants shall provide an engineer's cost estimate</b> for the improvements, to be approved by the Public Works Department. <b>The Public Works Department shall determine the project's fair-share cost allocation</b> for the necessary improvements. All necessary improvements shall be constructed prior to the issuance of a certificate of occupancy.</p>	Less than significant

**Table ES-1  
Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<p>Impact 3.12-5: The proposed project would have a substantial effect on emergency access, based on the potential delays generated by train crossings at the grade crossings in Vallejo, American Canyon, and crossings further north. Impacts would be significant.</p>	<p>See MM-3.12-2a and MM-3.12-2b above.</p>	<p>Significant and unavoidable</p>
<p>Impact 3.12-6: The proposed <b>project's added operational auto</b> and truck trips on Lemon Street would make local vehicle, pedestrian, and bicycle movements unsafe or less convenient. Impacts would be significant.</p>	<p>MM-3.12-4: The project applicants shall work with the City of Vallejo to identify, design, and construct improvements on Lemon Street between the project site and Curtola Parkway, <u>and on Sonoma Boulevard between Lemon Street and I-80 where not already funded or completed, based on the project truck traffic phasing</u>, to provide for safe movement of pedestrians and bicycles along and across this section of roadway, and to provide for the safe movement of project trucks through portions of this roadway where existing residential driveways take direct access, consistent with the applicable General Plan policies (see Sections <u>3.9 and 3.12.1</u>). Improvements may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>• Provision of continuous 4-foot minimum-width sidewalks from Alden Street to Curtola Parkway, including closure of all gaps.</li> <li>• Installation of high-visibility crosswalks (i.e., continental or zebra striping), , and installation of pedestrian hybrid beacon or rectangular rapid flashing beacon devices if indicated by an engineering study), with curb extensions where feasible, at high-pedestrian use intersections as identified by the Public Works Department, including the intersections of Lemon Street with Sheridan Street, Lincoln Highway, Sonoma Boulevard, and Porter Street.</li> <li>• Lowering of the speed limit to 25 miles per hour (mph), subject to an engineering and traffic survey supporting the speed zone. The project applicant shall be responsible for funding of the study and the actual costs of signage and street markings.</li> </ul> <p>The project applicants shall provide an engineer's cost estimate for the necessary improvements, to be approved by the Public Works Department. The Public Works Department shall <b>determine the project's fair-share costs</b> allocation for the necessary improvements. The necessary improvements shall be constructed prior to the issuance of a certificate of occupancy.</p> <p><u>MM-3.12-5: The project applicants shall work with the City of Vallejo to ensure maintenance of key neighborhood connection routes and to facilitate pedestrian and bicycle access on Lemon Street between the project site and</u></p>	<p>Less than significant</p>

**Table ES-1**  
**Summary of Potentially Significant Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<u>Curtola Parkway, and on Sonoma Boulevard between Lemon Street and I-80. In addition, the applicant shall contribute their fair share to this maintenance of impacted roads, as determined by Public Works.</u>	
<i>Utilities and Service Systems</i>		
No significant impacts.	No mitigation required.	N/A

## ES.7 ANALYSIS OF ALTERNATIVES

### ES.7.1 Alternatives Analyzed

Two alternatives to the proposed project, including the No Project Alternative, were analyzed in Chapter 6, Alternatives. The No Project Alternative is a required element of an EIR pursuant to Section 15126.6(e) of the CEQA Guidelines that examines the environmental effects that would occur if the project were not to proceed. The other alternative is discussed as part of the “range of reasonable alternatives” selected by the City. The alternatives addressed in Chapter 6 are described below.

#### No Project Alternative

Under the No Project Alternative, the project site would remain in its current condition. No buildings would be demolished, and no construction of new buildings or structures would occur. The existing wharf structures would also remain and there would be no dredging or filling of Mare Island Strait. No new operations would be introduced and the project site would remain vacant.

The No Project Alternative would not meet any of the project objectives since the site would remain unchanged. No new employment opportunities nor increased tax revenues would be generated on the site. The site would not be developed into a marine terminal and would not provide for the production of GGBFS; therefore, the objectives related to maximizing the capabilities of the site for shipping and GGBFS production would not be achieved under this alternative.

#### Revised Operations Alternative

Under the Revised Operations Alternative, the overall operations of the proposed project would be modified to decrease potential project impacts related to air quality, GHG emissions, and transportation and traffic. The Revised Operations Alternative would develop the project site in an identical manner as the proposed project; however, the operation of each project component would be altered, with the resulting reductions in impacts, as outlined below. These alterations to the project components include: (1) reducing the maximum length of trains used by the proposed project from 77 cars to 50 cars per train; (2) implementing a refined truck loading and weight confirmation system for the Orcem component to improve the efficiency of tanker trucks leaving the site that would increase the finished product loads from 25-23 to 2426 tons; ~~and~~ (3) enhancing truck scheduling efficiency and increasing trucking days reducing the number of average daily trucks; (4) use of Tier 4 equipment for all land-based construction activities; (6) elimination of late night Orcem operations; (6) reduction of VMT trucking once rail is fully available; and (7) supplemental landscape screening of Orcem plant. The applicant proposed development of plans to revise operation of the VMT and Orcem components through ongoing fleet, barge preference and equipment management activities to reduce NO<sub>x</sub> emissions, but these plans were not produced and thus were not taken into consideration in the impact assessment of this alternative.

## ES.7.2 Environmentally Superior Alternative

The No Project Alternative would result in the least environmental impacts and would be the environmentally superior alternative. However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. In this case, the environmentally superior alternative is the Revised Operations Alternative since it would avoid the significant and unavoidable impacts to air quality and reduce impacts related to GHG emissions and traffic. The Revised Operations Alternative would also meet all of the project objectives.

## ES.8 AREAS OF CONTROVERSY

Section 15123 (b)(2) of the CEQA Guidelines requires the Executive Summary of an EIR to disclose areas of controversy known to the lead agency that have been raised by the agencies and the public. The City circulated a Notice of Preparation (NOP) to solicit agency and public comments on the scope and environmental analysis to be included in the EIR. A total of 14 comment letters were received during the NOP public review period. Copies of the NOP and the NOP comment letters received by the City are included in Appendix A to this EIR.

The Draft EIR was circulated for a 60-day public review period pursuant to CEQA Guidelines Section 15105. The public review period for the Draft EIR was from September 3, 2015, to November 2, 2015. The City received 543 separate pieces of communication about this project, including Open City Hall entries and speakers in two public hearings, which translated into approximately 2,600 individual comments and a response to comments document that is posted on the City's website. The following issues were raised in the written responses to the NOP and the Draft EIR public comment period:

- Impacts to ferry services during construction and operation
- Need for a complete project description
- Direct and indirect impacts to biological resources, including special-status species
- Terminology used to describe the product proposed to be manufactured on the site
- Impacts to the existing sanitary sewer lines within the project site
- Impacts to air quality
- Potential for hazards and hazardous emissions
- Increase in traffic on nearby roads and streets
- Impacts on water quality

## ES.9 ISSUES TO BE RESOLVED BY LEAD AGENCY

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain a discussion of issues to be resolved. With respect to the proposed project, the key issues to be resolved include decisions by the City, as lead agency, as to:

- Whether this environmental document adequately describes the environmental impacts of the proposed project.
- Whether the recommended mitigation measures should be modified and/or adopted.
- Whether there are other mitigation measures or alternatives that should be considered for the proposed project besides those identified in the ~~Draft~~ Final EIR.

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