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Application for Certification (15-AFC-01)

Puente Power Project (P3)
Oxnard, CA

Project Enhancement and Refinement Demolition of Mandalay Generating Station Units 1 and 2



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Submitted to:
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AECOM

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APPENDICES

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LIST OF ACRONYMS AND ABBREVIATIONS

ACM	asbestos-containing material
ADT	average daily traffic
AFC	Application for Certification
AFY	acre-feet per year
AST	aboveground storage tanks
BMP	best management practice
Caltrans	California Department of Transportation
C&D	construction and demolition
CEC	California Energy Commission
CH ₄	methane
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CPM	Compliance Project Manager
CUPA	Certified Unified Program Agency
dBA	A-weighted decibels
EDD	Employment Development Department
ESA	Environmental Site Assessment
HBM	hazardous building materials
HMBP	Hazardous Materials Business Plan
HP	horsepower
HRA	health risk assessment
ICU	Intersection Capacity Utilization
ID	identification
ips	inches per second
KOP	key observation point
L ₅₀	noise levels equaled or exceeded during 50 percent of the measured time interval
L ₉₀	noise levels equaled or exceeded during 90 percent of the measured time interval
L _{eq}	equivalent sound level
LORS	laws, ordinances, regulations, and standards
LOS	level of service
LT	long-term
ng/m ³	microgram per cubic meter
MGS	Mandalay Generating Station
MOE	measure of effectiveness
mph	miles per hour
MW	megawatt
N ₂ O	nitrous oxide
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
OEHHA	Office of Environmental Health Hazard Assessment
OSW	Oxnard Shores West
OTC	once-through cooling
P3	Puente Power Project
PCB	polychlorinated biphenyl
PM _{2.5}	particulates less than or equal to 2.5 microns in diameter
PM ₁₀	particulates less than or equal to 10 microns in diameter
PPE	Personal Protective Equipment
PPV	peak particle velocity
RCRA	Resource Conservation and Recovery Act of 1976

ROC	reactive organic compounds
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SIL	significant impact levels
SO ₂	sulfur dioxide
SOC	Standard Occupational Classification
SO _x	oxides of sulfur
SPL	sound pressure level
ST	short-term
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminant
TSCA	Toxic Substance Control Act
TSDF	treatment, storage, and disposal facility
U.S. EPA	United States Environmental Protection Agency
VAC	Visual Absorption Capability
V/C	volume-to-capacity ratio
VCAPCD	Ventura County Air Pollution Control District
VdB	decibel, vibration velocity
VOC	volatile organic compounds
VSOI	Visual Sphere of Influence

PUENTE POWER PROJECT APPLICATION FOR CERTIFICATION 15-AFC-01 PROJECT ENHANCEMENT AND REFINEMENT: DEMOLITION OF MANDALAY GENERATING STATION UNITS 1 AND 2

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The Puente Power Project (P3 or project) Application for Certification (AFC) was filed on April 15, 2015, and was accepted as “data adequate” in June 2015. NRG Energy Center Oxnard LLC (Applicant) is proposing a project enhancement and refinement relative to the previously submitted AFC, to include the demolition of the two gas-fired steam-generating units (Units 1 and 2) at the existing Mandalay Generating Station (MGS). The location and description of the P3 facility, remaining project components, and project characteristics have not changed, and are as described in the April AFC.

The AFC assumed that if P3 is approved and developed, MGS Units 1 and 2 would be retired by the completion of commissioning of P3 (in June 2020), and that the units would then be decommissioned and left in place. As a project enhancement and refinement with corresponding community benefits, and to improve the visual aspects associated with development of P3, Applicant now proposes to demolish MGS Units 1 and 2 following their retirement and decommissioning.¹ This improvement is the outcome of continuous evaluation of methods and financial means to improve upon P3 as originally proposed in the AFC, while maintaining the contractual commitments to the load-serving entity, Southern California Edison (SCE).

1.2 PROJECT LOCATION

All activities associated with the demolition of MGS Units 1 and 2, with the exception of offsite disposal of materials and waste, would be located within the existing boundaries of MGS on Assessor’s Parcel Number 183-0-022-025. Contractor parking and laydown areas for the demolition work will also be within the existing boundaries of MGS.

1.3 PROJECT ENHANCEMENT AND REFINEMENT OVERVIEW

MGS is an existing natural-gas-fired steam electric-generating facility owned by NRG California South LP; it is located in the City of Oxnard, Ventura County, California. MGS consists of two conventional steam turbine units (Units 1 and 2) and one gas turbine peaking unit (Unit 3).²

MGS Units 1 and 2 were constructed in the 1950s, and have a combined generating capacity of 430 megawatts (MW). Units 1 and 2 are cooled by ocean water conveyed via the 2.5-mile-long Edison Canal from the Channel Islands Harbor (also referred to as the Mandalay Canal). The generating station intake is in the Edison Canal. MGS discharges wastewater—consisting of once-through cooling (OTC) water and other process wastewaters—into the Pacific Ocean, via a concrete-and-rock revetted structure

¹ To better coordinate commissioning, retirement, decommissioning, and demolition activities, the specific sequencing of events will be retirement of MGS Unit 2 prior to completion of commissioning of P3, retirement of MGS Unit 1 by the applicable OTC compliance deadline of December 31, 2020, and decommissioning and demolition of MGS Units 1 and 2 thereafter.

² MGS Unit 3 is a jet-engine-powered unit that was commissioned in 1970, and has a generating capacity of approximately 130 MW. Unit 3 will continue to operate and will not be affected by P3 or the demolition of MGS Units 1 and 2.

immediately offshore of the facility. MGS discharges its wastewater in compliance with its National Pollutant Discharge Elimination System permit for withdrawal and discharge.

MGS Units 1 and 2 are subject to the California State Water Resources Control Board's OTC Policy. Irrespective of the proposed development of P3, pumping of ocean water for cooling MGS Units 1 and 2 must be reduced or eliminated as of the OTC Policy compliance date of December 31, 2020.

Applicant proposes to demolish all above-grade structures associated with MGS Units 1 and 2 following their retirement and decommissioning. The demolition of Units 1 and 2 will generally occur in the western portion of the MGS property, south of the three basins and north of the water storage tanks area.

Demolition will proceed as a set of segmented tasks associated with each of the following major components or component areas on site:

- Asbestos removal;
- Demolition to grade of the MGS Units 1 and 2 turbine plant equipment and building;
- Demolition to grade of the MGS Units 1 and 2 boiler plant equipment and structures;
- Demolition to grade of the 200-foot-tall stack;
- Removal of empty hazardous-materials-contaminated equipment; and
- Removal of transformers and associated electrical equipment up to the switchyard.

The specific sequencing of demolition activities will provide for coordinated removal of MGS Units 1 and 2 and continued operation and maintenance activities related to P3 and MGS Unit 3. Figure 1-1 shows a visual simulation of the site after construction of P3 and demolition of MGS Units 1 and 2.

1.4 PROJECT SCHEDULE

Decommissioning of Units 1 and 2 would commence upon retirement of both units (no later than December 31, 2020), and is anticipated to take approximately 6 months. Asbestos abatement and above-grade demolition work for MGS Units 1 and 2 is anticipated to take approximately 15 months following completion of decommissioning, and would be completed by late 2022.

Milestones are as follows:

- | | |
|--|-----------|
| · P3 commercial online date: | June 2020 |
| · Complete decommissioning of MGS Units 1 and 2: | June 2021 |
| · Complete asbestos abatement: | late 2021 |
| · Complete demolition: | late 2022 |

1.5 REFERENCES

No references in addition to those presented in Section 1.0 of the AFC were used for this AFC Enhancement and Refinement.

2.0 PROJECT ENHANCEMENT AND REFINEMENT DESCRIPTION

2.1 SCOPE OF WORK OVERVIEW

The demolition areas are shown on Figure 2-1. The demolition of Units 1 and 2 will generally occur in the western portion of the MGS property, south of the three basins and north of the water storage tanks area. The demolition area is approximately 3.5 acres. As shown on Figure 2-1, all construction laydown and parking areas will also be within the existing MGS site, and are the same areas that are to be used during construction of P3.

Demolition will proceed as a set of segmented tasks associated with each of the following major components or component areas on site:

- Asbestos removal;
- Demolition to grade of the MGS Units 1 and 2 turbine plant equipment and building;
- Demolition to grade of the MGS Units 1 and 2 boiler plant equipment and structures;
- Demolition to grade of the 200-foot-tall stack;
- Removal of empty hazardous-materials-contaminated equipment; and
- Removal of transformers and associated electrical equipment up to the switchyard.

The specific sequencing of demolition activities will provide for coordinated removal of MGS Units 1 and 2 and continued operation and maintenance activities related to P3 and MGS Unit 3. Sequencing is described further in Section 2.2. The six primary demolition targets are described below.

1. **Asbestos Removal:** Asbestos-containing materials (ACM) are prevalent throughout the MGS plant equipment and structures. Past surveys will be verified and a new survey conducted, if necessary, to identify the presence of ACM. Asbestos removal will take place in compliance with all federal, state, and local requirements, including those for personnel protection.
2. **Turbine plant equipment and building:** MGS Units 1 and 2 steam turbine generators were constructed as outdoor units served by a concrete operating floor, under which are housed turbine cycle components. These structures will be demolished to an “at-grade” condition. Existing stormwater sumps in the area will be maintained during and following demolition activities. Subgrade infrastructure that could present a safety risk if not filled will be filled with crushed concrete derived from demolition activities.
3. **Boiler plant equipment and structures:** MGS Units 1 and 2 boilers were constructed as outdoor units. The structures and systems will be demolished to an “at-grade” condition, with the core steel structures felled by implosion using explosive charges placed per an engineered blast plan. Existing stormwater sumps in the area will be maintained during and following demolition activities. Subgrade infrastructure that could present a safety risk if not filled will be filled with crushed concrete derived from demolition activities.
4. **Stack:** The 200-foot-tall stack shared by MGS Units 1 and 2 will be demolished to an “at-grade” condition, with the core structure felled by implosion using explosive charges placed per an engineered blast plan. Subgrade infrastructure that could present a safety risk if not filled will be filled with crushed concrete derived from demolition activities.
5. **Contaminated equipment:** All chemicals and hazardous materials associated exclusively with MGS Units 1 and 2 will be removed from site and disposed of in appropriate facilities as part of the decommissioning process. Following decommissioning of MGS Units 1 and 2, there will be some equipment and piping (such as lube oil tanks or fuel oil piping) that, although emptied of hazardous materials, may still be contaminated. This equipment will be removed and disposed of in compliance with all applicable federal, state, and local requirements.

6. **Transformers and associated equipment:** Transformers and associated electrical equipment (such as isolated-phase bus, breakers, and transmission lines) will be removed up to an interface with the SCE switchyard.

2.2 DEMOLITION SEQUENCING AND PROCESS

Demolition of MGS Units 1 and 2 will follow a general systematic approach that allows for cleanup and removal of hazardous building materials (HBMs); recycling of valuable materials; physical demolition and removal of equipment and structures; and final clean up. Conventional demolition with continual separation of salvageable materials will be the most cost-effective method of disposal. The project is expected to generally follow the sequence described below, but some tasks may be completed in parallel and may be subject to change based on work plan development, approval of designated disposal/recycling targets, HBM abatement plans, grading, and site-specific health and safety plans.

Generally, the demolition process will proceed as follows:

- **Planning and assessment:** Surveys and evaluations will be conducted to identify and assess the presence of HBMs as well as recyclable metals, materials, and equipment. Generally, this phase will proceed as follows:
 - Prior to the demolition of the structures, develop the implementation plans for the identification, testing, removal, monitoring, and disposal of any hazardous fluids and building materials, including asbestos and lead-based paint, as necessary;
 - Develop demolition plans; and
 - Contract for services related to the plans.

At the completion of this phase, the demolition of MGS Units 1 and 2 will be ready to commence. The exact timing of the initiation of demolition will be driven by actual dates when Units 1 and 2 are retired and the subsequent decommissioning is complete; P3 is commercially operating; and the P3 construction contractor has demobilized, to the extent that such demobilization is needed to allow demolition of MGS Units 1 and 2.

- **Demolition mobilization:** Nondiscretionary permits required beyond the California Energy Commission (CEC) license, if any, will be obtained. Such permits may include a demolition permit from California Department of Industrial Relations' Division of Occupational Safety and Health (i.e., Cal/OSHA); and asbestos/lead-based paint abatement permit and notification from Ventura County Air Pollution Control District (VCAPCD). To the maximum extent possible, existing construction equipment for P3 that could support demolition of Units 1 and 2 will remain onsite.
- **HBM abatement and material recycling:** Asbestos and lead or other HBMs will be removed. HBM abatement will be completed prior to major structure demolition activities.
- **Demolition of selected structures to facilitate further demolition and laydown:** Some structures and equipment will be removed first to provide working areas for remaining demolition equipment and activities. This will be primarily in the area east of MGS Units 1 and 2. It is also expected that other areas of the property, including laydown areas shown on AFC Figure 2.9-3 used for P3 construction, will be identified as temporary storage areas for scrap, recycle, and/or offsite disposal to various end users, and staging during demolition. Figure 2-1 shows the demolition area and staging areas.

- **Transformers and associated electrical equipment:** Transformers, transmission lines, and electrical equipment will be removed to clear the way for the removal of demolition materials from the steam turbine and boiler plants.
- **Steam turbine plant:** Steam turbines and generators will be disassembled for recycling, and turbine area equipment and structures will be demolished, to clear the way for the removal of the boiler plant. Concrete from the turbine deck can be stockpiled or hauled offsite for disposal. Stockpiled material can be crushed and be used to fill below-grade spaces to alleviate safety concerns.
- **Boiler plant equipment and structures:** This is the most significant component of the demolition effort. These structures and systems will be demolished to an “at-grade” condition, with the core steel structures felled by implosion using explosive charges placed per an engineered blast plan. Below-grade spaces will be filled with crushed concrete as required.
- **Stack removal:** The stack is the tallest visual structure. The 200-foot-tall stack shared by MGS Units 1 and 2 will be demolished to an “at-grade” condition, with the core structure felled by implosion using explosive charges placed per an engineered blast plan.
- **Demobilize demolition:** Trailers, equipment, and any remaining materials left over from demolition will be removed.
- **Final “as left” acceptance:** Approval that demolition is completed will be obtained from CEC.

The estimated quantities of wastes generated during the demolition of MGS Units 1 and 2 are summarized in Table 2-1. Applicant will prepare a Demolition and Construction Waste Management Plan that will describe demolition and construction waste streams and management methods. Further details are provided in Section 4.14, Waste Management.

2.3 DEMOLITION CONTROL MEASURES

Listed below are typical measures to be implemented to control exhaust emissions from diesel heavy equipment, and potential emissions of fugitive dust during demolition activities. These measures will be implemented, as needed, to avoid and/or reduce project-related impacts to air quality to less-than-significant levels.

- Unpaved surface travel and disturbed areas in the project site will be watered as frequently as necessary to prevent fugitive dust plumes. The frequency of watering can be reduced or eliminated during periods of precipitation.
- The vehicle speed limit will be 15 miles per hour within the site.
- The site entrances will be posted with visible speed limit signs.
- Demolition equipment vehicle tires will be inspected and washed as necessary to be free of dirt prior to entering paved roadways.
- Gravel ramps of at least 20 feet in length will be provided at the tire washing/cleaning station.
- Unpaved exits from the site will be graveled or treated to prevent track-out to public roadways.
- Demolition vehicles will enter the site through the treated entrance roadways, unless an alternative route has been submitted to and approved by the Compliance Project Manager (CPM).

Table 2-1
Estimated Quantities of Waste Generated during Demolition of MGS Units 1 and 2

Waste	Origin	Composition	Estimated Quantity		Classification	Disposal
			Units	Quantity		
Scrap wood, glass, plastic, paper, and silicate and mineral wool insulation	Demolition of piping, structures, tanks, and equipment	General construction waste	tons	1,000	Nonhazardous	Recycle and/or dispose in a Class II or III landfill
Scrap metals	Demolition of piping and structures	Metal	tons	12,000	Nonhazardous	Recycle and/or dispose in a Class II or III landfill
Concrete	Demolition of turbine buildings and stack	Concrete	tons	18,000	Nonhazardous	Recycle and/or dispose in a Class II or III landfill
Spent welding and cutting materials	Construction	Solids	pounds/month	33	Nonhazardous	Recycle and/or dispose in a Class II or III landfill
Waste oil filters	Construction equipment and vehicles	Solids	pounds/month	93	Nonhazardous	Recycle at permitted TSDF
Used and waste lube oil	Turbine lube oil draining	Hydrocarbons	drums	295	Hazardous	Recycle at permitted TSDF
Oily rags, oil sorbent	Cleanup of small spills	Hydrocarbons	pounds/month	47	Hazardous	Recycle or dispose at permitted TSDF
Spent lead acid batteries	Construction equipment and trucks	Heavy metals	batteries per demolition duration	5	Hazardous	Recycle offsite
Spent alkaline batteries	Equipment and flashlights	Metals	batteries/month	5	Universal waste solids	Recycle or dispose offsite at a Universal Waste Destination Facility
Asbestos waste	Demolition of unabated piping and equipment	Asbestos	tons	1,267	Hazardous	Disposal in licensed and permitted landfill
Lead-based paint	Demolition of piping and structures	Lead	—	TBD	Hazardous	Disposal in licensed and permitted landfill

Table 2-1
Estimated Quantities of Waste Generated during Demolition of MGS Units 1 and 2 (Continued)

Waste	Origin	Composition	Estimated Quantity		Classification	Disposal
			Units	Quantity		
Waste oil	Equipment and vehicles	Hydrocarbons	gallons/ month	117	Non-RCRA Hazardous Liquid	Dispose at permitted TSDF
Sanitary waste	Portable toilets	Sewage	gallons/day	75	Nonhazardous liquid	Remove by contracted sanitary service
Stormwater ¹	Rainfall	Water	gallons	260,000	Nonhazardous liquid	Discharge to stormwater drains
Fluorescent, mercury vapor lamps	Demolished lighting	Metals and PCBs	pounds	11,600	Universal waste solids	Recycle or dispose offsite at an Universal Waste Destination Facility

Notes:

¹ Stormwater runoff based on 3.5 acres and a 2-year, 24-hour storm event.

MGS = Mandalay Generating Station

PCB = polychlorinated biphenyl

RCRA = Resource Conservation and Recovery Act of 1976

TSDF = treatment, storage, and disposal facility

- Demolition areas adjacent to any paved roadway will be provided with sandbags or other measures, as specified in the Storm Water Pollution Prevention Plan (SWPPP) to prevent run-off to roadways.
- Paved roads in the site will be cleaned as needed on days when demolition activity occurs, to prevent the accumulation of dirt and debris.
- Dust management and suppression will be controlled by engineered dust control methods. Water is the primary control for dust suppression during operations. Water is provided through water misters, with direct flow applications from water trucks.
- Noise from demolition activities will be controlled and minimized to the extent possible. Shearing and concrete processing equipment use will be maximized as much as possible; noise generation from shearing and processing is significantly lower than impact equipment. Explosive charges may be used to fell structures; noise from explosive charges will be attenuated with wrapping materials.

Dust control measures specific to implosion activities include:

- Establish a dust impact zone where no vehicular or pedestrian traffic will be permitted;
- Schedule the implosion for optimal weather conditions (optimal wind direction, low wind speed);
- Schedule smaller implosions in stages/phases, instead of one giant implosion, if possible;
- For the demolition of an exhaust stack, clean the inside of the stack prior to implosion, including material that has built up at the bottom of the stack;
- Remove material such as insulation, wallboard, and hazardous material (asbestos, lead paint) prior to implosion;
- Do not proceed with implosion if local wind advisories indicate gusts over 20 miles per hour, or an average wind speed greater than 10 miles per hour;
- Monitor wind speed and direction at the site before and after the implosion;
- Use a water mist system to control dust during implosion. These systems are designed to create a mist curtain to reduce dust migration;
- Stabilize surface area and demolition debris immediately following implosion (using watering or dust palliative);
- At least the first 500 feet of any public roadway exiting the site will be cleaned as needed when dirt or runoff from the site is visible on public roadways;
- Debris storage piles and disturbed areas that remain inactive for more than 10 days will be covered or treated with appropriate dust-suppressant compounds;
- Vehicles used to transport solid bulk/waste material on public roadways and having the potential to cause visible emissions will be provided with a cover, or the materials will be sufficiently wetted, and loaded onto the trucks in a manner to provide at least 1 foot of freeboard;
- Wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) will be used on all areas that may be disturbed—any windbreaks installed to comply with this condition will remain in place until the disturbed area is stabilized; and
- United States Environmental Protection Agency (U.S. EPA) Tier 4i engines will be used for the larger equipment (engines greater than 75 HP), and U.S. EPA Tier 4 engines will be used for smaller equipment (engines equal to or smaller than 75 HP).

An onsite Air Quality Mitigation Manager will be responsible for directing and documenting compliance with demolition-related mitigation conditions.

2.4 SAFETY AND HAZARDOUS MATERIALS REMOVAL

Key health and safety aspects such as physical hazards, asbestos, lead, and other HBMs require careful management during demolition to minimize risks to site workers and the public while complying with applicable laws, ordinances, regulations, and standards (LORS).

HBMs—including asbestos, mercury, and lead-based paints—have been identified in the past, but only areas that needed repair/replacement have been remediated. The majority of MGS Units 1 and 2 still contain these materials, primarily asbestos in piping, flue gas ductwork, and equipment insulation. Prior to the asbestos abatement work, a survey will be performed to identify ACM; additional identification of areas of asbestos insulation used will be required throughout the demolition process as structures are removed. Asbestos is one of the most prevalent HBMs in the structures of MGS Units 1 and 2. Asbestos removal will be monitored to ensure that the abatement is conducted in accordance with the regulatory approval. See Section 4.5, Hazardous Materials; Section 4.14, Waste Management; and Section 4.16, Worker Safety of this AFC Enhancement and Refinement for a complete explanation of how these hazards and risks will be managed.

2.5 MANPOWER AND EQUIPMENT

Estimated manpower requirements for the demolition of MGS Units 1 and 2 are provided in Table 2-2. Manpower loads will vary depending on the specific activities (e.g., equipment operation, truck driving, asbestos and lead abatement, dismantling of structures, health and safety monitoring, sampling, and general housekeeping). The demolition schedule and manpower requirements assume up to 10-hour days, 5 days a week, Monday through Friday. Work will be limited to 7:00 a.m. to 6:00 p.m., Mondays through Fridays. It is anticipated the maximum number of onsite personnel during demolition activities will be 74 in months 7 through 11 (i.e., January 2022 through May 2022).

Table 2-3 provides an estimate for truck deliveries to the site to support the demolition. During peak activities at the site, it is anticipated that approximately 220 tractor-trailer units may leave the site during month 9 (March 2022) to transport equipment/structures and waste offsite for disposal and/or recycling.

Table 2-4 provides quantity estimates for major equipment required. The bulk of the equipment will be used during the demolition of the main structure and the stack. It is anticipated that a maximum of 27 pieces of equipment will be onsite during demolition activities, with an average of 19 pieces of equipment for the duration of the project. It is anticipated the equipment will be used 5 days a week during the demolition of MGS Units 1 and 2.

2.6 WATER USAGE

The demolition activities will require water for dust control, as well as equipment washdown and concrete preparation. Water use during the 15-month demolition period is summarized in Table 2-5. The total estimated amount of water to be used, including domestic use, is approximately 3.2 acre-feet.

2.7 REMEDIATION

Subsurface remediation of the MGS site is not included as part of the demolition activities to occur under the AFC. If, during demolition, obvious areas of contamination are found (such as stained soil or soil with a strong odor), samples will be taken to determine the type and potential extent of contamination. These activities will be conducted in accordance with the P3 Soil Management Plan described in AFC Section 4.14, Waste Management, and included as Appendix M-2 of the AFC.

Table 2-2
MGS Units 1 and 2 Demolition Staff by Trade by Month

Month ¹	2021						2022								
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	May	Apr	May	Jun	Jul	Aug	Sep
Craft Trade															
Asbestos removal certified workers	6	12	12	12	12	0	0	0	0	0	0	0	0	0	0
Asbestos removal helpers	3	6	6	6	6	0	0	0	0	0	0	0	0	0	0
Boilermakers	0	0	0	0	8	8	8	8	8	8	8	8	6	4	4
Carpenters	2	2	2	2	2	2	4	4	4	4	4	4	4	2	2
Electricians	2	0	0	0	8	8	8	8	8	8	8	8	6	4	4
Ironworkers	0	0	0	0	8	8	8	8	8	8	8	4	4	2	2
Laborers	2	4	4	4	8	8	10	10	10	10	10	8	8	6	6
Pipefitters	2	0	0	0	8	8	8	8	8	8	8	8	8	6	6
Painters and insulators	0	0	0	0	6	6	10	10	10	10	10	6	4	4	4
Cement workers	0	0	0	0	0	0	0	0	0	0	0	4	4	4	2
Millwrights	0	0	0	0	2	2	4	4	4	4	4	2	2	2	2
Operators	2	2	2	2	2	8	8	8	8	8	8	8	8	2	2
Teamsters	0	0	0	0	2	2	2	2	2	2	2	2	2	2	2
Total Craft	19	26	26	26	54	60	70	70	70	70	70	62	56	38	36
Construction Staff	2	2	2	2	4	4	4	4	4	4	4	4	4	2	2
Total Site Staff	21	28	28	28	58	64	74	74	74	74	74	66	60	40	38
	Asbestos Removal					General Equipment/Piping Removal – Structures Removal – Stack Demolition									
Note: ¹ Schedule shown is approximate.															

Table 2-3
MGS Units 1 and 2 Demolition Trucks by Month

Month ¹	2021						2022								
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	May	Apr	May	Jun	Jul	Aug	Sep
Asbestos to licensed facility	8	16	16	16	0	0	0	0	0	0	0	0	0	0	0
Hazardous fluid removal	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete to recycling	0	0	0	10	30	30	30	10	30	40	40	30	20	20	10
Metal to recycling	0	0	0	30	30	40	60	60	60	60	60	30	20	20	20
General debris to landfill	0	0	0	30	30	40	40	40	50	40	40	30	20	20	20
Fuel delivery trucks	0	0	0	30	30	30	60	60	60	30	30	30	30	20	20
Hazardous to qualified landfill	0	6	6	10	10	10	20	20	20	10	10	10	10	10	10
Total	12	24	22	126	130	150	210	190	220	180	180	130	100	90	80

Notes:

¹ The schedule shown is approximate. The numbers shown represent trucks required per month to remove materials from the site. The number of trips per month represents twice the number of trucks shown on the table (one truck trip in and one truck trip out).

MGS = Mandalay Generating Station

Table 2-4
MGS Units 1 and 2 Demolition Equipment on Site by Month

Demolition Equipment	Percent Usage	HP	Fuel Diesel/ Gas	2021 ¹						2022 ¹								
				Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	May	Apr	May	Jun	Jul	Aug	Sep
Demolition																		
Pickup truck	75	150	Gas	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2
1-ton flatbed truck	50	150	Gas	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1
Tractor/front loader	50	200	Diesel	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1
Forklift	75	40	Gas	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1
Fuel/lube truck	25	150	Gas	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Hydraulic excavator	100	250	Diesel	2	2	3	3	3	3	3	2	1	1	1	1	1	1	1
Hydraulic crane (75-ton)	50	350	Diesel	1	2	3	3	3	3	2	2	2	2	1	1	1	1	1
Articulating boom manlift (120, 80, 60, and 40)	100	75	Gas	2	2	4	4	4	3	3	3	3	3	2	2	2	1	1
Dump truck (30-ton)	100	300	Diesel	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
Air compressor	80	50	Gas	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1
Water truck	100	300	Diesel	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Welding machine (diesel)	30	25	Diesel	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1
JXT jaw crusher/impact crusher	50	300	Diesel	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0
Spyder screening plant	50	84	Diesel	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0
Demolition Total				19	20	24	27	27	25	22	19	19	19	17	17	16	12	12

Notes:

¹ Schedule shown is approximate.

HP = horsepower

MGS = Mandalay Generating Station

**Table 2-5
MGS Units 1 and 2 Demolition Water Use**

Demolition Month¹		Domestic Water Use Gallons²	Dust Suppression Gallons	Other Demolition Gallons³	Total Demolition Gallons
July 2021	1	6,000	20,000	10,000	36,000
August 2021	2	9,000	20,000	10,000	39,000
September 2021	3	9,000	20,000	10,000	39,000
October 2021	4	9,000	30,000	10,000	49,000
November 2021	5	18,000	40,000	10,000	68,000
December 2021	6	19,000	40,000	10,000	69,000
January 2022	7	23,000	40,000	10,000	73,000
February 2022	8	23,000	30,000	10,000	63,000
March 2022	9	21,000	50,000	30,000	101,000
April 2022	10	23,000	50,000	30,000	103,000
May 2022	11	22,000	50,000	30,000	102,000
June 2022	12	20,000	40,000	30,000	90,000
July 2022	13	18,000	40,000	30,000	88,000
August 2022	14	12,000	40,000	20,000	72,000
September 2022	15	12,000	20,000	20,000	52,000
Total (gallons)		244,000	530,000	270,000	1,044,000
Total (acre-feet)		0.75	1.63	0.83	3.20
Average Monthly (gallons)		16,300	35,300	18,000	69,600
Average Daily (gallons)		542	1,178	600	2,320

Notes:

¹ Schedule is approximate.

² Domestic water use during demolition is based on craft personnel summarized in Table 2-2, and on 10 gallons per day for drinking and washing.

³ Other demolition includes water for equipment and general area washdowns, and for preparing concrete mix to fill below-ground openings.

MGS = Mandalay Generating Station

2.8 APPLICABLE LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

The project, including the changes discussed herein, will comply with applicable LORS described in Section 2.13 of the AFC.

2.9 INVOLVED AGENCIES AND AGENCY CONTACTS

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 2.14 of the AFC.

2.10 REFERENCES

No references in addition to those presented in Section 2.15 of the AFC were used for this AFC Enhancement and Refinement.

3.0 TRANSMISSION FACILITIES

As described in Chapter 3 of the AFC, the new P3 will tie into the existing Mandalay Switchyard owned by SCE. No additional changes are required in the SCE switchyard as a result of the demolition of MGS Units 1 and 2, and the analysis of impacts and LORS related to transmission systems are the same as presented in the AFC.

4.0 ENVIRONMENTAL ANALYSIS

4.1 AIR QUALITY

This section presents a discussion of the potential impacts related to air quality from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.1.1 Affected Environment

The demolition of MGS Units 1 and 2 will occur entirely within the MGS property and within the air quality study area presented in the AFC.

4.1.2 Environmental Consequences

The demolition of MGS Units 1 and 2 does not change the analyses for P3 construction emissions or P3 operation emissions presented in the AFC. It should be noted that the Applicant has remodeled its air emissions following updated (lower) particulate matter emissions guarantees provided by the P3 combustion turbine manufacturer (General Electric), and updates to modeling procedures. This has been reported previously to CEC Staff, VCAPCD staff, and the respective parties to the AFC, and results of the modeling will be docketed separately.

The emissions and resulting ambient air quality impacts were calculated for the previously identified demolition activities:

- Asbestos removal;
- Demolition to grade of the MGS Units 1 and 2 turbine plant equipment and building;
- Demolition to grade of the MGS Units 1 and 2 boiler plant equipment and structures;
- Demolition to grade of the 200-foot-tall stack;
- Removal of empty hazardous-materials-contaminated equipment; and
- Removal of transformers and associated electrical equipment up to the switchyard.

The primary emission sources during demolition will include exhaust from heavy equipment and vehicles, and fugitive dust generated by demolition activities.

Combustion emissions during demolition will result from the following:

- Exhaust from the diesel equipment used for demolition of onsite structures;
- Exhaust from water trucks used to control dust emissions;
- Exhaust from portable welding machines;
- Exhaust from pickup trucks and diesel trucks used to transport workers and materials around the site;
- Exhaust from diesel trucks used to deliver fuel to the site, including the heavy hauling of debris and waste material using trucks; and
- Exhaust from vehicles used by workers to commute to the site.

Fugitive dust emissions from the demolition will result from the following:

- Dust entrained during removal of structures at the site;
- Dust entrained during onsite travel on paved and unpaved surfaces;
- Dust entrained during debris loading operations; and
- Wind erosion of areas disturbed during demolition activities.

To determine the potential worst-case daily demolition impacts, exhaust and dust emission rates have been evaluated for each source of emissions. Maximum short-term impacts are calculated based on the equipment mix expected during month 5 of the demolition schedule. Annual emissions are based on the

average equipment mix during the peak 12-month period out of the overall 15-month demolition period. The detailed demolition emissions calculations are shown in Tables 4.1-4 through 4.1-7 herein, and in Tables 4.1-8 through 4.1-12, included in Appendix A to this document. The CalEEMod model (version 2013.2.2) was used to calculate demolition emissions for the proposed project. The following paragraphs provide additional details regarding the assumptions used in calculating demolition emissions using the CalEEMod model.

Emissions of Fugitive Dust from Onsite Demolition Activities. CalEEMod generates estimates for fugitive dust emissions during the “demolition” phase. With this phase type selection, the CalEEMod model calculates dust emissions associated with various activities, including dismemberment and debris loading; CalEEMod estimates these emissions based on AP-42 methodology (see Section 4.4 of the CalEEMod User Guide, Appendix A).

Windblown Dust at the Demolition Site. Emissions of windblown dust are not included in CalEEMod, so those emissions were calculated manually. The disturbed area for these calculations was determined by dividing the total active area (3.5 acres) by the months of demolition. An emission factor for particulates less than or equal to 10 microns in diameter (PM_{10}) of 0.011 ton/acre-month was used to estimate these emissions (per Table ES-2, “Improvement of Specific Emission Factors [BACM Project No. 1], Final Report,” prepared for South Coast Air Quality Management District by Midwest Research Institute, March 1996).

Demolition Access. The primary site access will be via North Harbor Boulevard. The access roads are either paved or covered in gravel. In addition, the worker parking and laydown areas will either be existing paved or gravel surfaced areas. For the demolition air quality impact analysis, onsite worker travel was assumed to occur on paved surfaces (workers traveling to and from parking areas). Onsite delivery and haul truck travel was assumed to occur on a combination of paved and unpaved surfaces (delivery and haul trucks traveling to and from active demolition areas).

Onsite Travel during Demolition. For delivery and haul vehicles, the onsite travel distance was taken as the distance from the plant entrance to the material storage and laydown area. For worker vehicles, the onsite travel distance was taken as the distance from the plant entrance to the craft parking area. These distances were doubled to account for round-trip travel.

A manual calculation was performed to calculate the onsite paved surface vehicle travel emissions (combustion and paved fugitive dust emissions). This was done by first calculating the ratio of the onsite paved surface vehicle trip distances (a round trip distance on paved surface of approximately 0.06 mile was used for workers; a roundtrip distance of 0.46 mile on paved surface was used to estimate the onsite paved fugitive dust emissions for delivery and haul trucks) versus the CalEEMod model offsite vehicle trip distances by vehicle type (offsite round trip distances were approximately 60 miles for workers, delivery trucks, and haul trucks, based on travel distance to the county line). The offsite paved surface travel emissions per vehicle type (which includes a fugitive dust component) calculated by the CalEEMod model were multiplied by these ratios to calculate onsite vehicle combustion and paved surface travel emissions.

A portion of the onsite delivery and haul truck travel would be on unpaved surface (a round trip distance of 0.64 mile was estimated). To account for the onsite delivery and haul truck fugitive dust emissions on unpaved surface, a separate manual calculation was performed using AP-42 methodology.

Paved/Unpaved Surface Travel Emissions Calculation Assumptions. The CalEEMod model default silt content and silt-loading values were used for the unpaved/paved surface travel emission calculations. As described in the CalEEMod model user guide (see Section 4.4.3), U.S. EPA AP-42 methods are used to calculate fugitive dust emissions for paved and unpaved road travel. The CalEEMod model defaults for silt content/silt loading are 8.5 percent and 0.1 gram per square meter, respectively (these are defaults for construction activities).

Fugitive Dust Control Efficiency. The following fugitive dust control efficiencies were used as part of the CalEEMod model runs performed for the demolition activities. Mitigation measures used to minimize fugitive dust are discussed further below.

- For water application in active demolition areas (watered at least three times a day), the PM₁₀ emission control efficiency is 61 percent in the CalEEMod model for demolition activities.
- Paved roads in the site will be cleaned at least once per day on days when demolition activities occur. The onsite paved road travel PM₁₀ emission control efficiency was set to 9 percent as a CalEEMod model input based on control levels described by the South Coast Air Quality Management District (see Fugitive Dust, Table XI-C in SCAQMD, 2007).

Exhaust Emission Source Assumptions. The number, type, and engine rating of the equipment used in the demolition impact analysis were based on equipment loadings summarized in Table 2-4.

The CalEEMod model default engine load factors were used for the demolition emission calculations (a function of the type of demolition equipment in question). Due to the large number of different types and sizes of equipment (which impacts the availability of Tier 4 engines), it was assumed that U.S. EPA Tier 4i engines would be used for the larger equipment (engines greater than 75 horsepower [HP]), and U.S. EPA Tier 4 engines would be used for smaller equipment (engines equal to or smaller than 75 HP).

4.1.3 Air Quality Impacts Analyses

A dispersion modeling analysis was conducted based on the demolition emissions discussed above using the approach discussed in the modeling protocol submitted to the VCAPCD and CEC (see Appendix C-4 of AFC).

As shown in Table 4.1-1, the results of the analysis indicate that demolition activities are not expected to cause or contribute to exceedances of state or federal standards for criteria pollutants, with the exception of the daily and annual state PM₁₀ standards. For this pollutant and averaging periods, existing background concentrations already exceed the state standards. The best available emission control techniques will be used to minimize emissions during demolition. The project impacts are not unusual in comparison with most demolition sites; demolition sites that use good dust suppression techniques and low-emitting vehicles typically do not cause violations of air quality standards. Also, the maximum 24-hour and annual average PM₁₀ demolition impacts are 2 microgram per cubic meter (µg/m³) and 0.3 µg/m³, respectively. These maximum impacts are below the 24-hour and annual average U.S. EPA significant impact levels (SILs) of 5 and 1 µg/m³, respectively. The primary purpose of federal SILs is to identify a level of ambient impact that is sufficiently low relative to an ambient air quality standard that the impact can be considered de minimis. Hence, U.S. EPA considers a source whose individual impact falls below a SIL to have a de minimis impact on air quality concentrations that already exist. If a project's impacts are below a federal SIL, these impacts are not considered to cause or contribute to a violation of an ambient air quality standard and/or increment.³ Consequently, because the demolition PM₁₀ impacts are below federal SILs, the impacts will cause or contribute to a violation of the 24-hour or annual PM₁₀ ambient air quality standards. The detailed AERMOD modeling files are included in the compact disc filed as part of this submittal to the CEC.

³ 75 FR 64891: "Accordingly, a source that demonstrates that the projected ambient impact of its proposed emissions increase does not exceed the SIL for that pollutant at a location where a NAAQS or increment violation occurs is not considered to cause or contribute to that violation."

Table 4.1-1
Modeled Maximum Impacts During the Demolition Period

Pollutant	Averaging Time	Maximum Project Impact (mg/m³)	Background (mg/m³)	Total Impact (mg/m³)	State Standard (mg/m³)	Federal Standard (mg/m³)
NO ₂	1-hour	161.6	169.5	331.1	339	—
	98th percentile	137.7	—	171.8 ¹	—	188
	Annual	8.0	13.2	21.2	57	100
SO ₂	1-hour	2.7	7.9	10.6	655	—
	99th percentile	2.7	7.9	10.6	—	196
	24-hour	0.3	5.2	5.5	105	—
CO	1-hour	1,587	2,875	4,462	23,000	40,000
	8-hour	382.0	2,185	2,567	10,000	10,000
PM ₁₀	24-hour	2.0	56.9	58.9	50	150
	Annual	0.3	23.6	23.9	20	—
PM _{2.5}	24-hour	0.8	18.3 ²	19.1	—	35
	Annual	0.1	9	9.1	12	12
Notes: ¹ Includes background levels. ² 24-hour PM_{2.5} background concentration reflects 3-year average of the 98th percentile values based on form of standard. CO = carbon monoxide mg/m³ = micrograms per cubic meter NO₂ = nitrogen dioxide PM₁₀ = particulates less than or equal to 10 microns in diameter PM_{2.5} = particulates less than or equal to 2.5 microns in diameter SO₂ = sulfur dioxide						

As described in Section 2.3, the project will implement various measures to control exhaust emissions from diesel heavy equipment, and potential emissions of fugitive dust during demolition activities. These measures will be implemented to avoid and/or reduce project-related impacts to air quality to less-than-significant levels.

Tables 4.1-2 and 4.1-3 show the estimated maximum daily and annual heavy equipment exhaust and fugitive dust emissions with the assumptions described above and the mitigation measures described in Section 2.3 for onsite demolitions activities. Detailed emission calculations are presented in Tables 4.1-4 through 4.1-7, and in Tables 4.1-8 through 4.1-12 in Appendix A.

4.1.4 Cumulative Impacts Analyses

Potential air quality cumulative impacts were analyzed and presented in Section 4.1.4 of the AFC. Demolition activities would be of short duration, and impacts would be less than significant. Therefore, similar to the analysis presented in the AFC, the project's contribution from the demolition activities to cumulative impacts would be less than significant.

Table 4.1-2
Maximum Daily Emissions During Demolition, Pounds per Day

Emission Source	NO _x	CO	ROC	SO _x	PM ₁₀	PM _{2.5}
Onsite						
Demolition equipment and onsite vehicle	59.45	110.16	2.97	0.18	0.30	0.30
Fugitive dust (demolition equipment and onsite vehicle)	—	—	—	—	0.35	0.04
Fugitive dust (wind erosion)	—	—	—	—	0.18	0.07
Offsite						
Worker travel	1.16	11.39	0.38	0.04	0.02	0.02
Delivery truck travel	0.89	0.74	0.07	0.01	0.02	0.02
Haul truck travel	3.23	2.54	0.22	0.02	0.07	0.07
Fugitive dust (worker, delivery, and haul trucks) ¹	—	—	—	—	3.69	0.99
Total Emissions (Onsite and Offsite)	64.7	124.8	3.6	0.2	4.3	1.4
Notes: ¹ Offsite paved emissions. CO = carbon monoxide NO _x = oxides of nitrogen PM ₁₀ = particulates less than or equal to 10 microns in diameter PM _{2.5} = particulates less than or equal to 2.5 microns in diameter ROC = reactive organic compounds SO _x = oxides of sulfur						

Table 4.1-3
Peak Annual Emissions During Demolition, Tons per Year

Emission Source	NO _x	CO	ROC	SO _x	PM ₁₀	PM _{2.5}
Onsite						
Demolition equipment and onsite vehicle	7.39	13.74	0.37	0.02	0.04	0.04
Fugitive dust (demolition equipment and onsite vehicle)	—	—	—	—	0.04	0.01
Fugitive dust (wind erosion)	—	—	—	—	0.03	0.01
Offsite						
Worker travel	0.14	1.30	0.04	0.005	0.003	0.003
Delivery truck travel	0.07	0.05	0.005	0.0003	0.002	0.001
Haul truck travel	0.34	0.24	0.02	0.002	0.01	0.01
Fugitive dust (worker, delivery, and haul trucks) ¹	—	—	—	—	0.44	0.12
Total Emissions (Onsite and Offsite)	7.9	15.3	0.4	0.03	0.5	0.2
Notes; ¹ Offsite paved emissions. CO = carbon monoxide NO _x = oxides of nitrogen PM ₁₀ = particulates less than or equal to 10 microns in diameter PM _{2.5} = particulates less than or equal to 2.5 microns in diameter ROC = reactive organic compounds SO _x = oxides of sulfur						

Table 4.1-4
Demolition of the MGS Units 1 and 2 – Daily and Annual Emissions

Emission Source	Daily Emissions (peak month) (pounds per day)					
	NO _x	CO	VOC	SO _x	PM ₁₀	PM _{2.5}
Onsite						
Off-road equipment and onsite vehicle (combustion)	59.45	110.16	2.97	0.18	0.30	0.30
Demolition and onsite vehicle – fugitive dust	—	—	—	—	0.35	0.04
Wind erosion – fugitive dust	—	—	—	—	0.18	0.07
Total Onsite Emissions	59.4	110.2	3.0	0.2	0.8	0.4
Offsite						
Worker travel (combustion)	1.16	11.39	0.38	0.04	0.02	0.02
Worker travel – fugitive dust	—	—	—	—	3.19	0.85
Delivery truck emissions (combustion)	0.89	0.74	0.07	0.01	0.02	0.02
Delivery truck – fugitive dust	—	—	—	—	0.15	0.04
Haul truck emissions (combustion)	3.23	2.54	0.22	0.02	0.07	0.07
Haul truck – fugitive dust	—	—	—	—	0.34	0.09
Total Offsite Emissions	5.3	14.7	0.7	0.1	3.5	1.0
Total	64.7	124.8	3.6	0.2	4.3	1.4
Emission Source	Peak Annual Emissions (tons per year, rolling 12-month maximum)					
	NO _x	CO	VOC	SO _x	PM ₁₀	PM _{2.5}
Onsite						
Off-road equipment and onsite vehicle (combustion)	7.39	13.74	0.37	0.02	0.04	0.04
Demolition and onsite vehicle – fugitive dust	—	—	—	—	0.04	0.01
Wind erosion – fugitive dust	—	—	—	—	0.03	0.01
Total Onsite Emissions	7.4	13.7	0.4	0.0	0.1	0.1
Offsite						
Worker travel (combustion)	0.14	1.30	0.04	0.005	0.003	0.003
Worker travel – fugitive dust	—	—	—	—	0.40	0.11
Delivery truck emissions (combustion)	0.07	0.05	0.005	0.0003	0.002	0.001
Delivery truck – fugitive dust	—	—	—	—	0.01	0.003
Haul truck emissions (combustion)	0.34	0.24	0.02	0.002	0.01	0.01
Haul truck – fugitive dust	—	—	—	—	0.03	0.01
Total Offsite Emissions	0.5	1.6	0.1	0.01	0.4	0.1
Total	7.9	15.3	0.4	0.03	0.5	0.2
Notes: CO = carbon monoxide NO _x = oxides of nitrogen PM ₁₀ = particulates less than or equal to 10 microns in diameter PM _{2.5} = particulates less than or equal to 2.5 microns in diameter ROC = reactive organic compounds SO _x = oxides of sulfur VOC = volatile organic compounds						

Table 4.1-5
Demolition of the MGS Units 1 and 2 – Modeled Emissions, Short-Term Impacts
(24 Hours and Less, 10-Hour Working Day)

Emission Source	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Off-road equipment and onsite vehicle (combustion) (pounds per day)	59.45	110.16	0.18	0.30	0.30
Off-road equipment and onsite vehicle (combustion) (pounds per hour)	5.94	11.02	0.02	0.03	0.03
Off-road equipment and onsite vehicle (combustion) (grams per second)	0.75	1.39	0.002	0.004	0.004
Off-road equipment and onsite vehicle fugitive dust (pounds per day)	—	—	—	0.35	0.04
Off-road equipment and onsite vehicle fugitive dust (pounds per hour)	—	—	—	0.03	0.00
Off-road equipment and onsite vehicle fugitive dust (grams per second)	—	—	—	0.004	0.001
Wind erosion (fugitive dust) (pounds per day)	—	—	—	0.18	0.07
Wind erosion (fugitive dust) (pounds per hour) ¹	—	—	—	0.01	0.003
Wind erosion (fugitive dust) (grams per second)	—	—	—	0.001	0.0004
Notes: ¹ Wind erosion and fugitive dust are assumed to occur 24 hours per day. CO = carbon monoxide NO _x = oxides of nitrogen PM ₁₀ = particulates less than or equal to 10 microns in diameter PM _{2.5} = particulates less than or equal to 2.5 microns in diameter SO _x = oxides of sulfur					

Table 4.1-6
Demolition of the MGS Units 1 and 2 – Modeled Emissions, Long-Term Impacts
(Annual, 10-Hour Working Day, 313 Working Days Per Year)

Emission Source	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Off-road equipment and onsite vehicle (combustion) (tons/yr)	7.39	13.74	0.02	0.04	0.04
Off-road equipment and onsite vehicle (combustion) (pounds per hour)	4.72	8.78	0.01	0.02	0.02
Off-road equipment and onsite vehicle (combustion) (grams per second)	0.59	1.11	0.002	0.003	0.003
Off-road equipment and onsite vehicle fugitive dust (tons per year)	—	—	—	0.04	0.01
Off-road equipment and onsite vehicle fugitive dust (pounds per hour)	—	—	—	0.03	0.004
Off-road equipment and onsite vehicle fugitive dust (grams per second)	—	—	—	0.003	0.0004
Wind erosion (fugitive dust) (tons per year)	—	—	—	0.03	0.01
Wind erosion (fugitive dust) (pounds per hour) ¹	—	—	—	0.01	0.003
Wind erosion (fugitive dust) E(grams per second)	—	—	—	0.001	0.0004
Notes: ¹ Wind erosion and fugitive dust are assumed to occur 24 hours per day, 365 days per year. CO = carbon monoxide NO _x = oxides of nitrogen PM ₁₀ = particulates less than or equal to 10 microns in diameter PM _{2.5} = particulates less than or equal to 2.5 microns in diameter ROC = reactive organic compounds SO _x = oxides of sulfur					

Table 4.1-7
Demolition of the MGS Units 1 and 2 – Greenhouse Gas Emission Calculations
(Metric Tons, Total for 15-Month Demolition Period)

Emission Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
Off-road equipment and onsite vehicle	2,367	0.65	0.00	2,383
Worker travel	352	0.02	0.00	352
Delivery truck	30	0.0002	0.00	30
Haul truck	139	0.001	0.00	139
Total	2,888	0.66	0.00	2,904
Notes: CH ₄ = methane CO ₂ = carbon dioxide CO ₂ e = carbon dioxide equivalent N ₂ O = nitrous oxide				

4.1.5 Mitigation Measures

In addition to the mitigation measures proposed in Section 4.1.5 of the AFC, the Project will implement the mitigation measures described in Section 2.3.

4.1.6 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.1.2 of the AFC.

4.1.7 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.1.6 of the AFC.

4.1.8 Permits Required and Permit Schedule

Demolition of MGS Units 1 and 2 may require additional nondiscretionary permits and notifications for asbestos abatement and demolition. Otherwise, the project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required other than extending the permit schedule described in Section 4.1.7 of the AFC.

4.1.9 References

Additional references used in preparation of this AFC Enhancement and Refinement include the following.

SCAQMD (South Coast Air Quality Management District), 2007. Mitigation Measures and Control Efficiencies, Fugitive Dust, Table XI-C. Available online at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies/fugitive-dust>.

SCAQMD (South Coast Air Quality Management District), 1996. Midwest Research Institute, "Improvement of Specific Emission Factors (BACM Project No. 1), Final Report." March.

4.2 BIOLOGY

This section presents a discussion of the potential impacts related to biological resources from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.2.1 Affected Environment

The demolition of MGS Units 1 and 2 will occur entirely within the MGS property and within the biological study area presented in the AFC.

4.2.2 Environmental Consequences

Demolition activities will occur within the 3.5-acre portion of the MGS property that is currently covered by structures and pavement. Because there will be no subsurface excavations, no dewatering will be required. Demolition activities will not result in the permanent alteration of any sensitive natural communities or areas of designated critical habitat, and no loss of natural habitat would result from the proposed demolition. The existing facilities do not support vegetation, and no plants would be removed. Biological impacts of the demolition would be limited to direct impacts to wildlife that may be present in the existing structures; and indirect impacts, such as noise and dust, to adjacent areas.

Although they are not natural features, the structures of Mandalay Units 1 and 2 have been in place for a significant period of time, and may provide nesting and/or roosting habitat for a number of avian species. No special-status avian species are known to use or occupy the existing structures. Nevertheless, absent protective measures or timing restrictions, demolition of the structures would have the potential to destroy active bird nests in a manner prohibited by the federal Migratory Bird Treaty Act. Due to the extended duration of the proposed demolition activities, it is expected that the demolition would span one to two avian breeding seasons. However, by initiating demolition activities outside the nesting season, the project would eliminate the potential to remove nests that were active prior to the onset of the project. The site would experience heavy equipment activity, high noise levels, and continued human presence during the demolition period, and it is expected that these factors would deter avian species from attempting to initiate nesting activities in or on the facilities during demolition. Prior to the start of demolition, the existing structures to be demolished will be surveyed for the presence of nesting birds. For these reasons, removal of the existing facilities would not result in impacts to nesting birds.

Similar to P3 construction, demolition would require the use of typical heavy construction machinery, such as front-end loaders, cranes, miscellaneous rubber-tired trucks, generators, crushers, and compressors. Unlike the P3 construction activities discussed in the AFC, there would be no pile-drivers required for demolition. The noise levels would vary over the 15-month schedule, depending on the type and location of the equipment used during demolition, as shown on Table 2-4.

The effects of noise would be greatest in areas immediately abutting the project site, such as the beach situated to the west; the sand dunes to the northwest; and marsh vegetation along the southern edges of McGrath Lake. Noise is a concern during the nesting season because of the potential to disrupt nesting behavior and potentially cause abandonment of eggs and/or young of the year. Because demolition will occur over a 15-month period, noise will be generated during at least one and possibly two nesting seasons.

For the AFC, a predictive sound model was used to predict sound levels during construction and during the operational phase of P3, to assess the potential effect on western snowy plovers, California least terns, and other species potentially nesting near the project site (see Section 4.7 of the AFC for an explanation of sound levels and methodology). The sound levels from hammers, crushers, or shears are expected to be similar in level to those from the construction equipment discussed in the AFC. The boilers and stack would be felled by implosion to the east. Boiler structures will be demolished using a combination of

high-reach excavators, cutting, and implosion felling. High-reach excavators will be used to shear steel and safely remove elevated portions of the boilers. Crushed masonry debris or similar material will be used in fall/drop zones to attenuate sound and vibration. Boiler shells may be used as chutes for transporting materials from higher elevations to grade in a controlled manner. Boiler system elements will be conveyed to a vibration-absorbing bed of concrete/masonry debris in the confined area beneath each boiler. The stack and each boiler will be draped with an outdoor construction blanket to limit noise impact. The project will take feasible measures to reduce project-related noise; for example, blasting mats or similar structures may be suitable to reduce the impact of demolition of the boilers and stack.

Although the footprint of the MGS Units 1 and 2 demolition area is in a facility devoid of biological resources (with the possible exception of nesting birds potentially present in the existing structures), demolition activities could, if not properly conducted and controlled, impact sensitive species in the nearby dunes. Measures similar to those presented in the AFC that would be implemented during construction of P3—including noise monitoring during the nesting season, and the use of best management practices (BMPs) to avoid diversion of harmful materials to sensitive habitat—would reduce any impacts to insignificant levels. The Biological Resources Monitoring Implementation and Mitigation Plan will be modified accordingly to account for the demolition phase of work and the associated BMPs.

The above-ground demolition of MGS Units 1 and 2 will not result in new impacts to biological resources beyond those identified in the AFC.

4.2.3 Cumulative Impacts Analyses

The analysis presented in Section 4.2.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. Demolition of MGS Units 1 and 2 would not result in any new impacts to biological resources as a result of the project changes described herein, although noise impacts would occur over a longer period. With the implementation of noise monitoring during the nesting season, impacts would be less than significant, as described in the AFC. Therefore, the project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts to biological resources.

4.2.4 Mitigation Measures

No mitigation measures are proposed beyond those addressed in Section 4.2.6 of the AFC.

4.2.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.2.5 of the AFC.

4.2.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.2.6 of the AFC.

4.2.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.2.7 of the AFC.

4.2.8 References

No references in addition to those presented in Section 4.2.8 of the AFC were used for this AFC Enhancement and Refinement.

4.3 CULTURAL RESOURCES

This section presents a discussion of the potential impacts related to cultural resources from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.3.1 Affected Environment

The demolition of MGS Units 1 and 2 will occur entirely within the MGS property and within the Project Area of Analysis for both archeological and historic architectural resources presented in Section 4.3 of the AFC.

4.3.2 Environmental Consequences

The above-ground demolition of MGS Units 1 and 2 will not result in new impacts to cultural resources beyond those identified in the AFC. No below-grade ground disturbance would occur in previously undisturbed areas; therefore, it is unlikely that previously undiscovered archaeological resources would be inadvertently exposed during construction activities.

As presented in the AFC, MGS Units 1 and 2 do not meet the criteria for listing in the National Register of Historical Places or the California Register of Historical Resources. Therefore, the features to be demolished are not considered significant historic properties under Section 106 of the National Historic Preservation Act, nor are they historical resources for the purposes of the California Environmental Quality Act; no impacts to a historical resource are anticipated from implementation of the proposed project changes.

4.3.3 Cumulative Impacts Analyses

The analysis presented in Section 4.3.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The project would not result in additional impacts to cultural resources as a result of the project changes described herein. Therefore, the project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts to cultural resources.

4.3.4 Mitigation Measures

No mitigation measures are proposed beyond those addressed in Section 4.3.4 of the AFC.

4.3.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.3.5 of the AFC.

4.3.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.3.6 of the AFC.

4.3.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.3.7 of the AFC.

4.3.8 References

No references in addition to those presented in Section 4.3.8 of the AFC were used for this AFC Enhancement and Refinement.

4.4 GEOLOGIC HAZARDS AND RESOURCES

This section presents a discussion of the potential impacts related to geologic hazards and resources from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.4.1 Affected Environment

The demolition of MGS Units 1 and 2 will occur entirely within the MGS property and within the geological study area presented in the AFC.

4.4.2 Environmental Consequences

Similar to the design and construction of the P3 facility, demolition activities will comply with appropriate geologic hazard and resource protection measures. Therefore, demolition of MGS Units 1 and 2 will not result in potential geologic hazards or impacts to geologic resources greater than those presented in Section 4.4 of the AFC.

4.4.3 Cumulative Impacts Analyses

The analysis presented in Section 4.4.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts to geologic resources or hazards.

4.4.4 Mitigation Measures

No new or additional measures beyond those identified in Section 4.4.4 of the AFC are required for the project.

4.4.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.4.5 of the AFC.

4.4.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.4.6 of the AFC.

4.4.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.4.7 of the AFC.

4.4.8 References

No references in addition to those presented in Section 4.4.8 of the AFC were used for this AFC Enhancement and Refinement.

4.5 HAZARDOUS MATERIALS

This section presents a discussion of the potential impacts related to hazardous materials handling from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.5.1 Affected Environment

Hazardous materials typical of a natural-gas-fired power plant are currently used at the MGS facility and stored in aboveground storage tanks (ASTs), equipment, drums, and small containers. MGS Units 1 and 2 are fueled by natural gas. Electric transformers on site contain dielectric oil. Ammonium hydroxide, hydrazine, sodium hydroxide, and tri-sodium phosphate are used for boiler water chemical control. Sodium nitrate is used as a corrosion inhibitor in the equipment cooling-water system. Sodium hypochlorite is used to treat the circulating water system. Gasoline and diesel are used for fueling vehicles and equipment. Various solvents, paints, lubricants, and compressed gases are used in the servicing and maintenance of equipment. Aqueous ammonia (ammonium hydroxide) (29 percent) is used in the selective catalytic reduction system for controlling emissions of oxides of nitrogen. Industrial processes involving hazardous materials are either enclosed by covered structures or surrounded by secondary containment structures. The facility maintains a Hazardous Materials Business Plan (HMBP) with the City of Oxnard Fire Department, Certified Unified Program Agency (CUPA). The HMBP includes a chemical inventory and emergency response procedures. Procedures for oil storage and receiving, and for oil spill prevention and response, are outlined in the facility's Spill Prevention, Control and Countermeasure Plan. MGS has implemented a Risk Management Plan for the storage and use of aqueous ammonia. Hazardous wastes are currently generated at the facility. The facility maintains a U.S. EPA Identification Number for the generation of hazardous waste. Hazardous wastes are accumulated in satellite accumulation areas throughout MGS Units 1 and 2.

4.5.2 Environmental Consequences

Hazardous materials that would be used during the demolition of MGS Units 1 and 2 include unleaded gasoline, diesel fuel, oil, lubricants, and solvents. During the project's demolition phase, these hazardous materials are expected to be stored in the demolition laydown area, or in equipment/vehicle fuel tanks.

The demolition contractor would be responsible for ensuring that the use, storage, and handling of these materials is in compliance with applicable federal, state, and local LORS, including licensing, personnel training, accumulation limits, reporting requirements, and recordkeeping. A HMBP would be developed (or the MGS HMBP would be updated) prior to demolition activities, to include hazardous materials to be used and stored at the facility for demolition purposes. The HMBP would outline hazardous materials handling, storage spill response, and reporting procedures for all hazardous substances used on site during demolition.

There would be minimal potential for significant environmental impact from hazardous material incidents during demolition, because relatively small volumes of hazardous materials would be on site during demolition. When in use, these materials would be handled by trained maintenance and service personnel. The most likely incidents involving these materials would be dripping of gasoline, diesel fuel, oil, and lubricants from vehicles or equipment. The worst-case scenario would be an accident involving the release of one of these materials from a service vehicle during equipment maintenance or fueling. The risk of such an occurrence would be minimized by the emergency response training program and procedures that would be implemented by the contractor during demolition.

Additionally, CEC standard conditions and the mitigation measures presented in Section 4.5.4 of the AFC (see HM-1) would be implemented for demolition activities, further ensuring that impacts from fueling and maintenance of demolition vehicles and equipment would be less than significant.

The hazardous materials that would be used during demolition of MGS Units 1 and 2 have low acute toxicity. If a spill or leak into the environment were to involve hazardous materials equal to or greater than the specific reportable quantity, federal, state, and local reporting requirements would be followed. In particular, the Ventura County CUPA, City of Oxnard Fire Department, would be notified if the spill or leak leads to fire or injury. Contractors would be expected to implement BMPs with regard to hazardous materials storage, handling, emergency spill response, and reporting procedures. Measures HM-2 through HM-4, described in Section 4.5.4 of the AFC, will ensure that proper procedures are followed in the event of a hazardous materials spill. With implementation of the standard conditions and the procedures identified in Section 4.5.4 of the AFC, impacts from hazardous materials handling during construction are expected to be less than significant.

Hazardous materials that are currently stored at the MGS site for use in the operation of the existing MGS Units 1 and 2, and that would not be reused or repurposed for P3 operations, would be removed from the property during demolition activities. Materials and equipment that have the potential to contain hazardous materials will be surveyed to locate, characterize, and delineate the removal quantities. Hazardous materials, or equipment or structures that have been impacted with hazardous materials or HBMs, will be removed and disposed of in accordance the applicable LORS (see Section 4.14 of this AFC Enhancement and Refinement for additional information regarding waste management procedures).

As discussed in Section 4.5 of the AFC, the MGS site is on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5. As discussed in Section 4.14, Waste Management, of the AFC, a Phase I Environmental Site Assessment (ESA) was prepared for the MGS. According to the Phase I ESA (Appendix L-1 of the AFC), MGS was identified on several agency databases related to impacts to soil and groundwater associated with historical MGS activities. Impacts to soil and groundwater are currently being assessed and remediated. Closure activities associated with prior operations of retention basins and associated appurtenances on the MGS property are not part of the demolition activities to occur under the AFC. These activities are SCE's obligations as the previous owner of the property; they include ongoing groundwater monitoring related to cleanup of the three retention basins north of MGS Unit 2. There is the potential for subsurface impacts to areas in MGS that were not previously assessed and remediated. These areas include, but are not limited to, the powerblock area around Units 1, 2, and 3; the transformer areas; pipeline areas; oil-pumping areas; historical dredge-spoil-pile areas; the oil/water separator and sump; and AST and chemical storage areas. The MGS property will be investigated and evaluated under corrective action of the Department of Toxic Substances Control. Demolition of MGS Units 1 and 2 will be above grade and will not include ground-disturbing activities that would expose subsurface contamination.

4.5.3 Cumulative Impacts Analyses

The analysis presented in Section 4.5.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The project would not result in significant impacts from hazardous materials handling as a result of the project changes described herein. Compliance with existing LORS that address the handling of hazardous materials will ensure that the demolition of MGS Units 1 and 2 will not create a significant hazard to the public or the environment related to the handling or accidental release of hazardous materials. Past, present, and reasonably foreseeable future projects are also subject to existing LORS that address the handling and accidental release of hazardous materials. Therefore, existing LORS will ensure that the incremental effects of the demolition of the MGS Units 1 and 2—when considered together with the effects of past, present, and reasonably foreseeable projects—will not create a cumulatively considerable hazard to the public or environment related to the handling or accidental release of hazardous materials beyond those addressed in Section 4.5.3 of the AFC.

4.5.4 Mitigation Measures

CEC standard conditions and the mitigation measures presented in Section 4.5.4 of the AFC would be implemented for demolition activities, and would further ensure that impacts from hazardous materials handling would be less than significant.

4.5.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.5.5 of the AFC.

4.5.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.5.6 of the AFC.

4.5.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.5.7 of the AFC.

4.5.8 References

No references in addition to those presented in Section 4.5.8 of the AFC were used for this AFC Enhancement and Refinement.

4.6 LAND USE

This section presents a discussion of the potential impacts related to land use from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.6.1 Affected Environment

The demolition of MGS Units 1 and 2 will occur entirely within the MGS property and within the land use study area presented in the AFC.

4.6.2 Environmental Consequences

Demolition of MGS Units 1 and 2 would not have any adverse land use impacts. Demolition of these units would not divide an established community, conflict with any applicable land use plan and policies, or result in degradation or loss of available agricultural land. After demolition, the area presently occupied by MGS Units 1 and 2 would remain part of the greater MGS property, and the use of the greater MGS property would not change.

4.6.3 Cumulative Impacts Analyses

The analysis presented in Section 4.6.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The project would not result in additional impacts to land use as a result of the project changes described herein. Therefore, the project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts to land use beyond those addressed in Section 4.6.3 of the AFC.

4.6.4 Mitigation Measures

No significant adverse land use impacts were identified; therefore, no mitigation measures are proposed.

4.6.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.6.5 of the AFC.

4.6.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.6.6 of the AFC.

4.6.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.6.7 of the AFC.

4.6.8 References

No references in addition to those presented in Section 4.6.8 of the AFC were used for this AFC Enhancement and Refinement.

4.7 NOISE AND VIBRATION

This section presents a discussion of the potential impacts related to noise and vibration from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.7.1 Affected Environment

The demolition activities will occur within the study area previously evaluated in the AFC, and are subject to the same geographic, topographic, and noise conditions. Therefore, the affected environment is unchanged from that presented in Section 4.7.1 in the AFC.

4.7.2 Environmental Consequences

Overall noise level from demolition activity will vary during the 15-month period over which it is expected to occur, and will depend on the phasing and concurrence of different tasks and their general locations or zones in the MGS and P3 vicinity. Although demolition activities involve both stationary and mobile operating equipment and processes that can complicate accurate prediction, this analysis relies on a conservative noise prediction approach, as detailed herein.

4.7.2.1 Demolition Activity Noise

Demolition activity noise was modeled in the same manner described in Section 4.7.2.2.1 of the AFC, using the same assumptions with regard to expected sound propagation and applicable naturally occurring noise attenuation factors.

Equipment and demolition methods beyond what was previously analyzed in the AFC would be used for the demolition of the MGS Unit 1 and 2 structures, including the 200-foot-tall exhaust stack and boilers. The boilers and stack would be felled by implosion to the east. Boiler structures will be demolished using a combination of high-reach excavators, cutting, and implosion felling. High-reach excavators will be used to shear steel and safely remove elevated portions of the boilers. Crushed masonry debris or similar material will be used in fall/drop zones to attenuate sound and vibration. Boiler shells may be used as chutes for transporting materials from higher elevations to grade in a controlled manner. Boiler system elements will be conveyed to a vibration-absorbing bed of concrete/masonry debris in the confined area beneath each boiler. The stack and each boiler will be draped with an outdoor construction blanket to limit noise impact.

For the AFC, a predictive sound model was used to predict sound levels during construction and during the operational phase of P3, to assess the potential effect on western snowy plovers, California least terns, and other species potentially nesting near the project site (see Section 4.7 of the AFC for an explanation of sound levels and methodology). The sound levels from hammers, crushers and shears are expected to be similar in level to those of the construction equipment discussed in the AFC.

The project will take feasible measures to reduce project-related noise. Blasting mats or similar structures may be used to reduce noise impacts of demolition of the boilers and stack. The Applicant and its contractors will implement reasonable and feasible measures to reduce the level of noise associated with demolition activities. In addition to establishing a complaint resolution process and notification procedures, precise noise mitigation measures will be developed by the construction contractor.

Table 4.7-1a presents the low and high ends of a range of anticipated demolition noise sound levels, in A-weighted decibels (dBA)—based on the equipment expected to be onsite as summarized in Table 2-4—at each of the four indicated noise-sensitive receivers. Table 4.7-1a also shows the quietest (first month) and loudest (sixth month) noise levels expected from demolition activity, as well as the approximate horizontal distances (in meters) from the indicated noise-sensitive receivers to the assumed geographic center of demolition activity.

Table 4.7-1a MGS Units 1 and 2 Demolition Activity Noise Estimates at Nearby Noise-Sensitive Receivers			
Receiver Location¹	Distance in Feet to Approximate Center of Demolition Activity	Low L_{eq} (dBA, First Month)	High L_{eq} (dBA, Sixth Month)
LT-2	4,100	39	44
LT-3	2,625	44	49
LT-1	3,940	39	45
Oxnard Shores West	4,100	39	44
Notes: ¹ Locations are shown on Figure 4.7-1. L _{eq} = equivalent sound level dBA = A-Weighted equivalent decibel MGS = Mandalay Generating Station			

As for the above-described anticipated implosion to bring down the boilers and exhaust stack, Table 4.7-1b presents ground vibration and airborne noise predictions for this single event. Ground vibration velocity levels, expressed as peak particle velocity at the nearest residential noise-sensitive receivers, are expected to be equal to or less than 70 decibels, vibration velocity, due to this transient event. They would therefore be less than “barely perceptible” with respect to human annoyance, and much less than building damage risk criteria associated with these kinds of structures (as presented in Transportation and Construction-Induced Vibration Guidance Manual [Caltrans, 2004]). The ranges of predicted air overpressure (“airblast”) noise at the same four representative receivers shown in Table 4.7-1b would be considered in the range of “strongly perceptible” in accordance with the same California Department of Transportation guidance manual (Caltrans, 2004).

Table 4.7-1b MGS Units 1 and 2 Demolition Activity Noise and Vibration Estimates at Nearby Noise-Sensitive Receivers due to Stack/Boiler Implosion and Ground Impact Event			
Receiver Location¹	Distance in Feet to Approximate Center of Demolition Activity	Predicted Vibration² (Peak Particle Velocity [PPV, inches per second and VdB])	Predicted Airborne Noise Range³ (L_{max}, dB)
LT-2	4,100	0.006 ips, 64 VdB	100-110
LT-3	2,625	0.012 ips, 70 VdB	105-115
LT-1	3,940	0.007 ips, 65 VdB	100-110
Oxnard Shores West	4,100	0.006 ips, 64 VdB	100-110
Notes: ¹ Locations are shown on Figure 4.7-1. ² Assume event similar to cooling tower impact as described in <i>Construction Vibrations</i> (Dowding, 1996). ³ Assume event similar to open-air detonation of 1 to 10 kilograms of explosive, as discussed in <i>Construction Vibrations</i> (Dowding, 1996); attenuated 20 decibels by a blast curtain. dBA = A-Weighted equivalent decibel ips = inches per second L _{eq} = equivalent sound level MGS = Mandalay Generating Station PPV = peak particle velocity VdB = decibel, vibration velocity			

In the same manner shown in the AFC, Tables 4.7-2 and 4.7-3 examine the potential for significant demolition noise impacts, depending on use of either the high (in the case of Table 4.7-2) or low (in the case of Table 4.7-3) estimate from Table 4.7-1.

Tables 4.7-2 and 4.7-3 indicate that no significant impacts are expected at any of the studied representative noise-sensitive receptors.

Demolition occupational noise exposure and noise from demolition activity staging, laydown, and parking areas would not be expected to be substantially different from what was described in the AFC.

4.7.2.2 Demolition Traffic Noise Predictions

Demolition activity would introduce short-term traffic from trucks and worker vehicles, which would vary over the 15-month duration. Demolition activities would occur Mondays through Fridays, with work limited to the hours from 7:00 a.m. to 6:00 p.m. The analysis of traffic impacts is presented in Section 4.12.

Comparing average daily traffic (ADT) between future baseline traffic conditions for 2022 (Table 4.12-1) and expected future baseline traffic that includes contribution from project demolition activities (Table 4.12-3), the largest expected ADT increase on the Harbor Boulevard segment between Gonzales Road and the MGS driveway would be less than 1 percent. The largest expected increase in future baseline 2022 traffic would be less than 4 percent on the Gonzales Road segment east of Harbor Boulevard. With such modest increases in ADT, the corresponding increase in traffic noise is anticipated to be much less than 1 dBA (an imperceptible difference) at noise-sensitive receivers that are already located near these surface transportation routes, such as the residential receiver represented by LT-2, as discussed in the AFC noise section. On this basis, demolition-related traffic noise would not be considered a significant impact.

4.7.2.3 Operations Noise

Upon completion of construction and commissioning of P3, the project will generate noise as a result of normal operations. At times, P3 operation will be concurrent with operation of MGS Unit 3, which will remain in operation. The noise analysis presented in the AFC assumed that the MGS Units 1 and 2 would be retired and decommissioned, but not demolished. With the proposed project changes described herein, Applicant proposes to demolish MGS Units 1 and 2 after P3 begins commercial operations. Because the absence of the MGS Unit 1 and 2 structures could change the noise impacts associated with operation of P3 and MGS Unit 3, the operational noise analysis has been revised. The revised analysis of environmental noise effects presented herein therefore assumes that the structures associated with MGS Units 1 and 2 have been demolished and removed.

The same Cadna/A[®] Noise Prediction Model (Version 4.5.147) used to predict project operation noise for the AFC was used to estimate the aggregate sound pressure level from nominal P3 operations at the studied noise-sensitive receptors in this AFC Enhancement and Refinement. The analysis methodology and assumptions presented in Section 4.7.2.2.3 of the AFC are the same, as are its modeled sound sources (i.e., as shown in both AFC Table 4.7-9 and AFC Appendix B). The sole exception is that the modeled structures associated with MGS Units 1 and 2, including the exhaust stack, were effectively removed from the model space (and therefore no longer provide a potential source of sound scattering or reflection that may influence MGS Unit 3 and P3 operations sound propagation toward some noise-sensitive receiver locations).

**Table 4.7-2
MGS Units 1 and 2 Demolition Noise Impact Assessment – High Estimate**

Receiver ID	Time of Day	Representative Ambient SPL (dBA) ¹			High Estimate of Noise (dBA)	City of Oxnard or Ventura County Criteria			Oxnard or Ventura County Impact?	CEC Impact? (High Est. > L ₉₀ +10 dBA)
		L _{eq}	L ₅₀	L ₉₀		Day	Evening	Night		
LT-2	Day ²	61	55	51	44	n/a	Greater of 50 dBA L _{eq} or ambient +3 dBA	Greater of 45 dBA L _{eq} or ambient +3 dBA	no	no
	Evening	48	42	40	44				no	no
	Night	49	42	41	44				no	no
LT-3	Day ³	63	61	47	49	Greater of 55 dBA L ₅₀ or ambient L ₅₀	Greater of 50 dBA L ₅₀ or ambient L ₅₀	no	no	
	Evening ⁴	61	55	46	49			no	no	
	Night ⁵	54	44	42	49			yes	no	
LT-1	Day ³	55	51	46	45	Greater of 55 dBA L ₅₀ or ambient L ₅₀	Greater of 50 dBA L ₅₀ or ambient L ₅₀	no	no	
	Evening ⁴	52	48	46	45			no	no	
	Night ⁵	46	45	43	45			no	no	
OSW	Night	52	51	50	44	Same as LT-1			no	no

Notes:

¹ Unless otherwise noted, values for LT-2 and OSW are based on partial-hour ST measurements (see AFC Table 4.7-1), and values for LT-1 and LT-3 are full hours and based on LT measurement data (see AFC Tables 4.7-2 and 4.7-3).

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

CEC = California Energy Commission

dBA = A-Weighted equivalent decibel

ID = identification

L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval

L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval

L_{eq} = equivalent sound level

LT = long-term

MGS = Mandalay Generating Station

n/a = not applicable

OSW = Oxnard Shores West

SPL = sound pressure level

ST = short-term

**Table 4.7-3
MGS Units 1 and 2 Demolition Noise Impact Assessment – Low Estimate**

Receiver ID	Time of Day	Representative Ambient SPL (dBA) ¹			Low Estimate of Noise (dBA)	City of Oxnard or Ventura County Criteria			Oxnard or Ventura County Impact?	CEC Impact? (High Est. > L ₉₀ +10 dBA)
		L _{eq}	L ₅₀	L ₉₀		Day	Evening	Night		
LT-2	Day ²	61	55	51	39	n/a	Greater of 50 dBA L _{eq} or ambient +3 dBA	Greater of 45 dBA L _{eq} or ambient +3 dBA	no	no
	Evening	48	42	40	39				no	no
	Night	49	42	41	39				no	no
LT-3	Day ³	63	61	47	44	Greater of 55 dBA L ₅₀ or ambient L ₅₀	Greater of 50 dBA L ₅₀ or ambient L ₅₀	no	no	
	Evening ⁴	61	55	46	44			no	no	
	Night ⁵	54	44	42	44			yes	no	
LT-1	Day ³	55	51	46	39	Greater of 55 dBA L ₅₀ or ambient L ₅₀	Greater of 50 dBA L ₅₀ or ambient L ₅₀	no	no	
	Evening ⁴	52	48	46	39			no	no	
	Night ⁵	46	45	43	39			no	no	
OSW	Night	52	51	50	39	Same as LT-1			no	no

Notes:

¹ Unless otherwise noted, values for LT-2 and OSW are based on partial-hour ST measurements (see AFC Table 4.7-1), and values for LT-1 and LT-3 are full hours and based on LT measurement data (see AFC Tables 4.7-2 and 4.7-3).

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

CEC = California Energy Commission

dBA = A-Weighted equivalent decibel

ID = identification

L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval

L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval

L_{eq} = equivalent sound level

LT = long-term

MGS = Mandalay Generating Station

n/a = not applicable

OSW = Oxnard Shores West

SPL = sound pressure level

ST = short-term

Tables 4.7-5 through 4.7-7 illustrate that with respect to applicable regulatory criteria, no significant impacts are anticipated when P3 is operating. Compared to the AFC operations noise analysis, in which the structures of MGS Units 1 and 2 remained in the model, predicted operation noise levels after demolition of MGS Units 1 and 2 were 2 dBA higher at LT-1 and 3 to 4 dBA higher at Oxnard Shores West; nevertheless, the levels are still compliant with applicable criteria.

Tables 4.7-8 through 4.7-10 are similar to Tables 4.7-5 through 4.7-7, but show the estimated future ambient levels (i.e., the logarithmic addition of existing ambient sound, plus predicted MGS Unit 3 sound [as appropriate], plus the predicted P3 operations noise—both of which contributions are presented in Table 4.7-4) so that they can be compared with existing ambient levels to determine the post-project ambient noise increment.

Under calm meteorological conditions, the permanent ambient noise increase is expected to be no more than 1 dBA (an imperceptible difference) when both MGS Unit 3 and P3 are operating. When MGS Unit 3 is not operating, operation of P3 at night would be expected to result in an increase of up to 3 dBA in the ambient noise level equaled or exceeded during 90 percent of the measured time interval (L_{90}) at LT-3; otherwise, at different times of day and at the other noise-sensitive receiver locations, the ambient increment is expected to be about 1 dBA. For the eastern winds condition, when only P3 is operating, the ambient L_{90} increment at LT-3 is expected to increase by 2 dBA, which is barely detectable. At other representative receiver locations, or when MGS Unit 3 is also operating, the expected ambient increment is 1 dBA or less. For the western winds condition, and when only P3 is operating, LT-2 is anticipated to see an ambient L_{90} increment of 2 to 3 dBA; LT-1 is expected to experience an ambient L_{90} increment of 3 dBA; and LT-3 is anticipated to see an ambient L_{90} increment of no more than 5 dBA. When P3 and MGS Unit 3 are operating, the expected increase in ambient noise level is only about 1 dBA. Although an increment of 3 to 5 dBA would usually be considered perceptible, the CEC usually considers an increment of 5 dBA or less to be insignificant. Therefore, after demolition of the structures and stack of MGS Units 1 and 2, P3 operational noise increases would be considered an insignificant impact, and would not require noise mitigation.

Table 4.7-4 Predicted Operations Noise at Sensitive Receptors					
Scenario	Wind Case	Hourly A-weighted Sound Pressure Level			
		LT-2	LT-3	OSW	LT-1
P3 Offline and MGS Unit 3 Online; MGS Units 1 and 2 Offline (Demolished)	Calm (0 mph)	42	53	48	47
	East (7 mph)	42	50	45	45
	West (6 mph)	42	56	51	51
P3 Online and MGS Unit 3 Offline; MGS Units 1 and 2 Offline (Demolished)	Calm (0 mph)	37	42	39	38
	East (7 mph)	34	39	35	35
	West (6 mph)	40	46	44	43
Notes: MGS = Mandalay Generating Station mph = miles per hour OSW = Oxnard Shores West P3 = Puente Power Plant					

Table 4.7-5a P3 Operation Noise Impact Assessment (Calm Conditions, MGS Unit 3 Offline)										
Rcvr. ID	Time of Day	Representative Ambient SPL (dBA) ¹			City of Oxnard or Ventura County Criteria (Day, Evening, Night)			Estimated Noise Level (dBA), under Calm Conditions (wind speed = 0 mph)	Per Scenario: City of Oxnard or Ventura County Impact? (Y/N)	Per Scenario, CEC Impact, if Estimated > L ₉₀ +10 dBA? (Y/N)
		L _{eq}	L ₅₀	L ₉₀	Day	Evening	Night			
LT-2	Day ²	61	55	51	55 dBA L _{eq} or ambient +3 dBA	50 dBA L _{eq} or ambient +3 dBA	45 dBA L _{eq} or ambient +3 dBA	37	N	N
	Evening	48	42	40				37	N	N
	Night	49	42	41				37	N	N
LT-3	Day ³	63	61	47	55 dBA L ₅₀ or ambient	50 dBA L ₅₀ or ambient		42	N	N
	Evening ⁴	61	55	46				42	N	N
	Night ⁵	54	44	42				42	N	N
LT-1	Day ³	55	51	46	55 dBA L ₅₀ or ambient	50 dBA L ₅₀ or ambient		38	N	N
	Evening ⁴	52	48	46				38	N	N
	Night ⁵	46	45	43				38	N	N
OSW	Night	52	51	50	55 dBA L ₅₀ or ambient	50 dBA L ₅₀ or ambient		39	N	N
Notes: ¹ Unless otherwise noted, values for LT-2 and OSW are based on partial-hour ST measurements (see AFC Table 4.7-1), and values for LT-1 and LT-3 are full hours and based on LT measurement data (see AFC Tables 4.7-2 and 4.7-3). ² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014. ³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014. ⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014. ⁵ L _{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L ₅₀ and L ₉₀ are averages of these statistical values from each of the same 4 hours. CEC = California Energy Commission dBA = A-Weighted equivalent decibel ID = identification L ₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval L ₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval L _{eq} = equivalent sound level LT = long-term MGS = Mandalay Generating Station mph = miles per hour OSW = Oxnard Shores West P3 = Puente Power Plant SPL = sound pressure level ST = short-term										

Table 4.7-5b
P3 Operation Noise Impact Assessment (Calm Conditions, MGS Unit 3 Online)

Rcvr. ID	Time of Day	Representative Ambient SPL (dBA) ¹			City of Oxnard or Ventura County Criteria (Day, Evening, Night)			Estimated Noise Level (dBA), under Calm Conditions (wind speed = 0 mph)	Per Scenario: City of Oxnard or Ventura County Impact? (Y/N)	Per Scenario, CEC Impact, if Estimated > L ₉₀ +10 dBA? (Y/N)
		L _{eq}	L ₅₀	L ₉₀	Day	Evening	Night			
LT-2	Day ²	61	55	52	55 dBA	50 dBA	45 dBA L _{eq}	37	N	N
	Evening	49	45	44	L _{eq} or ambient +3 dBA	L _{eq} or ambient +3 dBA	or ambient +3 dBA	37	N	N
	Night	50	45	44				37	N	N
LT-3	Day ³	63	62	54	55 dBA L ₅₀ or ambient		50 dBA L ₅₀ or ambient	42	N	N
	Day ⁶	63	61	50				42	N	N
	Evening ⁴	62	57	54				42	N	N
	Night ⁵	56	53	53				42	N	N
LT-1	Day ³	56	53	50	55 dBA L ₅₀ or ambient		50 dBA L ₅₀ or ambient	38	N	N
	Day ⁶	57	52	49				38	N	N
	Evening ⁴	53	51	50				38	N	N
	Night ⁵	50	49	49				38	N	N
OSW	Night	53	53	52	55 dBA L ₅₀ or ambient		50 dBA L ₅₀ or ambient	39	N	N

Notes:

¹ These values represent the logarithmic addition of ambient SPL from Table 4.7-5a and predicted MGS Unit 3 operation from Table 4.7-4.

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

⁶ With MGS Unit 3 operating at peak on December 16, 2014, from AFC Table 4.7-4, MGS Units 1 and 2 not operational. Predicted MGS Unit 3 operation not added to these values.

CEC = California Energy Commission

dBA = A-Weighted equivalent decibel

ID = identification

L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval

L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval

L_{eq} = equivalent sound level

MGS = Mandalay Generating Station

mph = miles per hour

OSW = Oxnard Shores West

P3 = Puente Power Plant

SPL = sound pressure level

Table 4.7-6a
P3 Operation Noise Impact Assessment (East Winds Conditions, MGS Unit 3 Offline)

Rcvr. ID	Time of Day	Representative Ambient SPL (dBA) ¹			City of Oxnard or Ventura County Criteria (Day, Evening, Night)			Estimated Noise Level (dBA), under East Winds Conditions (wind speed = 7 mph)	Per Scenario: City of Oxnard or Ventura County Impact? (Y/N)	Per Scenario, CEC Impact, if Estimated > L ₉₀ +10 dBA? (Y/N)
		L _{eq}	L ₅₀	L ₉₀	Day	Evening	Night			
LT-2	Day ²	61	55	51	55 dBA L _{eq} or ambient +3 dBA	50 dBA L _{eq} or ambient +3 dBA	45 dBA L _{eq} or ambient +3 dBA	34	N	N
	Evening	48	42	40				34	N	N
	Night	49	42	41				34	N	N
LT-3	Day ³	63	61	47	55 dBA L ₅₀ or ambient	50 dBA L ₅₀ or ambient		39	N	N
	Evening ⁴	61	55	46				39	N	N
	Night ⁵	54	44	42				39	N	N
LT-1	Day ³	55	51	46	55 dBA L ₅₀ or ambient	50 dBA L ₅₀ or ambient		35	N	N
	Evening ⁴	52	48	46				35	N	N
	Night ⁵	46	45	43				35	N	N
OSW	Night	52	51	50	55 dBA L ₅₀ or ambient	50 dBA L ₅₀ or ambient		35	N	N

Notes:

¹ Unless otherwise noted, values for LT-2 and OSW are based on partial-hour ST measurements (see AFC Table 4.7-1), and values for LT-1 and LT-3 are full hours and based on LT measurement data (see AFC Tables 4.7-2 and 4.7-3).

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

CEC = California Energy Commission

dBA = A-Weighted equivalent decibel

ID = identification

L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval

L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval

L_{eq} = equivalent sound level

LT = long-term

MGS = Mandalay Generating Station

mph = miles per hour

OSW = Oxnard Shores West

P3 = Puente Power Plant

SPL = sound pressure level

ST = short-term

Table 4.7-6b
P3 Operation Noise Impact Assessment (East Winds Conditions, MGS Unit 3 Online)

Rcvr. ID	Time of Day	Representative Ambient SPL (dBA) ¹			City of Oxnard or Ventura County Criteria (Day, Evening, Night)			Estimated Noise Level (dBA), under East Winds Conditions (wind speed = 7 mph)	Per Scenario: City of Oxnard or Ventura County Impact? (Y/N)	Per Scenario, CEC Impact, if Estimated > L ₉₀ +10 dBA? (Y/N)
		L _{eq}	L ₅₀	L ₉₀	Day	Evening	Night			
LT-2	Day ²	61	55	52	55 dBA	50 dBA	45 dBA L _{eq}	34	N	N
	Evening	49	45	44	L _{eq} or ambient +3 dBA	L _{eq} or ambient +3 dBA	or ambient +3 dBA	34	N	N
	Night	50	45	44				34	N	N
LT-3	Day ³	63	61	52	55 dBA L ₅₀ or ambient		50 dBA L ₅₀ or ambient	39	N	N
	Day ⁶	63	61	50				39	N	N
	Evening ⁴	61	56	52				39	N	N
	Night ⁵	55	51	51				39	N	N
LT-1	Day ³	55	52	48	55 dBA L ₅₀ or ambient		50 dBA L ₅₀ or ambient	35	N	N
	Day ⁶	57	52	49				35	N	N
	Evening ⁴	53	50	48				35	N	N
	Night ⁵	48	48	47				35	N	N
OSW	Night	53	52	51	55 dBA L ₅₀ or ambient		50 dBA L ₅₀ or ambient	35	N	N

Notes:

¹ These values represent the logarithmic addition of ambient SPL from Table 4.7-6a and predicted MGS Unit 3 operation from Table 4.7-4.

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

⁶ With MGS Unit 3 operating at peak on December 16, 2014, from AFC Table 4.7-4, MGS Units 1 and 2 not operational. Predicted MGS Unit 3 operation not added to these values.

CEC = California Energy Commission

dBA = A-Weighted equivalent decibel

ID = identification

L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval

L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval

L_{eq} = equivalent sound level

MGS = Mandalay Generating Station

mph = miles per hour

OSW = Oxnard Shores West

P3 = Puente Power Plant

SPL = sound pressure level

Table 4.7-7a
P3 Operation Noise Impact Assessment (West Winds Conditions, MGS Unit 3 Offline)

Rcvr. ID	Time of Day	Representative Ambient SPL (dBA) ¹			City of Oxnard or Ventura County Criteria (Day, Evening, Night)			Estimated Noise Level (dBA), under West Winds Conditions (wind speed = 6 mph)	Per Scenario: City of Oxnard or Ventura County Impact? (Y/N)	Per Scenario, CEC Impact, if Estimated > L ₉₀ +10 dBA? (Y/N)
		L _{eq}	L ₅₀	L ₉₀	Day	Evening	Night			
LT-2	Day ²	61	55	51	55 dBA	50 dBA	45 dBA L _{eq}	40	N	N
	Evening	48	42	40	L _{eq} or ambient +3 dBA	L _{eq} or ambient +3 dBA	or ambient +3 dBA	40	N	N
	Night	49	42	41				40	N	N
LT-3	Day ³	63	61	47	55 dBA L ₅₀ or ambient		50 dBA L ₅₀ or ambient	46	N	N
	Evening ⁴	61	55	46				46	N	N
	Night ⁵	54	44	42				46	N	N
LT-1	Day ³	55	51	46	55 dBA L ₅₀ or ambient		50 dBA L ₅₀ or ambient	43	N	N
	Evening ⁴	52	48	46				43	N	N
	Night ⁵	46	45	43				43	N	N
OSW	Night	52	51	50	55 dBA L ₅₀ or ambient		50 dBA L ₅₀ or ambient	44	N	N

Notes:

¹ Unless otherwise noted, values for LT-2 and OSW are based on partial-hour ST measurements (see AFC Table 4.7-1), and values for LT-1 and LT-3 are full hours and based on LT measurement data (see AFC Tables 4.7-2 and 4.7-3).

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

CEC = California Energy Commission

dBA = A-Weighted equivalent decibel

ID = identification

L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval

L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval

L_{eq} = equivalent sound level

LT = long-term

MGS = Mandalay Generating Station

mph = miles per hour

OSW = Oxnard Shores West

P3 = Puente Power Plant

SPL = sound pressure level

ST = short-term

Table 4.7-7b P3 Operation Noise Impact Assessment (West Winds Conditions, MGS Unit 3 Online)										
Rcvr. ID	Time of Day	Representative Ambient SPL (dBA) ¹			City of Oxnard or Ventura County Criteria (Day, Evening, Night)			Estimated Noise Level (dBA), under West Winds Conditions (wind speed = 6 mph)	Per Scenario: City of Oxnard or Ventura County Impact? (Y/N)	Per Scenario, CEC Impact, if Estimated > L ₉₀ +10 dBA? (Y/N)
		L _{eq}	L ₅₀	L ₉₀	Day	Evening	Night			
LT-2	Day ²	61	55	52	55 dBA	50 dBA	45 dBA L _{eq}	40	N	N
	Evening	49	45	44	L _{eq} or ambient +3 dBA	L _{eq} or ambient +3 dBA	or ambient +3 dBA	40	N	N
	Night	50	45	44				40	N	N
LT-3	Day ³	63	62	57	55 dBA L ₅₀ or ambient		50 dBA L ₅₀ or ambient	46	N	N
	Day ⁶	63	61	50				46	N	N
	Evening ⁴	62	59	56				46	N	N
	Night ⁵	58	56	56				46	N	N
LT-1	Day ³	56	54	52	55 dBA L ₅₀ or ambient		50 dBA L ₅₀ or ambient	43	N	N
	Day ⁶	57	52	49				43	N	N
	Evening ⁴	55	53	52				43	N	N
	Night ⁵	52	52	52				43	N	N
OSW	Night	55	54	54	55 dBA L ₅₀ or ambient		50 dBA L ₅₀ or ambient	44	N	N

Notes:

¹ These values represent the logarithmic addition of ambient SPL from Table 4.7-7a and predicted MGS Unit 3 operation from Table 4.7-4.

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

⁶ With MGS Unit 3 operating at peak on December 16, 2014, from AFC Table 4.7-4, MGS Units 1 and 2 not operational. Predicted MGS Unit 3 operation not added to these values.

CEC = California Energy Commission
dBA = A-Weighted equivalent decibel
ID = identification
L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval
L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval
L_{eq} = equivalent sound level
MGS = Mandalay Generating Station
mph = miles per hour
OSW = Oxnard Shores West
P3 = Puente Power Plant
SPL = sound pressure level

Table 4.7-8a
Future Ambient Noise Prediction (Calm Conditions, MGS Unit 3 Offline)

Receiver ID	Time of Day	Existing Representative Ambient SPL (dBA) ¹			Estimated Noise Level (dBA), under Calm Conditions (wind speed = 0 mph)	Predicted Future Ambient SPL (dBA)		
		L _{eq}	L ₅₀	L ₉₀		L _{eq}	L ₅₀	L ₉₀
LT-2	Day ²	61	55	51	37	60	54	50
	Evening	48	42	40	37	48	43	41
	Night	49	42	41	37	49	43	42
LT-3	Day ³	63	61	47	42	63	61	48
	Evening ⁴	61	55	46	42	61	55	47
	Night ⁵	54	44	42	42	54	46	45
LT-1	Day ³	55	51	46	38	55	51	47
	Evening ⁴	52	48	46	38	52	48	46
	Night ⁵	46	45	43	38	47	46	44
OSW	Night	52	51	50	39	52	51	50

Notes:

¹ Unless otherwise noted, values for LT-2 and OSW are based on partial-hour ST measurements (see AFC Table 4.7-1), and values for LT-1 and LT-3 are full hours and based on LT measurement data (see AFC Tables 4.7-2 and 4.7-3).

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

dBA = A-Weighted equivalent decibel

ID = identification

L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval

L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval

L_{eq} = equivalent sound level

LT = long-term

MGS = Mandalay Generating Station

mph = miles per hour

OSW = Oxnard Shores West

SPL = sound pressure level

ST = short-term

**Table 4.7-8b
Future Ambient Noise Prediction (Calm Conditions, MGS Unit 3 Online)**

Receiver ID	Time of Day	Existing Representative Ambient SPL (dBA) ¹			Estimated Noise Level (dBA), under Calm Conditions (wind speed = 0 mph)	Predicted Future Ambient SPL (dBA)		
		L _{eq}	L ₅₀	L ₉₀		L _{eq}	L ₅₀	L ₉₀
LT-2	Day ²	61	55	52	37	61	55	52
	Evening	49	45	44	37	49	46	45
	Night	50	45	44	37	50	46	45
LT-3	Day ³	63	62	54	42	63	62	54
	Day ⁶	63	61	50	42	63	61	51
	Evening ⁴	62	57	54	42	62	57	54
	Night ⁵	56	53	53	42	57	54	53
LT-1	Day ³	56	53	50	38	56	53	50
	Day ⁶	57	52	49	38	57	52	49
	Evening ⁴	53	51	50	38	53	51	50
	Night ⁵	50	49	49	38	50	50	49
OSW	Night	53	53	52	39	53	53	52

Notes:

¹ These values represent the logarithmic addition of ambient SPL from Table 4.7-8a and predicted MGS Unit 3 operation from Table 4.7-4.

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

⁶ With MGS Unit 3 operating at peak on December 16, 2014, from AFC Table 4.7-4, MGS Units 1 and 2 not operational. Predicted MGS Unit 3 operation not added to these values.

dBA = A-Weighted equivalent decibel

ID = identification

L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval

L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval

L_{eq} = equivalent sound level

MGS = Mandalay Generating Station

mph = miles per hour

OSW = Oxnard Shores West

SPL = sound pressure level

Table 4.7-9a
Future Ambient Noise Prediction (East Winds Conditions, MGS Unit 3 Offline)

Receiver ID	Time of Day	Existing Representative Ambient SPL (dBA) ¹			Estimated Noise Level (dBA), under East Winds Conditions (wind speed = 7 mph)	Predicted Future Ambient SPL (dBA)		
		L _{eq}	L ₅₀	L ₉₀		L _{eq}	L ₅₀	L ₉₀
LT-2	Day ²	61	55	51	34	61	55	51
	Evening	48	42	40	34	48	43	41
	Night	49	42	41	34	49	43	42
LT-3	Day ³	63	61	47	39	63	61	48
	Evening ⁴	61	55	46	39	61	55	47
	Night ⁵	54	44	42	39	54	45	44
LT-1	Day ³	55	51	46	35	55	51	46
	Evening ⁴	52	48	46	35	52	48	46
	Night ⁵	46	45	43	35	46	45	44
OSW	Night	52	51	50	35	52	51	50

Notes:

¹ Unless otherwise noted, values for LT-2 and OSW are based on partial-hour ST measurements (see AFC Table 4.7-1), and values for LT-1 and LT-3 are full hours and based on LT measurement data (see AFC Tables 4.7-2 and 4.7-3).

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

dBA = A-Weighted equivalent decibel

ID = identification

L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval

L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval

L_{eq} = equivalent sound level

LT = long-term

MGS = Mandalay Generating Station

mph = miles per hour

OSW = Oxnard Shores West

SPL = sound pressure level

ST = short-term

Table 4.7-9b
Future Ambient Noise Prediction (East Winds Conditions, MGS Unit 3 Online)

Receiver ID	Time of Day	Existing Representative Ambient SPL (dBA) ¹			Estimated Noise Level (dBA), under East Winds Conditions (wind speed = 7 mph)	Predicted Future Ambient SPL (dBA)		
		L _{eq}	L ₅₀	L ₉₀		L _{eq}	L ₅₀	L ₉₀
LT-2	Day ²	61	55	52	34	61	55	52
	Evening	49	45	44	34	49	45	44
	Night	50	45	44	34	50	45	45
LT-3	Day ³	63	61	52	39	63	61	52
	Day ⁶	63	61	50	39	63	61	50
	Evening ⁴	61	56	52	39	61	56	52
	Night ⁵	55	51	51	39	56	51	51
LT-1	Day ³	55	52	48	35	55	52	49
	Day ⁶	57	52	49	35	57	52	49
	Evening ⁴	53	50	48	35	53	50	49
	Night ⁵	48	48	47	35	49	48	47
OSW	Night	53	52	51	35	53	52	51

Notes:

¹ These values represent the logarithmic addition of ambient SPL from Table 4.7-9a and predicted MGS Unit 3 operation from Table 4.7-4.

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

⁶ With MGS Unit 3 operating at peak on December 16, 2014, from AFC Table 4.7-4, MGS Units 1 and 2 not operational. Predicted MGS Unit 3 operation not added to these values.

dBA = A-Weighted equivalent decibel

ID = identification

L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval

L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval

L_{eq} = equivalent sound level

MGS = Mandalay Generating Station

mph = miles per hour

OSW = Oxnard Shores West

SPL = sound pressure level

Table 4.7-10a
Future Ambient Noise Prediction (West Winds Conditions, MGS Unit 3 Offline)

Receiver ID	Time of Day	Existing Representative Ambient SPL (dBA) ¹			Estimated Noise Level (dBA), under West Winds Conditions (wind speed = 6 mph)	Predicted Future Ambient SPL (dBA)		
		L _{eq}	L ₅₀	L ₉₀		L _{eq}	L ₅₀	L ₉₀
LT-2	Day ²	61	55	51	40	61	55	51
	Evening	48	42	40	40	49	44	43
	Night	49	42	41	40	50	44	44
LT-3	Day ³	63	61	47	46	63	61	50
	Evening ⁴	61	55	46	46	61	56	49
	Night ⁵	54	44	42	46	55	48	47
LT-1	Day ³	55	51	46	43	55	52	48
	Evening ⁴	52	48	46	43	52	49	48
	Night ⁵	46	45	43	43	48	47	46
OSW	Night	52	51	50	44	53	52	51

Notes:

¹ Unless otherwise noted, values for LT-2 and OSW are based on partial-hour ST measurements (see AFC Table 4.7-1), and values for LT-1 and LT-3 are full hours and based on LT measurement data (see AFC Tables 4.7-2 and 4.7-3).

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

dBA = A-Weighted equivalent decibel

ID = identification

L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval

L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval

L_{eq} = equivalent sound level

LT = long-term

MGS = Mandalay Generating Station

mph = miles per hour

OSW = Oxnard Shores West

SPL = sound pressure level

ST = short-term

Table 4.7-10b
Future Ambient Noise Prediction (West Winds Conditions, MGS Unit 3 Online)

Receiver ID	Time of Day	Existing Representative Ambient SPL (dBA) ¹			Estimated Noise Level (dBA), under West Winds Conditions (wind speed = 6 mph)	Predicted Future Ambient SPL (dBA)		
		L _{eq}	L ₅₀	L ₉₀		L _{eq}	L ₅₀	L ₉₀
LT-2	Day ²	61	55	52	40	61	55	52
	Evening	49	45	44	40	49	46	46
	Night	50	45	44	40	50	46	46
LT-3	Day ³	64	62	57	46	64	62	57
	Day ⁶	63	61	50	46	63	61	51
	Evening ⁴	62	59	56	46	62	59	57
	Night ⁵	58	56	56	46	58	57	57
LT-1	Day ³	56	54	52	43	57	54	53
	Day ⁶	57	52	49	43	57	53	50
	Evening ⁴	55	53	52	43	55	53	53
	Night ⁵	52	52	52	43	53	53	52
OSW	Night	55	54	54	44	55	55	54

Notes:

¹ These values represent the logarithmic addition of ambient SPL from Table 4.7-10a and predicted MGS Unit 3 operation from Table 4.7-4.

² Based on measured hour from 5:55 p.m. to 6:55 p.m. on December 15, 2014.

³ With no MGS units operating during the 12:25 p.m. to 1:25 p.m. hour on December 18, 2014.

⁴ With no MGS units operating, 9:00 p.m. to 10:00 p.m. on December 16, 2014.

⁵ L_{eq} is an energy average of four quietest consecutive hours from survey (December 16, 2014, 00:25 to 04:25 a.m.); L₅₀ and L₉₀ are averages of these statistical values from each of the same 4 hours.

⁶ With MGS Unit 3 operating at peak on December 16, 2014, from AFC Table 4.7-4, MGS Units 1 and 2 not operational. Predicted MGS Unit 3 operation not added to these values.

dBA = A-Weighted equivalent decibel

ID = identification

L₅₀ = the noise levels equaled or exceeded during 50 percent of the measured time interval

L₉₀ = the noise levels equaled or exceeded during 90 percent of the measured time interval

L_{eq} = equivalent sound level

MGS = Mandalay Generating Station

mph = miles per hour

OSW = Oxnard Shores West

SPL = sound pressure level

Tonal noise, operations occupational noise exposure, and noise from power transmission corona would not be significantly affected by the demolition and removal of the structures of MGS Units 1 and 2. Analysis of noise related to these topics remains as discussed in the AFC.

4.7.3 Cumulative Impacts Analyses

The analysis presented in Section 4.7.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The noise and vibration impacts associated with the project changes described herein would be of short duration. Therefore, the project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts to noise beyond those addressed in Section 4.7.3 of the AFC.

4.7.4 Mitigation Measures

Demolition activities, although anticipated to generate noise that would not be considered a significant impact, would still be expected to implement noise complaint reporting, investigation and resolution mechanisms that are described as mitigation measures NOISE-1 and NOISE-2 in the AFC. Additionally, the AFC describes mitigation measure NOISE-3, which reflects County of Ventura guidance with respect to controlling and mitigating construction noise. Implementation of NOISE-3 is also anticipated to help ensure that actual demolition-generated noise levels will result in a less-than-significant impact on the sound environment.

4.7.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.7.5 of the AFC.

4.7.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.7.6 of the AFC.

4.7.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.7.7 of the AFC.

4.7.8 References

With the exception of the reference listed below, no references in addition to those presented in Section 4.7.8 of the AFC were used for this AFC Enhancement and Refinement.

Caltrans (California Department of Transportation), 2004. Transportation and Construction-Induced Vibration Guidance Manual. June.

Dowding, Charles H., 1996. Construction Vibrations. Prentice-Hall, Upper Saddle River, New Jersey.

4.8 PALEONTOLOGICAL RESOURCES

This section presents a discussion of the potential impacts related to paleontological resources from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.8.1 Affected Environment

The demolition of MGS Units 1 and 2 will occur entirely within the MGS property and within the paleontological study area presented in the AFC.

4.8.2 Environmental Consequences

The above-ground demolition of MGS Units 1 and 2 will not result in new impacts to paleontological resources beyond those identified in the AFC. No significant below-grade ground disturbance would occur in previously undisturbed areas; therefore, impacts to paleontological resources are not expected.

4.8.3 Cumulative Impacts Analyses

The analysis presented in Section 4.8.3 of the AFC concluded that the proposed Project's contribution to cumulative impacts would be less than significant. The project would not result in additional impacts to paleontological resources as a result of the project changes described herein. Therefore, the project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts to paleontological resources.

4.8.4 Mitigation Measures

No mitigation measures are proposed beyond those addressed in Section 4.8.6 of the AFC.

4.8.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.8.5 of the AFC.

4.8.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.8.7 of the AFC.

4.8.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.8.8 of the AFC.

4.8.8 References

No references in addition to those presented in Section 4.8.9 of the AFC were used for this AFC Enhancement and Refinement.

4.9 PUBLIC HEALTH

This section presents a discussion of the potential impacts related to public health from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.9.1 Affected Environment

The demolition of MGS Units 1 and 2 will occur entirely within the MGS property and within the public health study area presented in the AFC.

4.9.2 Environmental Consequences

A screening health risk assessment (HRA) of demolition impacts was performed in accordance with Office of Environmental Health Hazard Assessment (OEHHA) guidance, which requires adjusting the 70-year lifetime dosage to an exposure period equal to that of the demolition period. The screening HRA was prepared using the latest version of CARB's HARP2 model, the CARB July 2014 health database, and the OEHHA Hot Spots Program Guidance Manual. As part of this screening HRA, the U.S. EPA-recommended air dispersion model, AERMOD, was used along with 5 years (2009 through 2013) of representative meteorological data from the Oxnard airport meteorological station. The new Risk Assessment Standalone Tool that is part of the HARP2 model was also used with the air dispersion modeling output from the AERMOD model, to perform the risk assessment. The results of this analysis show a maximum off-property cancer risk of approximately 1.2 in 1 million. This impact is below the significance threshold of 10 in 1 million.

4.9.3 Cumulative Impacts Analyses

The analysis presented in Section 4.9.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The HRA significance thresholds developed for toxic air contaminant (TACs) are set with sufficient stringency to preclude the potential for any significant cumulative impacts. Therefore, a separate cumulative impacts analysis for TACs is not required.

4.9.4 Mitigation Measures

The project demolition has been designed to minimize TACs emissions and impacts. No mitigation measures are needed for the project TAC emissions, because the potential public health impacts are less than significant.

4.9.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.9.5 of the AFC.

4.9.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.9.6 of the AFC.

4.9.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.9.7 of the AFC.

4.9.8 References

No references in addition to those presented in Section 4.9.8 of the AFC were used for this AFC Enhancement and Refinement.

4.10 SOCIOECONOMICS

This section presents a discussion of the potential impacts related to socioeconomics from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.10.1 Affected Environment

The proposed project demolition activities would not change the study area and affected environment for socioeconomic resources presented in Section 4.10 of the project AFC.

4.10.2 Environmental Consequences

The following sections assess the direct employment impacts and the indirect and induced employment and economic impacts associated with the demolition of MGS Units 1 and 2. Demolition of MGS Units 1 and 2 would not change impacts on population, public services and utilities, or environmental justice that were described in the AFC.

4.10.2.1 Employment during Demolition

Project demolition is expected to occur over a period of approximately 15 months, from July 2021 through September 2022. The schedule assumes a single-shift work week with a 10-hour day and a 50-hour week. Demolition operations would take place between 7:00 a.m. and 6:00 p.m. The onsite workforce would consist of laborers, craftsmen, supervisory personnel, support personnel, and demolition management personnel. The onsite workforce averages 53 workers per month, and is expected to reach its peak of 74 individuals per month from January 2022 through May 2022. In these peak demolition months, there would be an estimated peak of 70 craft and trade personnel, and four professional personnel for demolition of MGS Units 1 and 2. The number of workers to be employed each month during demolition is listed by craft in Table 2-2. The study area has a large labor force, as discussed in Section 4.10.1 of the AFC. Peak construction employment would represent approximately 0.06 percent of construction jobs in the study area in 2012, and 0.05 percent of projected construction jobs in 2022, based on the historical and projected employment by industry in the study area presented in Table 4.10-5 of the AFC.

The trade crafts required for demolition activities are similar to and generally fewer than those required for the project construction (AFC Table 2.9-1). One additional craft category for asbestos removal (industry sector, Hazardous Materials Removal Workers) would be required for the proposed demolition activities. Historical and projected employment data for this sector for 2012 and 2022 are presented in Table 4.10-1, and indicate that the labor force in the study area would be sufficient to serve the project demolition activities.

To the extent practicable, the Applicant has committed to giving local preference in hiring. For the purposes of this analysis, it is assumed that approximately 95 percent of the workforce (i.e., average of 51 workers) would be hired from within the study area. It is expected that most of the demolition workers who live in the study area would commute up to 2 hours to the project site, and would not relocate. As stated in Section 4.10.2.5.1 of the AFC, based on the large available labor force in the study area, including Hazardous Materials Removal Workers, it is anticipated that the Applicant would not encounter difficulties hiring from the local workforce within the daily commuting distance to supply the workers required for demolition of MGS Units 1 and 2. Therefore, demolition of MGS Units 1 and 2 would not be expected to cause substantial permanent population increase or changes in concentration of population that would increase the demand for housing other resources in the project area.

**Table 4.10-1
Occupational Projections of Employment in Project Region (2012-2022)**

Industry Sector	SOC Code	Workforce, 2012	Projected Workforce, 2022	Projected Growth, 2012 to 2022
Hazardous Materials Removal Workers	47-4041	970	1190	220 (10.2%)
Note: SOC = Standard Occupational Classification				

4.10.2.2 Indirect and Induced Employment and Economic Impacts during Demolition

Demolition activities would result in secondary economic and employment impacts (indirect and induced impacts) that would occur in the City of Oxnard and elsewhere in Ventura and Los Angeles counties. The Applicant would seek to locally source services, consumables, rental equipment, and other items in the study area to the greatest extent practical, where available and competitively priced. For this analysis, the estimated value of materials and supplies that are assumed to be purchased locally in the study area during the demolition phase is \$3.8 million, and was determined based on locations where supplies and materials would reasonably be expected to be purchased.

The project would provide approximately \$9.1 million in demolition payroll over the 15-month demolition timeframe. Based on the available regional workforce in the area of Ventura and Los Angeles counties, it is conservatively assumed that 95 percent of the workforce (i.e., average of 51 workers) would reside in the two-county area, resulting in approximately \$8.6 million in local payroll during the MGS Units 1 and 2 demolition period. These additional funds will result in a temporary beneficial impact by creating the potential for other employment opportunities for workers in other service areas in Ventura and Los Angeles counties, such as transportation and retail. Similarly, the anticipated purchase of materials and supplies and payroll for employees during demolition will have a beneficial temporary impact in the area of Ventura and Los Angeles counties. No significant adverse impacts related to the local economy and employment are expected.

Indirect and induced impacts associated with demolition of MGS Units 1 and 2 were estimated using an IMPLAN Version 3.1 Input/Output model of the Ventura and Los Angeles county economies. Economic estimates were based on 2014 dollars.

The estimated indirect and induced employment in the study area from the demolition activities would result in 16 and 56 jobs, respectively. These additional jobs result from the \$3.8 million in local materials expenditures and the local worker expenditures resulting from the \$6 million payroll over the 15-month demolition timeframe. The \$6 million represents the disposable portion of the payroll (assumed to be 70 percent of \$8.6 million). Based on an average direct demolition employment of 51 for the project, the associated employment multiplier is approximately 2.4 (i.e., $[51 + 16 + 56]/51$). This employment multiplier is based on a Type SAM model.

Indirect and induced income impacts associated with the demolition of MGS Units 1 and 2 were estimated at \$980,000 and \$2,800,000, respectively. Assuming total local expenditures (materials, supplies, and payroll) in the study area of \$9.8 million (\$3.8 million in materials and supplies + \$6 million, representing the disposable portion of payroll), the income multiplier based on a Type SAM model is approximately 1.4 (i.e., $[\$9.8 \text{ million} + \$980,000 + \$2,800,000]/\9.8 million).

4.10.2.3 Economic Impacts during Operations

As described in the AFC, because there would be no change in staffing for P3 operations when MGS Units 1 and 2 are retired, this would not represent a new economic benefit.

4.10.3 Cumulative Impacts Analyses

The analysis presented in Section 4.10.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The project would not result in additional adverse impacts to socioeconomic resources as a result of the project changes described herein. Therefore, the project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts to socioeconomics.

4.10.4 Mitigation Measures

No significant adverse impacts were identified. Therefore, no mitigation measures would be necessary.

4.10.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.10.5 of the AFC.

4.10.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.10.6 of the AFC.

4.10.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.10.7 of the AFC.

4.10.8 References

No references in addition to those presented in Section 4.10.8 of the AFC were used for this AFC Enhancement and Refinement.

4.11 SOILS

This section presents a discussion of the potential impacts related to soils from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.11.1 Affected Environment

The demolition of MGS Units 1 and 2 will occur entirely within the MGS property and within the soils study area presented in the AFC.

4.11.2 Environmental Consequences

The footprint of the demolition will be approximately 3.5 acres; this consists of the existing MGS Unit 1 and 2 structures and adjacent paved area, as shown on Figure 2-1. During demolition, construction staging areas that were previously used during P3 construction will be available for use during the 15-month demolition period.

Demolition of MGS Units 1 and 2 would include demolishing the structures to grade and filling below-grade spaces with crushed concrete. No excavation to remove foundations or piping would be required.

Similar to the construction of P3, Applicant will develop a SWPPP and implement BMPs during demolition activities. With preparation of a final SWPPP prior to construction and implementation of BMPs, direct and indirect impacts to soils resources from project construction would be less than significant.

4.11.3 Cumulative Impacts Analyses

The analysis presented in Section 4.11.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The project would not result in additional impacts to soils as a result of the project changes described herein. Therefore, the project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts to soils.

4.11.4 Mitigation Measures

No mitigation measures are proposed beyond those addressed in Section 4.11.5 of the AFC.

4.11.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.11.6 of the AFC.

4.11.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.11.7 of the AFC.

4.11.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.11.8 of the AFC.

4.11.8 References

No references in addition to those presented in Section 4.11.9 of the AFC were used for this AFC Enhancement and Refinement.

4.12 TRAFFIC

This section presents a discussion of the potential impacts related to traffic and transportation from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.12.1 Affected Environment

The affected environment for this AFC Enhancement and Refinement is the same as the traffic study area presented in Section 4.12 of the AFC. Similar to P3 construction, demolition activities, including contractor parking, offices, and laydown, will occur within the MGS property.

The study intersections and roadway segments presented in the AFC and in Applicant's Responses to CEC Data Requests 45 and 73 are the same for this AFC Enhancement and Refinement. These include the following:

Study Intersections:

- Intersection 1: Victoria Avenue/Gonzales Road
- Intersection 2: Harbor Boulevard/Gonzales Road
- Intersection 3: Harbor Boulevard/MGS Entrance
- Intersection 4: Harbor Boulevard/West 5th Street
- Intersection 5: West 5th Street and Victoria Avenue
- Intersection 6: Victoria Avenue/Doris Avenue

Roadway Segments:

- Segment 1: Harbor Boulevard – north of Gonzales Road
- Segment 2: Harbor Boulevard – between Gonzales Road and MGS Entrance
- Segment 3: Harbor Boulevard – between MGS Entrance and West 5th Street
- Segment 4: Harbor Boulevard – south of West 5th Street
- Segment 5: Gonzales Road – between Harbor Boulevard and Victoria Avenue
- Segment 6: Victoria Avenue – north of Gonzales Road
- Segment 7: Highway 101 – west of Victoria Avenue
- Segment 8: Highway 101 – east of Victoria Avenue
- Segment 9: Victoria Avenue – between West 5th Street and Gonzales Road
- Segment 10: West 5th Street – between Harbor Boulevard and Victoria Avenue

Because demolition of MGS Units 1 and 2 will occur from July 2021 through September 2022, with peak demolition-related trips expected in 2022, the following conditions are presented herein for the level of service (LOS) analysis at the study intersections and roadway segments:

- Future Baseline (Year 2022) Conditions – Evaluate traffic conditions considering existing traffic plus growth applied to Year 2015 traffic volumes presented in the AFC. Year 2022 was evaluated as Future Baseline Conditions, because the demolition of MGS Units 1 and 2 is anticipated to peak during 2022.
- Future Baseline (Year 2022) plus Demolition Conditions – Evaluate traffic conditions considering Future Baseline forecasted conditions plus project demolition-related traffic.

4.12.2 Environmental Consequences

Demolition of MGS Units 1 and 2 will occur after P3 is operational and will therefore not coincide with construction-related traffic for P3. Demolition is expected to take approximately 15 months, with a peak construction force of 74 workers during a 5-month period (January 2022 through May 2022), as shown in Table 2-2. In comparison, the peak number of workers during P3 construction was estimated to be 90 workers in 2019. For this reason, an Existing Baseline (2015) plus Project Conditions LOS analysis was not conducted for demolition, because impacts under this scenario would be less than those for construction described in the AFC.

Demolition trucks will peak during month 9 (March 2022), with 220 trucks. The anticipated average daily trucks during the peak month is 11 trucks per day averaged over a 5-day (Monday to Friday) work week, or 20 working days per month. The maximum number of truck trips per month is estimated at 440, or an average of 22 truck trips per day. The majority of the truck trips would be scheduled to not occur during the peak hour; therefore, these trips would not result in significant traffic impacts. The traffic routing for the project demolition activities would be similar to project construction.

As discussed in AFC Section 4.12, because there will be no change in staff during operations, and only a very small increase in operation-related trips, the proposed plant operations will not change the LOS of the roads and intersections in the study area. The demolition of MGS Units 1 and 2 does not change the analysis of project operations. Therefore, no significant traffic impacts during project operations are anticipated. In addition, traffic from project operations will not impede or obstruct existing emergency access.

4.12.2.1 Traffic Impacts during Project Demolition

Consistent with the findings and conclusions in AFC Section 4.12 for construction traffic, the demolition activities are anticipated to introduce short-term demolition-related traffic. However, demolition activities associated with MGS Units 1 and 2 have lower manpower needs when compared with P3 construction activities, resulting in less traffic generated at the project site. To alleviate potential impacts from demolition traffic entering and exiting the site, the project will implement a Traffic Control Plan similar to that used during construction.

The City of Oxnard 2030 General Plan does not identify an acceptable LOS for roadway segments. Roadway segment analysis is generally used by the City of Oxnard for high-level planning and forecasting of the its roadway circulation system.

In the City of Oxnard 2030 General Plan, the acceptable LOS for intersections incorporated in the Oxnard Traffic Model is grade C or better. However, under the General Plan, Section 4.4, Circulation Element, Infrastructure and Community Services-3.3 New Development Level of Service C, “The City may allow an exception of level of service “D” in order to avoid impacting private homes and/or businesses, avoid environmental impacts, or preserve or enhance aesthetic integrity.” According to the City of Oxnard impact threshold criteria, a significant impact occurs if a project’s added traffic increases the Intersection Capacity Utilization (ICU) volume-to-capacity (V/C) ratio by 0.02 or more at an intersection operating at LOS C or worse (LOS D, E, and F) when compared to the baseline (No Project) ICU V/C ratio.

Table 4.12-1 summarizes the results of the analysis for the roadway segments under Future Baseline (2022) No Demolition Conditions, and Table 4.12-2 summarizes the results of the LOS analysis at the study intersections under Future Baseline (2022) No Demolition Conditions.

**Table 4.12-1
Roadway Segment Level of Service – Future Baseline (2022) No Demolition Conditions**

No.	Roadway	Segment	Roadway Classification	General Plan Capacity	Future Baseline (2022) No Project ADT	V/C	LOS
1	Harbor Boulevard ¹	North of Gonzales Road	Secondary Arterial	32,000	21,414	0.669	B
2	Harbor Boulevard ¹	North of MGS Driveway	Secondary Arterial	32,000	20,343	0.636	B
3	Harbor Boulevard ¹	South of MGS Driveway	Secondary Arterial	32,000	20,320	0.635	B
4	Harbor Boulevard ¹	South of West 5th Street	Secondary Arterial	32,000	18,589	0.581	A
5	Gonzales Road ²	East of Harbor Boulevard	Local Arterial	32,000	4,047	0.126	A
6	Victoria Avenue ³	North of Gonzales Road	Primary Arterial	54,000	49,943	0.925	E
7	Highway 101 ⁴	West of Victoria Avenue	Freeway	135,000	135,660	1.005	F
8	Highway 101 ⁴	East of Victoria Avenue	Freeway	135,000	158,460	1.174	F
9	Victoria Avenue	South of Gonzales Road	Primary Arterial	54,000	48,351	0.895	D
10	West 5th Street	East of Harbor Boulevard	Local Arterial	32,000	5,816	0.182	A

Notes:

¹ Classified as 4-Lane Secondary Arterial

² Classified as 4-Lane Local Arterial

³ Classified as 6-Lane Primary Arterial

⁴ No assumed widening applied

ADT = average daily traffic

LOS = level of service

MGS = Mandalay Generating Station

V/C = volume-to-capacity ratio

**Table 4.12-2
Intersection Level of Service – Future Baseline (2022) No Demolition Conditions**

No.	Intersection	Type of Control	Future Baseline (2022) No Project Conditions			
			A.M. Peak		P.M. Peak	
			V/C	LOS	V/C	LOS
1	Victoria Avenue/Gonzales Road	Signal	0.866	D	0.884	D
2	Harbor Boulevard/Gonzales Road	Signal	0.812	D	0.826	D
3	Harbor Boulevard/MGS Entrance	Stop Sign ¹	47.4	E	53.9	F
4	Harbor Boulevard/West 5th Street	Signal	0.852	D	0.577	A
5	West 5th Street and Victoria Avenue	Signal	0.636	B	0.657	B
6	Victoria Avenue and Doris Avenue	Signal	0.841	D	0.750	C

Notes:

¹ MOE for unsignalized intersections is delay in seconds per vehicle.

LOS = level of service

MGS = Mandalay Generating Station

MOE = measure of effectiveness

V/C = volume-to-capacity ratio

Under Future Baseline (2022) No Demolition Conditions, the ten study roadway segments are projected to operate at LOS B or better, with the exception to the following locations that are projected to operate at LOS D, E, or F:

- Victoria Avenue – North of Gonzales Road (LOS E)
- Highway 101 – West of Victoria Avenue (LOS F)
- Highway 101 – East of Victoria Avenue (LOS F)
- Victoria Avenue – South of Gonzales (LOS D)

Under Future Baseline (2022) No Demolition Conditions, the study intersections shown below are projected to operate at LOS D, E, or F during the AM and/or PM peak hours.

- Victoria Avenue/Gonzales Road (LOS D, AM/PM)
- Harbor Boulevard/Gonzales Road (LOS D, AM/PM)
- Harbor Boulevard/MGS Entrance (LOS E AM, LOS F PM)
- Harbor Boulevard/West 5th Street (LOS D, AM)
- Victoria Avenue/Doris Avenue (LOS D, AM)

The above findings indicate that future traffic growth and background-related traffic alone had cumulatively contributed to the aforementioned Future Baseline (2022) conditions.

The analysis of demolition traffic impacts assumed the addition of 74 worker vehicle trips, and that each worker drives alone (i.e., 148 trips per day). In addition, an average of 11 trucks or 22 one-way truck trips is spread throughout the day.

Table 4.12-3 summarizes the results of the analysis for the roadway segments under Future Baseline (2022) Plus Project Demolition. The addition of project traffic is not anticipated to change the LOS for the study roadway segments. Therefore, it is expected that the addition of the traffic during demolition of MGS Units 1 and 2 will not have any significant impacts at the study roadway segments.

Table 4.12-4 summarizes the results of the LOS analysis at the study intersections under Future Baseline (2022) Plus Demolition Conditions. When compared to Table 4.12-2, for all the study intersections, the addition of demolition traffic will not change the baseline LOS operating conditions. For the signalized intersections, the addition of demolition traffic will not increase the V/C by more than 0.02. At the unsignalized Harbor Boulevard/MGS Entrance there would be a minor increase in delay at the unsignalized MGS Entrance only, with Harbor Boulevard operating unconstrained. Similar to P3 construction conditions, at Harbor Boulevard/MGS Entrance, the incremental addition and short-term nature of the project-added demolition trips does not impact or burden the general public traffic, because Harbor Boulevard is operating uncontrolled and delay at the private MGS driveway is solely attributed to the project by itself. The Applicant will accept the consequences of incremental delay and associated wait times to exit, and wait for gaps in traffic to transition to Harbor Boulevard. This occurs only as a short-term inconvenience during the demolition period, rather than a long-term project impact. Therefore, the addition of the traffic during demolition of MGS Units 1 and 2 will not have any significant impacts at the study intersections.

The traffic counts and traffic model calculation worksheets are provided in Appendix C.

**Table 4.12-3
Roadway Segment Level of Service – Future Baseline (2022) Plus Demolition Conditions**

No.	Roadway	Segment	Roadway Classification	General Plan Capacity	Future Baseline (2022) Plus Demolition Project ADT	V/C	LOS
1	Harbor Boulevard ¹	North of Gonzales Road	Secondary Arterial	32,000	21,424	0.670	B
2	Harbor Boulevard ¹	North of MGS Driveway	Secondary Arterial	32,000	20,510	0.641	B
3	Harbor Boulevard ¹	South of MGS Driveway	Secondary Arterial	32,000	20,367	0.636	B
4	Harbor Boulevard ¹	South of West 5th Street	Secondary Arterial	32,000	18,599	0.581	A
5	Gonzales Road ²	East of Harbor Boulevard	Local Arterial	32,000	4,203	0.131	A
6	Victoria Avenue ³	North of Gonzales Road	Primary Arterial	54,000	50,125	0.928	E
7	Highway 101 ⁴	West of Victoria Avenue	Freeway	135,000	135,746	1.006	F
8	Highway 101 ⁴	East of Victoria Avenue	Freeway	135,000	158,556	1.174	F
9	Victoria Avenue	South of Gonzales Road	Primary Arterial	54,000	48,382	0.896	D
10	West 5th Street	East of Harbor Boulevard	Local Arterial	32,000	5,853	0.183	A

Notes:

¹ Classified as 4-Lane Secondary Arterial

² Classified as 4-Lane Local Arterial

³ Classified as 6-Lane Primary Arterial

⁴ No assumed widening applied

ADT = average daily traffic

LOS = level of service

MGS = Mandalay Generating Station

V/C = volume-to-capacity ratio

**Table 4.12-4
Intersection Level of Service – Future Baseline (2022) Plus Demolition Conditions**

No.	Intersection	Type of Control	Future Baseline (2022) Plus Demolition Conditions			
			A.M. Peak		P.M. Peak	
			V/C	LOS	V/C	LOS
1	Victoria Avenue/Gonzales Road	Signal	0.866	D	0.896	D
2	Harbor Boulevard/Gonzales Road	Signal	0.824	D	0.826	D
3	Harbor Boulevard/MGS Entrance	Stop Sign ¹	47.7	E	76.7	F
4	Harbor Boulevard/West 5th Street	Signal	0.853	D	0.589	A
5	West 5 th Street and Victoria Avenue	Signal	0.636	B	0.669	B
6	Victoria Avenue and Doris Avenue	Signal	0.841	D	0.750	C

Notes:

¹ MOE for unsignalized intersections is delay in seconds per vehicle.

LOS = level of service

MGS = Mandalay Generating Station

MOE = measure of effectiveness

V/C = volume-to-capacity ratio

4.12.3 Cumulative Impacts Analyses

The analysis presented in Section 4.12.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The project would not result in greater LOS impacts to traffic and transportation as a result of the project changes described herein. Therefore, the project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts to traffic and transportation.

4.12.4 Mitigation Measures

No mitigation measures are proposed beyond those addressed in Section 4.12.4 of the AFC.

4.12.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.12.5 of the AFC.

4.12.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.12.6 of the AFC.

4.12.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.12.7 of the AFC.

4.12.8 References

No references in addition to those presented in Section 4.12.8 of the AFC and the responses to Data Requests 45 and 73 were used for this AFC Enhancement and Refinement.

4.13 VISUAL RESOURCES

This section discusses the potential impacts to visual resources from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.13.1 Affected Environment

The proposed demolition of MGS Units 1 and 2 would not change the baseline description of existing visual character or quality assigned to individual key observation points (KOPs) within the project Visual Sphere of Influence (VSOI), because the demolition of MGS Units 1 and 2 would not occur unless and until P3 is constructed and operational.

4.13.2 Environmental Consequences

This section assesses direct and indirect impacts to visual resources within the VSOI that could result from demolition of MGS Units 1 and 2.

4.13.2.1 Methodology

The level of potential visual impact that could result from demolition of MGS Units 1 and 2 within the VSOI is based on a comparison of the baseline conditions prior to construction of P3 with the proposed visual conditions after P3 is constructed and operational, and demolition of existing MGS Units 1 and 2 is complete. For the purposes of this analysis, demolition period impacts to visual resources are considered temporary in nature, and are therefore similar to construction period impacts.

4.13.2.2 Visual Simulations

Visual simulations of project components with demolition of the existing MGS Units 1 and 2 were used to evaluate project prominence and assess potential impacts to aesthetic quality that may result from the demolition of MGS Units 1 and 2. Views of P3 and Units 1 and 2 were simulated from KOP 1 through KOP 5 (Figure 4.13-1), as shown on Figures 4.13-2b through 4.13-6b. The simulations provide an illustration of how P3 may appear to viewers once P3 is in operation and MGS Units 1 and 2 are demolished. Simulations represent views from the same KOPs that were used to analyze visual impacts in the AFC without demolition of MGS Units 1 and 2.

4.13.2.3 Demolition Period Visual Impacts

Demolition of MGS Units 1 and 2 would begin after commercial operation of P3 is achieved; therefore, P3 and MGS Units 1 and 2 would co-exist until the demolition of MGS Units 1 and 2 commences. It is further anticipated that the demolition work of MGS Units 1 and 2 will take approximately 15 months, and be completed by late 2022. The demolition of MGS Units 1 and 2 will generally occur in the western portion of the MGS property, south of the three basins and north of the water storage tanks area. The demolition area is approximately 3.5 acres. All construction laydown and parking areas will also be within the existing MGS site, and are the same areas that will be used during construction of P3.

The demolition schedule and manpower requirements assume up to 10-hour days, 5 days a week, Monday through Friday. Demolition work hours will be limited to 7:00 a.m. to 6:00 p.m., Monday through Friday.

During project demolition, construction activities, materials, equipment, trucks, temporary structures, and vehicles would be highly visible from residential and beach areas south, east, and west of MGS Units 1 and 2 and P3. Specifically, views from Mandalay State Beach are likely to have the most unobstructed views of the construction activities, because MGS Units 1 and 2 are closest to this beach.

Although visual change associated with demolition activities would introduce movement, equipment, and structures (temporary construction trailers) not currently occurring in the area, these impacts would be temporary in nature. Therefore, demolition period direct impacts would be less than significant.

Indirect impacts associated with demolition of MGS Units 1 and 2 may include impacts associated with fugitive dust, night lighting, and the presence of construction equipment. Demolition activities would be conducted in stages, and in a manner that minimizes (visible) dust emissions, and hours of demolition activities are not anticipated to last beyond 6:00 p.m. Any nighttime lighting that is required will be positioned to face downward and away from beach, residential, and agricultural uses, as is practicable for safety. Therefore, potential indirect impacts to visual resources from demolition activities are also considered temporary, and less than significant.

4.13.2.4 Direct and Indirect Visual Impacts Related to Operations

Figures 4.13-2a through 4.13-6b depict existing and simulated views from each of the five selected KOPs. Tables in Appendix C rank the Project Prominence attributes of demolition activities, as seen from KOPs 1 through 5, based on the simulated views of the project after demolition of MGS Units 1 and 2 is complete.

Key Observation Point No. 1

KOP 1 is on Mandalay State Beach, just west of its intersection with West 5th Street and Mandalay Beach Road (Figure 4.13-1). The existing Landscape View Inventory was ranked Low to Moderate.

Figure 4.13-2b indicates that MGS Units 1 and 2 and the shared stack would no longer dominate this viewshed once demolition is complete. From this distance, the P3 stack would remain visible, but would not dominate the landscape due to its smaller scale and more muted colors compared with MGS Units 1 and 2. Contrast rating indicates that the demolition of MGS Units 1 and 2 would remove the strong angular geometric shape of MGS Units 1 and 2, and the massing and bright coloring associated with the MGS stack. Removal of these elements would improve the visual harmony and unity of views from KOP 1 compared with existing conditions. The removal of the stack and MGS Units 1 and 2 would also reduce the overall Visual Absorption Capability (VAC) of the landscape to moderate (see Appendix C, rankings for KOP 1). However, reduction in VAC would only occur after P3 was constructed, so the basic character elements of form, line, color, and texture of views would remain intact, though less prominent with the demolition of MGS Units 1 and 2 but continued existence of P3.

Based on the above, demolition of MGS Units 1 and 2 would reduce the degree of contrast that currently occurs within the visual environment of KOP 1, and increase the overall visual quality of proposed views. Demolition of MGS Units 1 and 2 would have less-than-significant impacts to the existing measures of visual character and quality as viewed from KOP 1.

Key Observation Point No. 2

KOP 2 is in Mandalay State Beach and situated just west of Mandalay County Park (Figure 4.13-1). The existing Landscape View Inventory from KOP 2 was ranked Low to Moderate. Due to its proximity to KOP 1, KOP 2 shares the same basic existing and proposed visual character as KOP 1.

Figure 4.13-3b indicates that MGS Units 1 and 2 and their associated stack would no longer dominate the character of proposed views from this location. Demolition of MGS Units 1 and 2 would reduce the prominence and strong geometric form associated with MGS Units 1 and 2. Although the proposed P3 stack would remain highly visible from KOP 2 once demolition is complete, the overall impact of the demolition to the landscape quality would be beneficial. Similar to KOP 1, the demolition of MGS Units 1 and 2 would reduce the VAC for new structural development, but would increase the natural

character of the landscape in doing so (see Appendix C, rankings for KOP 2). However, reduction in VAC would only occur after P3 was constructed, so the basic character elements of form, line, color, and texture of views would remain intact, though less prominent with the demolition of MGS Units 1 and 2 but continued existence of P3.

Based on the above, demolition of MGS Units 1 and 2 would have less-than-significant impacts to the visual character and quality of the site and its surroundings, and would ultimately improve the visual quality of views from KOP 2.

Key Observation Point No. 3

KOP 3 is approximately 0.22 mile northwest of the proposed P3 stack, and is just west of McGrath Lake and south of the Santa Clara Estuary (Figure 4.13-1). The existing Landscape View Inventory was ranked Low to Moderate.

Demolition of MGS Units 1 and 2 and the stack would remove substantial bulk, mass, and geometric form from the dominant character of the landscape. From KOP 3, P3 would dominate views once MGS Units 1 and 2 are removed, but the demolition would improve the overall visual quality by reducing the dominant industrial character of proposed views. The removal of MGS Units 1 and 2 would decrease the level of contrast that the facility in total would have on the surrounding landscape, which would also result in a higher degree of harmony within proposed views from KOP 3 by reducing the prominence of structural form (Appendix C, rankings for KOP 3). Furthermore, because the project prominence associated with demolition of MGS Units 1 and 2 would be weak, the overall potential for adverse change is reduced and scenic quality increased. Similar to KOP 1 and 2, the demolition of MGS Units 1 and 2 and the MGS stack would reduce the VAC of this landscape. However, reduction in VAC would only occur after P3 was constructed, so the basic character elements of form, line, color, and texture of views would remain intact, though less prominent with the demolition of MGS Units 1 and 2 but continued existence of P3.

Figure 4.13-4b indicates that the proposed P3 facility would retain its dominance from KOP 3 along McGrath State Beach. However, demolition of MGS Units 1 and 2 would eliminate a substantial contribution to the existing degree of contrasting elements in this view.

The factors described above indicate that demolition of Units 1 and 2 would have less-than-significant impacts to the existing visual character and quality of the site and its surroundings, and would result in an overall net benefit to visual quality.

Key Observation Point No. 4

KOP 4 is on Victoria Avenue just south of its intersection with West 5th Street near the Rancho Victoria Plaza (Figure 4.13-1). West 5th Street is a locally designated scenic road, and the agricultural area (also known as Oxnard-Ventura Greenbelt) just west of this KOP is a designated scenic area. The existing Landscape View Inventory was ranked Moderate at this KOP.

Figure 4.13-5b indicates that the demolition of MGS Units 1 and 2 and the MGS stack would improve the overall visual quality of the landscape viewer from KOP 4. This is because demolition of MGS Units 1 and 2 would reduce the prominence of contrasting geometric shapes on the horizon of this view. The demolition of MGS Units 1 and 2 would reduce the bulk, mass, and scale of existing contrasting structural elements in this view, thereby improving the overall visual quality. Demolition of MGS Units 1 and 2 would improve the prominence of the agricultural and dune areas in this existing view by eliminating the contrast and attention created by the mass of MGS Units 1 and 2 in the background on the horizon line.

Upon completion of demolition, the P3 facility would remain moderately prominent in proposed views, and demolition of MGS Units 1 and 2 would reduce the overall VAC of this landscape. However, reduction in VAC would only occur after P3 was constructed, so the basic character elements of form, line, color, and texture of views would remain intact, though less prominent with the demolition of MGS Units 1 and 2 but continued existence of P3.

The factors described above indicate that demolition of MGS Units 1 and 2 would have less-than-significant impacts to the existing visual character and quality of the site and its surroundings, and would result in an overall net benefit to visual quality.

Key Observation Point No. 5

KOP 5 is on the eastern side of North Harbor Boulevard at the entrance to the North Shore at Mandalay Bay residential subdivision (Figure 4.13-1). The existing Landscape View Inventory was ranked Moderate from this location.

The simulation produced from this KOP (Figure 4.13-6b) indicates that P3 would no longer be co-dominant with MGS Units 1 and 2 and the stack. Demolition of MGS Units 1 and 2 would reduce the degree of contrasting elements that exist in this landscape by reducing the prominence of geometric bulk and mass associated with MGS Units 1 and 2. Removal of MGS Units 1 and 2 would increase the visual harmony and unity of the landscape viewed from KOP 5, but it would also reduce the overall VAC of the landscape to moderate (see Appendix C, rankings for KOP 5). However, this would only occur after P3 was constructed, so the character of long-term operational views would remain somewhat similar to their current character.

The factors described above indicate that demolition of MGS Units 1 and 2 would have less-than-significant impacts to the existing visual character and quality of the site and its surroundings, and would result in an overall net benefit to visual quality.

Light and Glare

Demolition of MGS Units 1 and 2 would reduce the overall presence of night-time lighting within the VSOI. This would be a beneficial/less-than-significant impact to the night-time lighting conditions. The demolition of MGS Units 1 and 2 would not create significant glint/glare or night-lighting impacts from backscatter light and night lighting that the average viewer may experience when looking toward the project site. Therefore, impacts from light and glare would be less than significant.

Water Vapor Plume

No visible steam plumes will be created as a result of demolition of MGS Units 1 and 2.

4.13.3 Cumulative Impacts Analyses

The analysis presented in Section 4.13.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The project would not result in additional impacts to visual resources as a result of the project changes described herein. The demolition of Units 1 and 2 would reduce the cumulative impact of P3 to visual and aesthetic resources. Therefore, the project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts to visual resources beyond those addressed in Section 4.13.3 of the AFC.

4.13.4 Mitigation Measures

No mitigation measures are proposed beyond those addressed in Section 4.13.4 of the AFC.

4.13.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.13.5 of the AFC.

4.13.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.13.6 of the AFC.

4.13.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.13.7 of the AFC.

4.13.8 References

No references in addition to those presented in Section 4.13.8 of the AFC were used for this AFC Enhancement and Refinement.

4.14 WASTE MANAGEMENT

This section presents a discussion of the potential impacts related to waste management from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.14.1 Affected Environment

As discussed in Section 4.14, Waste Management, of the AFC, a Phase I ESA was prepared for the MGS, including MGS Units 1 and 2. The objective of the Phase I ESA was to identify recognized environmental conditions that may exist on the MGS site or the surrounding area. Previous environmental investigations, including the 1997 Phase II ESA (see Response to Data Request 74) of the MGS facility, identified known and potential subsurface impacts on the property and adjacent properties. Impacts to soil and groundwater are currently being remediated by SCE, the former owner. Remediation and closure activities associated with prior operations on the MGS property are not part of the proposed project. As described in the AFC, these activities are SCE's obligation, and include ongoing groundwater monitoring related to cleanup and closure of the three retention ponds.

4.14.1.1 Nonhazardous Solid Waste Disposal

Existing nonhazardous solid waste disposal facilities for the demolition of MGS Units 1 and 2 are listed in Table 4.14-1, Waste Recycling/Disposal Facilities for Wastes Generated during MGS Units 1 and 2 Demolition. Several available Class III landfills accept nonhazardous wastes and inert solid wastes, including construction/demolition wastes. Liquid wastes are not accepted by these landfills. Industrial process solid waste is accepted on a case-by-case basis.

4.14.1.2 Hazardous Solid Waste Disposal

Hazardous waste generated during demolition of MGS Units 1 and 2 will be taken off site for recycling or disposal by a permitted hazardous waste transporter to a permitted treatment, storage, and disposal facility or Class I landfill. There are several Class I landfills in California, including Clean Harbors Buttonwillow Landfill in Kern County, and Chemical Waste Management's Kettleman Hills Landfill in Kings County. These landfills are listed in Table 4.14-1.

4.14.1.3 Hazardous and Nonhazardous Wastewater (Noneffluent Waste Streams)

There are several California wastewater treatment and recycling facilities that accept Resource Conservation and Recovery Act of 1976 (RCRA) hazardous, non-RCRA hazardous, and nonhazardous wastewater. These facilities are described in Table 4.14-1.

4.14.2 Environmental Consequences

Wastes generated during demolition of MGS Units 1 and 2 will include scrap wood, scrap metal, concrete, wood, glass, plastic, paper, silicate and mineral wool insulation, spent welding and cutting materials, waste oil filters, used and waste oil, oily rags, spent lead acid and alkaline batteries, waste and waste ACM, and lead-based paint waste from equipment and structures. Table 2-1 lists the types and amounts of wastes anticipated to be generated by demolition of the existing MGS Units 1 and 2.

These wastes will be segregated, where practical, for recycling. Nonrecyclable wastes will be placed in covered dumpsters and removed on a regular basis by a licensed waste-handling contractor for disposal at a Class III landfill. Nonhazardous waste generated during construction phases at the project site is not expected to significantly impact already-available landfill capacity, because landfills in the area have sufficient remaining capacity, as demonstrated in Table 4.14-1. The project will comply with federal, state, and local statutes and regulations related to solid waste. Impacts associated with the nonhazardous waste management during the construction phase would be less than significant.

**Table 4.14-1
Waste Recycling/Disposal Facilities**

Solid Recycling/Waste Disposal Site	Title 23 Class	Waste Types	Permitted Throughput	Permitted Capacity	Remaining Capacity	Estimated Closure Date	Enforcement Action Taken?
Toland Road Landfill 3500 North Toland Road Santa Paula, CA	III	Nonhazardous C&D debris	1,500 tons/day	30 million cubic yards	21.983 million cubic yards	2027	No
Simi Valley Landfill and Recycling Center 2801 Madera Road Simi Valley, CA	III	Nonhazardous C&D debris (Concrete and metals recycling)	9,250 tons/day	119.6 million cubic yards	119.6 million cubic yards	2052	No
Chemical Waste Management Kettleman Hills Landfill (Industrial Waste) 35251 Old Skyline Road Kettleman City, CA 93239	I, II, and III	Hazardous waste	2,000 tons/day	18.4 million cubic yards	17.469 million cubic yards	Not available	No
Clean Harbors Buttonwillow Landfill (Solid Disposal) 2500 West Lokern Road Buttonwillow, CA 93206	I	Hazardous waste	10,500 tons/day	13,250 cubic yards	Not available	2040	No
Azusa Land Reclamation Co. Inc. 1211 West Gladstone Azusa, CA 91702	II/III	Nonfriable asbestos waste	8,000 tons/day	80.6 million cubic yards	51.5 million cubic yards	Not available	
Del Norte Regional Recycling and Transfer Station 111 S. Del Norte Boulevard Oxnard, CA 93030	No Applicable	C&D waste (recycled)	Not available	Not available	Not applicable	Not available	No
Gold Coast Recycling Facility 5275 Colt Street Ventura, CA 93003	Not applicable		Not available	Not available	Not applicable	Not available	No
American Remedial Technologies (Solid Recycling) 2680 Seminole Avenue Lynwood, CA 90262	Not applicable		Not available	Not available	Not applicable	Not available	No

**Table 4.14-1
Waste Recycling/Disposal Facilities**

Solid Recycling/Waste Disposal Site	Title 23 Class	Waste Types	Permitted Throughput	Permitted Capacity	Remaining Capacity	Estimated Closure Date	Enforcement Action Taken?
Soil Safe-Adelanto 12328 Hibiscus Avenue Adelanto, CA 92301	Not applicable		Not available	Not available	Not applicable	Not available	No
DeMenno/Kerdoon (Liquid Recycling) 2000 North Alameda Street Compton, CA 90222	Not applicable	Waste oil/oily wastewater	Not available	Not available	Not applicable	Not applicable	No
Note: C&D = construction and demolition							

As described in Section 2.2, Demolition Sequencing Process, demolition of MGS Units 1 and 2 will follow a general systematic approach that allows for cleanup and removal of HBMs; recycling of valuable materials; physical demolition and removal of equipment and structures; disposal; and final clean up.

As described in Mitigation Measure MW-9 of the AFC, prior to demolition activities, a Demolition Hazardous Building Materials Management Plan will be developed to identify, abate, and properly dispose of ACM, lead-based paint, and universal waste. For the proposed demolition of MGS Units 1 and 2, the following additional surveys will be conducted:

- A Hazardous Materials Survey will be conducted for MGS Units 1 and 2 to identify materials or equipment that are known to or have the potential to contain hazardous waste (see WM-10 in Section 4.14.4).
- A Toxic Substance Control Act (TSCA) survey will be conducted for MGS Units 1 and 2, to identify materials that would contain TSCA hazardous waste (see Mitigation Measure WM-11 in Section 2.14.4).
- A Demolition Waste Management Plan will be developed for demolition of MGS Units 1 and 2 (see Mitigation Measure WM-12 in Section 4.14.4).

Additionally, CEC standard conditions and the mitigation measures presented in Section 4.14.4 of the AFC would be implemented for demolition activities, and would further ensure that impacts from waste management would be less than significant.

4.14.3 Cumulative Impacts Analyses

The analysis presented in Section 4.14.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The demolition of MGS Units 1 and 2 would not result in new substantial impacts from waste management as a result of the project changes described herein. Therefore, the project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts from waste management beyond those addressed in Section 4.14.3 of the AFC.

The project will generate nonhazardous solid waste that will add to the total waste generated in Ventura County and in California. However, adequate recycling and landfill capacities exist to handle the waste generated by the project, as well as additional projects in Ventura County. The majority of the waste generated during the demolition of MGS Units 1 and 2 will be recycled or used onsite to fill voids. The solid waste anticipated to be generated during demolition of Units 1 and 2 will be disposed as indicated in Table 2-1. As discussed in the AFC, approximately 514,264 tons of solid waste were reported to have been placed in landfills in Ventura County in 2014. There is considerable available capacity at area landfills, as shown in Table 4.14-4 of the AFC; therefore, cumulative impacts on solid waste disposal capacity are not expected to be significant, and the project's impact on cumulative solid waste disposal capacity during demolition will be less than significant.

Demolition of MGS Units 1 and 2 will generate hazardous waste that will add to the total waste generated in Ventura County and in California. Hazardous wastes will either be recycled or disposed of in a licensed disposal facility, as appropriate. Hazardous waste treatment and disposal capacity in California is adequate to handle the hazardous waste generated by the project, as well as additional past, present, and reasonably foreseeable projects in Ventura County. Therefore, the project's incremental impact on cumulative hazardous waste recycling, treatment, and disposal capacity will be less than significant.

4.14.4 Mitigation Measures

Demolition of MGS Units 1 and 2 will have no significant effect on waste management, and no mitigation measures are required. In the AFC, the Applicant proposed conditions of certification (i.e., WM-1 through WM-9) to minimize potential impacts, and to ensure that P3 conforms to all LORS. Applicant proposes the following additional conditions to minimize potential impacts associated with demolition of MGS Units 1 and 2.

WM-10: Hazardous Materials Inventory/Survey

Hazardous materials surveys will be conducted for Units 1 and 2 to identify materials or equipment that are known to or have the potential to contain hazardous waste. Historical building materials and equipment may contain elevated levels of metals or chemical constituents that will require additional management, and proper handling and disposal.

Verification: Applicant shall submit the Hazardous Materials Inventory/Survey to the CPM for approval at least 30 days prior to the initiation of demolition activities at the site.

WM-11: TSCA Hazardous Materials/Waste Survey

A TSCA Hazardous Materials/Waste Survey will be conducted prior to demolition activities for MGS Units 1 and 2. TSCA hazardous materials—including painted or coated surfaces; caulking or seal surfaces; and material with TSCA-identified equipment such as transformers, compressors or other equipment identified with polychlorinated biphenyls greater than 50 parts per million—will be managed as TSCA hazardous waste. These wastes will be segregated from non-RCRA and nonhazardous waste streams, analyzed for characterization and profiling, and disposed of at a U.S. EPA TSCA-approved facility.

Verification: Applicant shall submit the TSCA Hazardous Materials/Waste Survey to the CPM for approval at least 30 days prior to the initiation of demolition activities at the site.

WM-12: Demolition Waste Management Plan

Applicant shall prepare a Demolition Waste Management Plan for all wastes generated during demolition of MGS Units 1 and 2, and shall submit the plan to the CPM for review and approval. The plan shall contain, at a minimum, the following:

- A description of all demolition waste streams, including projections of frequency, amounts generated, and hazard classifications.
- Management methods to be used for each waste stream, including waste container and label requirements; accumulation, handling, transport, treatment and disposal procedures for each waste; waste minimization and recycling procedures, housekeeping and BMPs to be employed; and preparedness, prevention, contingency, and emergency procedures.
- City of Oxnard Construction and Demolition Material (C&D) Environmental Resources Management and Recycling Plan that meets or exceeds the waste diversion goals established by the Integrated Waste Management Compliance Act (Pub. Resources Code, § 41780 et seq.) and Ventura County Ordinance requirements to divert from disposal at least 50 percent of materials generated at the project through reuse and recycling methods. After completion of demolition, the Applicant will complete the Environmental Resources Management and Recycling Construction and Demolition Report, and provide legible copies of weight tickets, receipts, or invoices for materials sent to disposal or reuse/recycling facilities.

- All facility employees will receive awareness training for hazardous waste segregation, accumulation, and labeling; inspection of satellite accumulation areas; spill contingencies; and waste minimization procedures, in accordance with California Code of Regulations Title 22. The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.14.5 of the AFC.

Verification: Applicant shall submit the Demolition Waste Management Plan to the CPM for approval at least 30 days prior to the initiation of demolition activities at the site.

CEC standard conditions and the mitigation measures presented in Section 4.14.4 of the AFC would be implemented for demolition activities, and would further ensure that impacts from waste management would be less than significant.

4.14.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.14.5 of the AFC.

4.14.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.14.6 of the AFC.

4.14.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.14.7 of the AFC.

4.14.8 References

No references in addition to those presented in Section 4.14.8 of the AFC were used for this AFC Enhancement and Refinement.

4.15 WATER RESOURCES

This section presents a discussion of the potential impacts related to water resources from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.15.1 Affected Environment

The demolition of MGS Units 1 and 2 will occur entirely within the MGS property and within the water resources study area presented in the AFC.

4.15.2 Environmental Consequences

Demolition of MGS Units 1 and 2 would increase the affected footprint within the MGS property. The estimated additional area of disturbance is approximately 3.5 acres. This portion of the MGS property is currently occupied by the building and structures that will be demolished to grade and covered with gravel. The above-grade elements of MGS Units 1 and 2 within the 3.5-acre demolition area will be demolished to grade. No excavation to remove foundations or piping would be required; therefore, there would be no dewatering required during demolition. Below-grade spaces will be filled with crushed concrete to alleviate safety concerns, and to minimize potential for these spaces to act as groundwater conduits. The existing stormwater sumps in the footprint of the demolition area will be maintained. Similar to the construction of P3, Applicant will develop a SWPPP and implement BMPs during demolition activities.

There will be no increase in impervious surface area, because this area was previously covered by structures and pavement. Stormwater runoff will be directed to the stormwater system, and discharged to the ocean in accordance with the existing MGS National Pollutant Discharge Elimination System Permit Number CA0001180.

The source of water during demolition will be potable water provided by the City of Oxnard. As described in the AFC, recycled water is currently unavailable.

During demolition activities, the project would use water for dust suppression, equipment washdown, and preparation of concrete. Table 2-4 summarizes the estimated amount of water to be used during the 15-month demolition period. A total of approximately 2.5 acre-feet would be used for the demolition activities.

Domestic water use for demolition workers is also summarized in Table 2-4. The number of demolition workers will vary from approximately 21 to 74. Assuming 10 gallons per day per person, domestic water use for these workers would be approximately 0.75 acre-feet for the 15-month period.

Therefore, the total combined water use during demolition over the 15-month period will be approximately 3.2 acre-feet (i.e., 2.5 acre-feet for demolition activities and 0.75 acre-foot for domestic water use).

The demolition will overlap with 15 months of P3 operations. Therefore, total potable water use will be slightly higher for this initial time period. During operations, P3 will be a dry-cooled facility and will use very little water (less than 20 acre-feet per year [AFY], of which 16 AFY will be for process water needs and 3 AFY will be for domestic water needs) (see AFC Table 2.7-5 in AFC Chapter 2, Project Description). The potable water use during the 15 months of P3 operations, when demolition activities are also occurring, would still comprise less than 0.1 percent of City of Oxnard water supplies, as discussed in AFC Section 4.15, Water Resources, of the AFC.

Impacts from operations of the project are unchanged from the discussion presented in Section 4.15.2 of the AFC. The project changes would not result in any changes to operational water use or wastewater discharge, and would not change the project's vulnerability to flooding.

4.15.3 Cumulative Impacts Analyses

The analysis presented in Section 4.15.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The project would not result in additional impacts to water resources as a result of the project changes described herein. Therefore, the project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts to water resources beyond those addressed in Section 4.15.3 of the AFC.

4.15.4 Mitigation Measures

No mitigation measures are proposed beyond those addressed in Section 4.15.6 of the AFC.

4.15.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.15.5 of the AFC.

4.15.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.15.6 of the AFC.

4.15.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.15.7 of the AFC.

4.15.8 References

No references in addition to those presented in Section 4.15.8 of the AFC were used for this AFC Enhancement and Refinement.

4.16 WORKER SAFETY

This section presents a discussion of the potential impacts related to worker safety from the demolition of MGS Units 1 and 2, as described in Section 2.0 of this AFC Enhancement and Refinement.

4.16.1 Affected Environment

Demolition activities will occur within the existing MGS facility. The affected environment (exposure to hazards and worker safety procedures) resulting from the demolition of MGS Units 1 and 2 will be similar to that presented for the construction of P3 in Section 4.16.1 of the AFC.

Asbestos is a mineral fiber that occurs in rock and soil. Because of its fiber strength and heat resistance, it has been used in a variety of building construction materials for insulation and as a fire-retardant. Thermal system insulation (formed or spray-on) is the ACM of greatest concern for response and recovery worker exposure (Occupational Safety and Health Administration). Insulation containing asbestos is present in MGS Units 1 and 2, and would be removed prior to demolition of the structures. Exposure to asbestos and ACM increases workers' risk of developing lung diseases, including asbestosis, lung cancer, and mesothelioma.

4.16.2 Environmental Consequences

Other than increased potential exposure to ACM, potential impacts due to worker exposure to hazardous materials, noise, and accidental injury are similar to those for the construction of P3 and can be mitigated to insignificant levels by compliance with California Occupational Safety and Health Administration regulations.

The applicant would designate an onsite representative to be present during all ACM demolition or handling procedures. The onsite representative would successfully complete the Asbestos Abatement Contractor/Supervisor course pursuant to the Asbestos Hazard Emergency Response Act. Personnel conducting asbestos removal would have completed Asbestos Abatement Worker Training pursuant to the Asbestos Hazard Emergency Response Act, and be equipped with the appropriate personal protective equipment (PPE). With appropriately trained workers and use of PPE, asbestos removal activities prior to demolition would not be expected to impact worker safety.

4.16.3 Cumulative Impacts Analyses

The analysis presented in Section 4.16.3 of the AFC concluded that the proposed project's contribution to cumulative impacts would be less than significant. The project would not result in additional impacts to worker safety as a result of the project changes described herein. Therefore, the project, including the demolition of MGS Units 1 and 2, will not result in any significant cumulative impacts to worker safety.

4.16.4 Mitigation Measures

No significant adverse impacts were identified. Therefore, no mitigation measures would be necessary.

4.16.5 Laws, Ordinances, Regulations, and Standards

The project, including the changes discussed herein, will comply with applicable LORS described in Section 4.16.8 of the AFC.

4.16.6 Involved Agencies and Agency Contacts

The project, including the demolition of MGS Units 1 and 2, would not require changes to the agencies identified in Section 4.16.9 of the AFC.

4.16.7 Permits Required and Permit Schedule

The project, including the demolition of MGS Units 1 and 2, would not require changes to the permits required and permit schedule described in Section 4.16.10 of the AFC.

4.16.8 References

No references in addition to those presented in Section 4.16.11 of the AFC were used for this AFC Enhancement and Refinement.

FIGURES

11/11/15 hk \\1578sr-v2\03\gs\Graphics\NRG Puente Power Project\Demo Supplement\Figs_Supplemental_nov15.indd



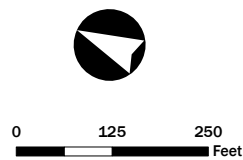
**VISUAL SIMULATION OF PUENTE POWER PROJECT
INCLUDING DEMOLITION OF MGS UNITS 1 AND 2**

NRG
Puente Power Project
Oxnard, California
November 2015

FIGURE 1-1

Source: Aerial Imagery, USGS 2013.

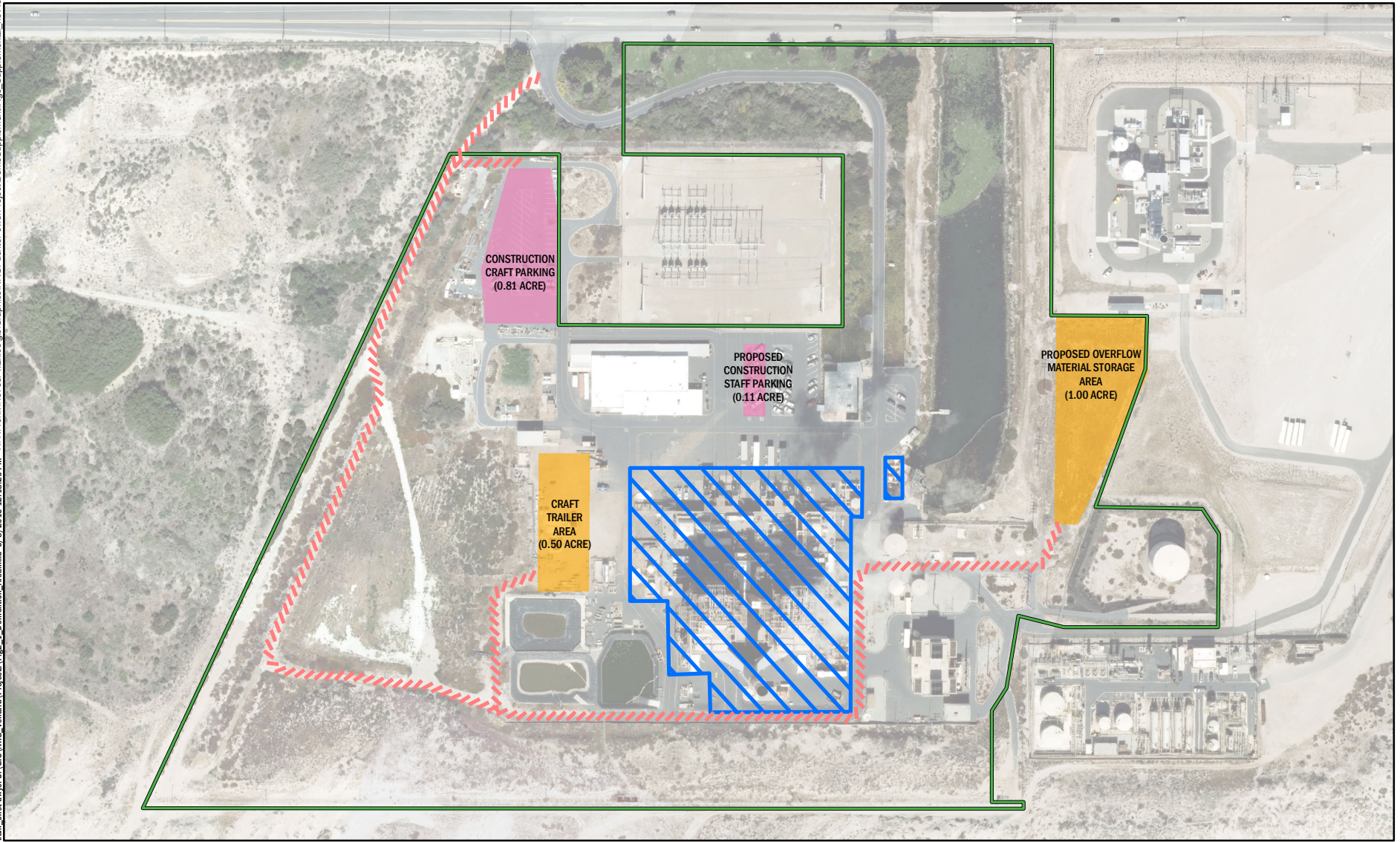
- Demolition Access on Existing Roads
- Aboveground Demolition
- Mandalay Generating Station Property
- Staging Area
- Existing Parking Used During Demolition

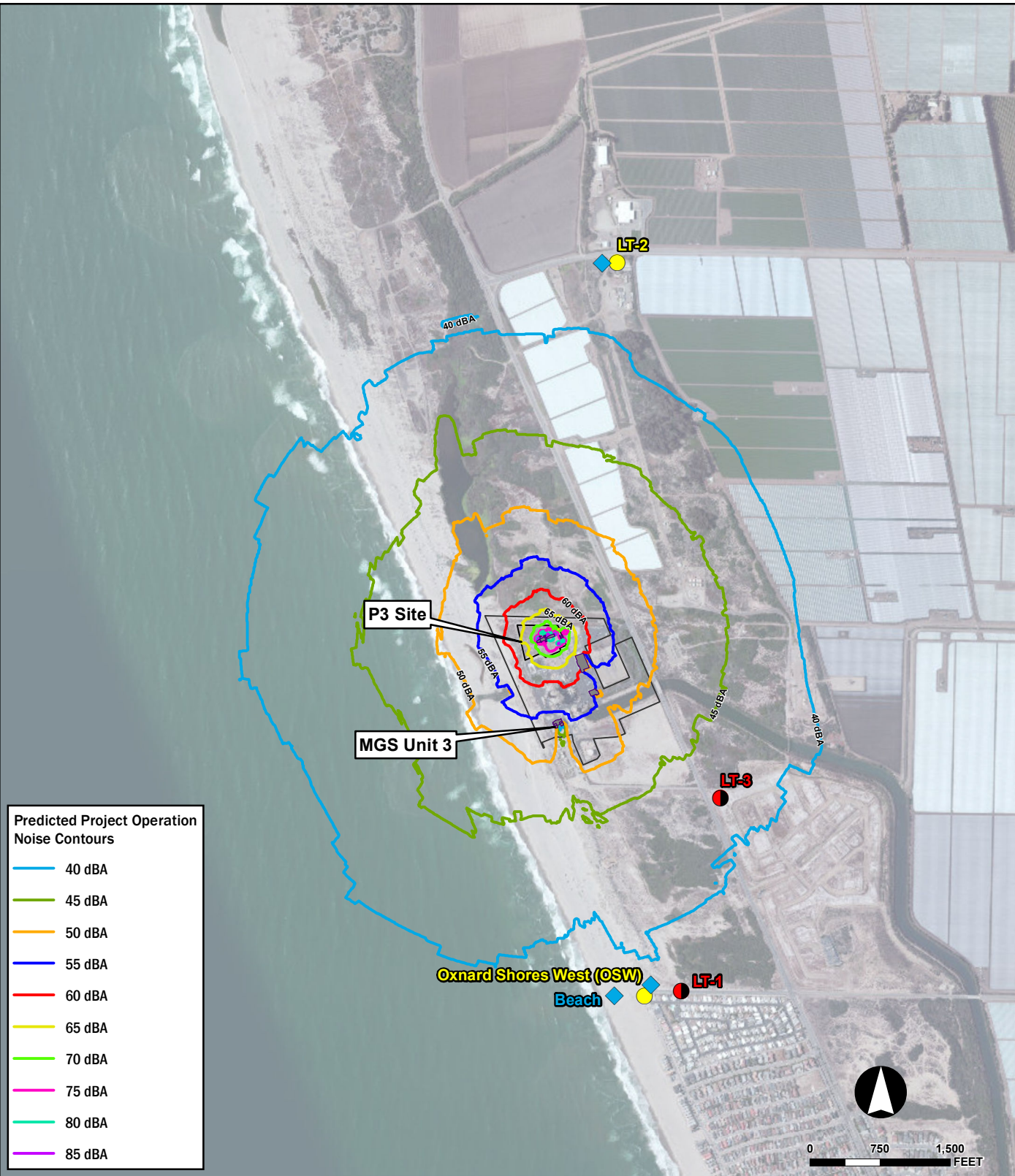


DEMOLITION AREAS

NRG
Puente Power Project
Oxnard, California
November 2015

FIGURE 2-1





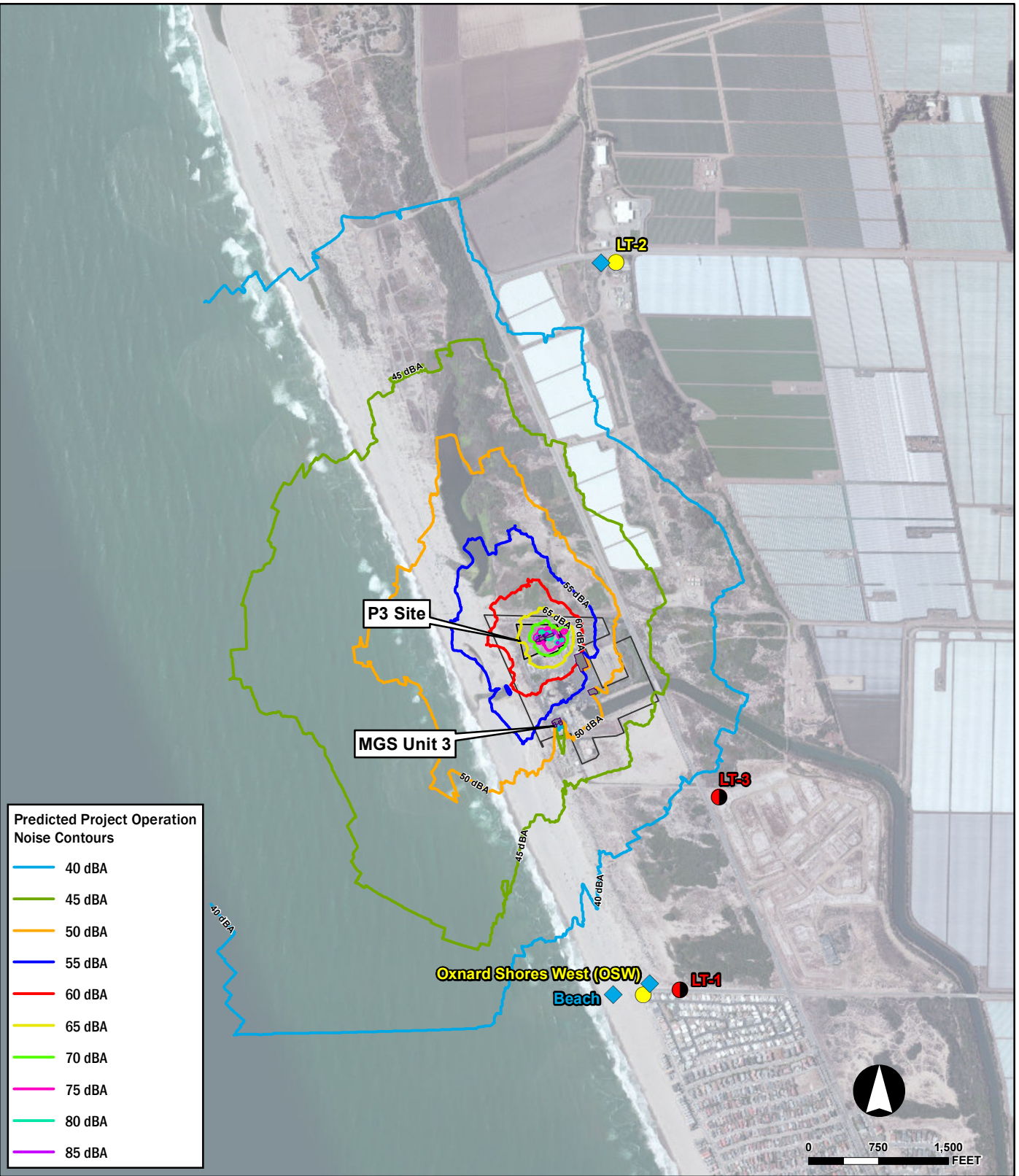
Source: Basemap, Esri Imagery, 2013; Contours/Receptors, URS 2015.

CALM CONDITIONS WITH MGS UNIT 3 OFFLINE AND MGS UNITS 1 AND 2 DEMOLISHED

NRG
Puente Power Project
November 2015
Oxnard, California

FIGURE 4.7-1

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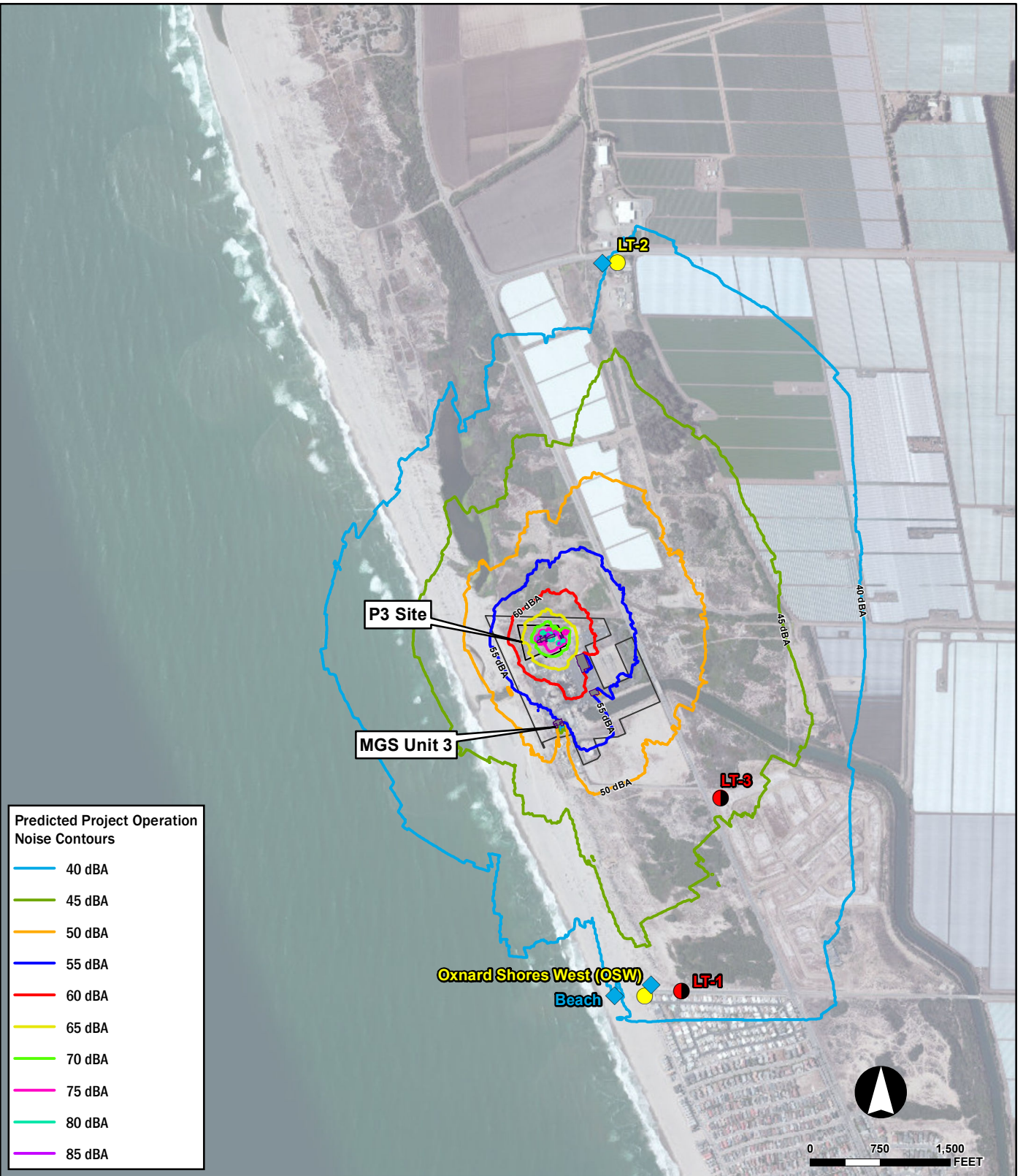


**EAST WIND CONDITIONS
WITH MGS UNIT 3 OFFLINE AND
MGS UNITS 1 AND 2 DEMOLISHED**

- Noise Sensitive Receptor (NSR)
- ◆ Short-term (ST) Sound Pressure Level (SPL) Measurement Location
- NSR and Long-term (LT) SPL Monitoring Location
- Building

NRG
Puente Power Project
November 2015
Oxnard, California

FIGURE 4.7-2



Source: Basemap, Esri Imagery, 2013; Contours/Receptors, URS 2015.

**WEST WIND CONDITIONS
WITH MGS UNIT 3 OFFLINE AND
MGS UNITS 1 AND 2 DEMOLISHED**

NRG
Puente Power Project
November 2015
Oxnard, California

FIGURE 4.7-3

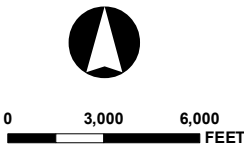


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Source: Imagery, ESRI 2013.

-  Key Observation Point and Photo Direction
-  Puente Power Project Site
-  Mandalay Generating Station Property
-  Greenbelt

- Stack Visibility**
-  Neither Stack Visible
-  Only Existing Stack Visible
-  Both Stacks Visible



**KEY OBSERVATION POINTS
VISUAL SPHERE OF INFLUENCE**

NRG
Puente Power Project
Oxnard, California
November 2015

FIGURE 4.13-1

11/11/15 hk \\1578sr-w2kf03\gis\Graphics\NRG_Puente Power Project\Demo SupplementalFigs_Supplemental_nov15.indd



Source Imagery, Esri 2013

-  Key Observation Point and Photo Direction
-  Puente Power Project Site
-  Mandalay Generating Station Property

Photograph Information

Time of photograph:	12:26 PM
Date of photograph:	2-6-15
Weather condition:	Cloudy
Bearing:	North
Latitude:	34°11'51.01"N
Longitude:	119°14'55.86"W
Distance to stack:	N/A
Camera:	Nikon D700
Lens:	Nikon 50mm f/1.4D AF
Focal length:	50mm
Aperture:	F/14

Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



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FIGURE 4.13-2A

11/11/15 hk \\1578sr-w2kf03\gis\Graphics\NRG Puente Power Project\Demo SupplementalFigs_Supplemental_nov15.indd



 **Key Observation Point and Photo Direction**

 **Puente Power Project Site**

 **Mandalay Generating Station Property**

Photograph Information

Time of photograph:	12:26 PM
Date of photograph:	2-6-15
Weather condition:	Cloudy
Bearing:	North
Latitude:	34°11'51.01"N
Longitude:	119°14'55.86"W
Distance to stack:	3,882 feet
Camera:	Nikon D700
Lens:	Nikon 50mm f/1.4D AF
Focal length:	50mm
Aperture:	F/14

Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



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**PHOTOGRAPHIC SIMULATION
WITHOUT MGS UNITS 1 AND 2
FROM KEY OBSERVATION POINT 1**

NRG
Puente Power Project
Oxnard, California

November 2015

FIGURE 4.13-2B

11/11/15 hk \\1578sr-w2kf03g\Graphics\NRG_Puente Power Project\Demo SupplementalFigs_Supplemental_nov15.indd



Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



Source Imagery, Esri 2013

-  Key Observation Point and Photo Direction
-  Puente Power Project Site
-  Mandalay Generating Station Property

Photograph Information

Time of photograph:	1:02 PM
Date of photograph:	2-6-15
Weather condition:	Cloudy
Bearing:	North
Latitude:	34°12'6.52"N
Longitude:	119°15'5.03"W
Distance to stack:	N/A
Camera:	Nikon D700
Lens:	Nikon 50mm f/1.4D AF
Focal length:	50mm
Aperture:	F/11

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11/11/15 hk \\1578sr-w2kf03g\Graphics\NRG_Puente Power Project\Demo SupplementalFigs_Supplemental_nov15.indd



Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



Source Imagery, Esri 2013

 **Key Observation Point and Photo Direction**

 **Puente Power Project Site**

 **Mandalay Generating Station Property**

Photograph Information

Time of photograph:	1:02 PM
Date of photograph:	2-6-15
Weather condition:	Cloudy
Bearing:	North
Latitude:	34°12'6.52"N
Longitude:	119°15'5.03"W
Distance to stack:	2,216 feet
Camera:	Nikon D700
Lens:	Nikon 50mm f/1.4D AF
Focal length:	50mm
Aperture:	F/11



**PHOTOGRAPHIC SIMULATION
WITHOUT MGS UNITS 1 AND 2
FROM KEY OBSERVATION POINT 2**

NRG
Puente Power Project
Oxnard, California

November 2015

FIGURE 4.13-3B

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Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



Source Imagery, Esri 2013

 **Key Observation Point and Photo Direction**

 **Puente Power Project Site**

 **Mandalay Generating Station Property**

Photograph Information

Time of photograph:	1:50 PM
Date of photograph:	2-6-15
Weather condition:	Cloudy
Bearing:	South
Latitude:	34°12'33.42"N
Longitude:	119°15'18.96"W
Distance to stack:	N/A
Camera:	Nikon D700
Lens:	Nikon 50mm f/1.4D AF
Focal length:	50mm
Aperture:	F/13

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**EXISTING CONDITIONS FROM
KEY OBSERVATION POINT 3**

NRG
Puente Power Project
Oxnard, California

November 2015

FIGURE 4.13-4A

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-  Key Observation Point and Photo Direction
-  Puente Power Project Site
-  Mandalay Generating Station Property

Photograph Information

Time of photograph:	1:50 PM
Date of photograph:	2-6-15
Weather condition:	Cloudy
Bearing:	South
Latitude:	34°12'33.42"N
Longitude:	119°15'18.96"W
Distance to stack:	1,150 feet
Camera:	Nikon D700
Lens:	Nikon 50mm f/1.4D AF
Focal length:	50mm
Aperture:	F/13

Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



**PHOTOGRAPHIC SIMULATION
WITHOUT MGS UNITS 1 AND 2
FROM KEY OBSERVATION POINT 3**

NRG
Puente Power Project
Oxnard, California
November 2015

FIGURE 4.13-4B

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11/11/15 hk \\1578sr-w2k103\gis\Graphics\NRG\Puente Power Project\Demo SupplementalFigs_Supplemental_nov15.indd



Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



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Source Imagery, Esri 2013

-  Key Observation Point and Photo Direction
-  Puente Power Project Site
-  Mandalay Generating Station Property

Photograph Information

Time of photograph:	3:49 PM
Date of photograph:	2-6-15
Weather condition:	Partly Cloudy
Bearing:	Northwest
Latitude:	34°11'43.61"N
Longitude:	119°13'15.72"
Distance to stack:	N/A
Camera:	Nikon D700
Lens:	Nikon 50mm f/1.4D AF
Focal length:	50mm
Aperture:	F/13

**EXISTING CONDITIONS FROM
KEY OBSERVATION POINT 4**

NRG
Puente Power Project
Oxnard, California
November 2015

FIGURE 4.13-5A

11/11/15 hk \\1578sr-w2kf03g\Graphics\NRG\Puente Power Project\Demo SupplementalFigs_Supplemental_nov15.indd



Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



Source Imagery, Esri 2013

-  Key Observation Point and Photo Direction
-  Puente Power Project Site
-  Mandalay Generating Station Property

Photograph Information

Time of photograph:	3:49 PM
Date of photograph:	2-6-15
Weather condition:	Partly Cloudy
Bearing:	Northwest
Latitude:	34°11'43.61"N
Longitude:	119°13'15.72"
Distance to stack:	1.96 miles
Camera:	Nikon D700
Lens:	Nikon 50mm f/1.4D AF
Focal length:	50mm
Aperture:	F/13

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11/11/15 hk \\1578sr-w2kf03g\Graphics\NRG Puente Power Project\Demo SupplementalFigs_Supplemental_nov15.indd



Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



Source Imagery, Esri 2013

 **Key Observation Point and Photo Direction**

 **Puente Power Project Site**

 **Mandalay Generating Station Property**

Photograph Information

Time of photograph:	4:17 PM
Date of photograph:	2-6-15
Weather condition:	Partly Cloudy
Bearing:	Northwest
Latitude:	34°12'3.06"N
Longitude:	119°14'38.01"W
Distance to stack:	N/A
Camera:	Nikon D700
Lens:	Nikon 50mm f/1.4D AF
Focal length:	50mm
Aperture:	F/13

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11/11/15 hk \\1578sr-w2k103\gis\Graphics\NRG_Puente Power Project\Demo SupplementalFigs_Supplemental_nov15.indd



Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



Source Imagery, Esri 2013

 **Key Observation Point and Photo Direction**

 **Puente Power Project Site**

 **Mandalay Generating Station Property**

Photograph Information	
Time of photograph:	4:17 PM
Date of photograph:	2-6-15
Weather condition:	Partly Cloudy
Bearing:	Northwest
Latitude:	34°12'3.06"N
Longitude:	119°14'38.01"W
Distance to stack:	3,516 feet
Camera:	Nikon D700
Lens:	Nikon 50mm f/1.4D AF
Focal length:	50mm
Aperture:	F/13

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APPENDIX A

AIR QUALITY

TABLE 4.1-8

Demolition of the MGS Units 1 and 2 – Monthly and Annual Emission Calculations

Project Month		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		ROG														
Onsite Off-Road Equipment	(tons/month)	2.30E-02	2.63E-02	3.13E-02	3.87E-02	4.01E-02	3.61E-02	3.45E-02	3.00E-02	2.72E-02	3.06E-02	2.64E-02	2.64E-02	2.47E-02	1.55E-02	1.50E-02
Onsite Vehicle	(tons/month)	2.66E-06	4.43E-06	4.14E-06	1.51E-05	1.87E-05	1.99E-05	2.68E-05	2.38E-05	2.87E-05	2.41E-05	2.39E-05	1.76E-05	1.38E-05	1.28E-05	1.14E-05
Onsite Off-Road + Onsite Vehicle	(tons/month)	2.30E-02	2.63E-02	3.13E-02	3.87E-02	4.01E-02	3.61E-02	3.45E-02	3.00E-02	2.72E-02	3.06E-02	2.64E-02	2.64E-02	2.47E-02	1.55E-02	1.50E-02
Offsite Haul Truck	(tons/month)	2.60E-04	5.20E-04	4.80E-04	1.62E-03	1.58E-03	1.88E-03	2.44E-03	2.11E-03	2.57E-03	2.38E-03	2.38E-03	1.58E-03	1.14E-03	1.14E-03	9.80E-04
Offsite Delivery Truck	(tons/month)	0.00E+00	0.00E+00	0.00E+00	3.00E-04	3.10E-04	2.90E-04	6.20E-04	5.80E-04	8.10E-04	3.00E-04	2.90E-04	2.90E-04	2.90E-04	3.00E-04	2.90E-04
Offsite Worker Travel	(tons/month)	1.31E-03	1.81E-03	1.74E-03	1.74E-03	4.90E-03	3.82E-03	4.78E-03	4.35E-03	4.01E-03	4.51E-03	4.35E-03	3.88E-03	3.52E-03	2.44E-03	2.23E-03
Onsite Off-Road Equipment	Rolling 12-month total (tons/year)												0.37	0.37	0.36	0.35
Onsite Off-Road + Onsite Vehicle	Rolling 12-month total (tons/year)												0.37	0.37	0.36	0.35
Offsite Haul Truck	Rolling 12-month total (tons/year)												0.02	0.02	0.02	0.02
Offsite Delivery Truck	Rolling 12-month total (tons/year)												0.00	0.00	0.00	0.00
Offsite Worker Travel	Rolling 12-month total (tons/year)												0.04	0.04	0.04	0.04
		NOx														
Onsite Off-Road Equipment	(tons/month)	0.49	0.55	0.63	0.77	0.80	0.72	0.67	0.58	0.53	0.60	0.52	0.52	0.49	0.34	0.33
Onsite Vehicle	(tons/month)	2.88E-05	5.47E-05	5.05E-05	2.44E-04	2.62E-04	2.96E-04	4.07E-04	2.84E-04	3.55E-04	2.88E-04	2.86E-04	2.03E-04	1.54E-04	1.52E-04	1.34E-04
Onsite Off-Road + Onsite Vehicle	(tons/month)	0.49	0.55	0.63	0.77	0.80	0.72	0.67	0.58	0.53	0.60	0.52	0.52	0.49	0.34	0.33
Offsite Haul Truck	(tons/month)	0.00477	0.00974	0.00903	0.0293	0.0284	0.0335	0.0439	0.0297	0.0361	0.0333	0.0333	0.0222	0.016	0.016	0.0137
Offsite Delivery Truck	(tons/month)	0.000	0.000	0.000	0.005	0.005	0.005	0.011	0.008	0.011	0.004	0.004	0.004	0.004	0.004	0.004
Offsite Worker Travel	(tons/month)	0.004	0.006	0.005	0.005	0.015	0.012	0.015	0.013	0.012	0.014	0.013	0.012	0.011	0.008	0.007
Onsite Off-Road Equipment	Rolling 12-month total (tons/year)												7.38	7.39	7.18	6.88
Onsite Off-Road + Onsite Vehicle	Rolling 12-month total (tons/year)												7.39	7.39	7.18	6.88
Offsite Haul Truck	Rolling 12-month total (tons/year)												0.31	0.32	0.33	0.34
Offsite Delivery Truck	Rolling 12-month total (tons/year)												0.06	0.06	0.06	0.07
Offsite Worker Travel	Rolling 12-month total (tons/year)												0.13	0.13	0.14	0.14
		CO														
Onsite Off-Road Equipment	(tons/month)	0.890	1.003	1.161	1.432	1.487	1.340	1.243	1.092	0.993	1.117	0.976	0.976	0.921	0.624	0.601
Onsite Vehicle	(tons/month)	5.21E-05	8.04E-05	7.61E-05	1.96E-04	2.97E-04	2.90E-04	3.81E-04	3.39E-04	3.87E-04	3.49E-04	3.43E-04	2.65E-04	2.15E-04	1.85E-04	1.65E-04
Onsite Off-Road + Onsite Vehicle	(tons/month)	0.890	1.003	1.161	1.432	1.487	1.341	1.244	1.092	0.994	1.118	0.976	0.976	0.921	0.624	0.601
Offsite Haul Truck	(tons/month)	0.003	0.005	0.005	0.018	0.018	0.021	0.027	0.023	0.029	0.027	0.027	0.018	0.013	0.013	0.011
Offsite Delivery Truck	(tons/month)	0.000	0.000	0.000	0.003	0.003	0.003	0.006	0.006	0.008	0.003	0.003	0.003	0.003	0.003	0.003
Offsite Worker Travel	(tons/month)	0.038	0.053	0.051	0.051	0.144	0.112	0.140	0.127	0.117	0.132	0.127	0.113	0.103	0.071	0.065
Onsite Off-Road Equipment	Rolling 12-month total (tons/year)												13.71	13.74	13.36	12.80
Onsite Off-Road + Onsite Vehicle	Rolling 12-month total (tons/year)												13.71	13.74	13.37	12.81
Offsite Haul Truck	Rolling 12-month total (tons/year)												0.22	0.23	0.24	0.24
Offsite Delivery Truck	Rolling 12-month total (tons/year)												0.04	0.04	0.05	0.05
Offsite Worker Travel	Rolling 12-month total (tons/year)												1.20	1.27	1.29	1.30
		SO2														
Onsite Off-Road Equipment	(tons/month)	1.46E-03	1.66E-03	1.94E-03	2.40E-03	2.49E-03	2.26E-03	2.13E-03	1.85E-03	1.68E-03	1.89E-03	1.65E-03	1.65E-03	1.55E-03	1.01E-03	9.70E-04
Onsite Vehicle	(tons/month)	2.44E-07	3.92E-07	3.90E-07	1.16E-06	1.47E-06	1.52E-06	2.10E-06	1.86E-06	2.22E-06	1.90E-06	1.88E-06	1.39E-06	1.12E-06	1.00E-06	9.02E-07
Onsite Off-Road + Onsite Vehicle	(tons/month)	1.46E-03	1.66E-03	1.94E-03	2.40E-03	2.49E-03	2.26E-03	2.13E-03	1.85E-03	1.68E-03	1.89E-03	1.65E-03	1.65E-03	1.55E-03	1.01E-03	9.71E-04
Offsite Haul Truck	(tons/month)	2.00E-05	4.00E-05	4.00E-05	1.20E-04	1.10E-04	1.30E-04	1.70E-04	1.50E-04	1.80E-04	1.70E-04	1.70E-04	1.10E-04	8.00E-05	8.00E-05	7.00E-05
Offsite Delivery Truck	(tons/month)	0.00E+00	0.00E+00	0.00E+00	2.00E-05	2.00E-05	2.00E-05	5.00E-05	4.00E-05	6.00E-05	2.00E-05	2.00E-05	2.00E-05	2.00E-05	2.00E-05	2.00E-05
Offsite Worker Travel	(tons/month)	1.40E-04	1.90E-04	1.90E-04	1.90E-04	5.20E-04	4.10E-04	5.10E-04	4.90E-04	4.60E-04	5.10E-04	4.90E-04	4.40E-04	4.00E-04	2.80E-04	2.50E-04
Onsite Off-Road Equipment	Rolling 12-month total (tons/year)												0.02	0.02	0.02	0.02
Onsite Off-Road + Onsite Vehicle	Rolling 12-month total (tons/year)												0.02	0.02	0.02	0.02
Offsite Haul Truck	Rolling 12-month total (tons/year)												0.00	0.00	0.00	0.00
Offsite Delivery Truck	Rolling 12-month total (tons/year)												0.00	0.00	0.00	0.00
Offsite Worker Travel	Rolling 12-month total (tons/year)												0.00	0.00	0.00	0.00

TABLE 4.1--8 (CONT.)

Demolition of the MGS Units 1 and 2 – Monthly and Annual Emission Calculations

Project Month		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		PM10														
Onsite Off-Road Equipment	(tons/month)	2.32E-03	2.65E-03	3.11E-03	3.85E-03	4.00E-03	3.63E-03	3.41E-03	2.99E-03	2.71E-03	3.05E-03	2.65E-03	2.65E-03	2.49E-03	1.62E-03	1.56E-03
Onsite Vehicle	(tons/month)	5.99E-07	1.12E-06	1.01E-06	4.90E-06	5.28E-06	6.01E-06	8.22E-06	7.07E-06	8.74E-06	7.03E-06	7.02E-06	5.00E-06	3.84E-06	3.77E-06	3.34E-06
Onsite Off-Road + Onsite Vehicle	(tons/month)	2.32E-03	2.65E-03	3.11E-03	3.85E-03	4.01E-03	3.64E-03	3.42E-03	3.00E-03	2.72E-03	3.06E-03	2.66E-03	2.66E-03	2.49E-03	1.62E-03	1.56E-03
Offsite Haul Truck	(tons/month)	1.00E-04	2.00E-04	1.80E-04	5.80E-04	5.60E-04	6.70E-04	8.70E-04	7.40E-04	8.90E-04	8.20E-04	8.20E-04	5.50E-04	4.00E-04	4.00E-04	3.40E-04
Offsite Delivery Truck	(tons/month)	0.00E+00	0.00E+00	0.00E+00	1.10E-04	1.20E-04	1.10E-04	2.30E-04	2.00E-04	2.70E-04	1.00E-04	1.00E-04	1.00E-04	1.00E-04	1.00E-04	1.00E-04
Offsite Worker Travel	(tons/month)	8.00E-05	1.10E-04	1.10E-04	1.10E-04	3.00E-04	2.30E-04	2.90E-04	2.80E-04	2.60E-04	2.90E-04	2.80E-04	2.50E-04	2.30E-04	1.60E-04	1.50E-04
Onsite Off-Road Equipment	Rolling 12-month total (tons/year)												0.037	0.037	0.036	0.035
Onsite Off-Road + Onsite Vehicle	Rolling 12-month total (tons/year)												0.037	0.037	0.036	0.035
Offsite Haul Truck	Rolling 12-month total (tons/year)												0.007	0.007	0.007	0.008
Offsite Delivery Truck	Rolling 12-month total (tons/year)												0.001	0.001	0.002	0.002
Offsite Worker Travel	Rolling 12-month total (tons/year)												0.003	0.003	0.003	0.003
Onsite Fugitive (Off-Road)	(tons/month)	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03	1.98E-03
Onsite Fugitive (Onsite Vehicle)	(tons/month)	1.27E-04	2.48E-04	2.28E-04	1.23E-03	1.30E-03	1.48E-03	2.07E-03	1.88E-03	2.17E-03	1.78E-03	1.78E-03	1.29E-03	9.98E-04	8.94E-04	7.95E-04
Onsite Off-Road + Onsite Vehicle	(tons/month)	2.11E-03	2.23E-03	2.21E-03	3.21E-03	3.28E-03	3.46E-03	4.05E-03	3.86E-03	4.15E-03	3.76E-03	3.76E-03	3.27E-03	2.98E-03	2.87E-03	2.77E-03
Offsite Fugitive - Haul Truck	(tons/month)	4.20E-04	8.70E-04	8.00E-04	2.59E-03	2.50E-03	2.96E-03	3.87E-03	3.36E-03	4.07E-03	3.75E-03	3.75E-03	2.50E-03	1.81E-03	1.81E-03	1.55E-03
Offsite Fugitive - Delivery Truck	(tons/month)	0.00E+00	0.00E+00	0.00E+00	6.50E-04	6.70E-04	6.20E-04	1.34E-03	1.29E-03	1.79E-03	6.70E-04	6.50E-04	6.50E-04	6.50E-04	6.70E-04	6.50E-04
Offsite Fugitive - Worker Travel	(tons/month)	1.13E-02	1.56E-02	1.50E-02	1.50E-02	4.23E-02	3.30E-02	4.12E-02	3.97E-02	3.66E-02	4.12E-02	3.97E-02	3.54E-02	3.22E-02	2.23E-02	2.04E-02
Onsite Fugitive (Off-Road)	Rolling 12-month total (tons/year)												0.02	0.02	0.02	0.02
Onsite Fugitive - Off-Road + Onsite Veh	Rolling 12-month total (tons/year)												0.04	0.04	0.04	0.04
Offsite Fugitive - Haul Truck	Rolling 12-month total (tons/year)												0.03	0.03	0.03	0.03
Offsite Fugitive - Delivery Truck	Rolling 12-month total (tons/year)												0.01	0.01	0.01	0.01
Offsite Fugitive - Worker Travel	Rolling 12-month total (tons/year)												0.37	0.39	0.39	0.40
		PM2.5														
Onsite Off-Road Equipment	(tons/month)	2.32E-03	2.65E-03	3.11E-03	3.85E-03	4.00E-03	3.63E-03	3.41E-03	2.99E-03	2.71E-03	3.05E-03	2.65E-03	2.65E-03	2.49E-03	1.62E-03	1.56E-03
Onsite Vehicle	(tons/month)	5.37E-07	1.01E-06	9.50E-07	4.54E-06	4.89E-06	5.48E-06	7.55E-06	6.47E-06	8.06E-06	6.50E-06	6.49E-06	4.62E-06	3.53E-06	3.47E-06	3.03E-06
Onsite Off-Road + Onsite Vehicle	(tons/month)	2.32E-03	2.65E-03	3.11E-03	3.85E-03	4.00E-03	3.64E-03	3.42E-03	3.00E-03	2.72E-03	3.06E-03	2.66E-03	2.65E-03	2.49E-03	1.62E-03	1.56E-03
Offsite Haul Truck	(tons/month)	9.00E-05	1.80E-04	1.70E-04	5.40E-04	5.20E-04	6.10E-04	8.00E-04	6.80E-04	8.20E-04	7.60E-04	7.60E-04	5.10E-04	3.70E-04	3.70E-04	3.10E-04
Offsite Delivery Truck	(tons/month)	0.00E+00	0.00E+00	0.00E+00	1.00E-04	1.10E-04	1.00E-04	2.10E-04	1.80E-04	2.50E-04	9.00E-05	9.00E-05	9.00E-05	9.00E-05	9.00E-05	9.00E-05
Offsite Worker Travel	(tons/month)	7.00E-05	1.00E-04	1.00E-04	1.00E-04	2.80E-04	2.20E-04	2.70E-04	2.60E-04	2.40E-04	2.70E-04	2.60E-04	2.30E-04	2.10E-04	1.50E-04	1.30E-04
Onsite Off-Road Equipment	Rolling 12-month total (tons/year)												0.04	0.04	0.04	0.03
Onsite Off-Road + Onsite Vehicle	Rolling 12-month total (tons/year)												0.04	0.04	0.04	0.03
Offsite Haul Truck	Rolling 12-month total (tons/year)												0.01	0.01	0.01	0.01
Offsite Delivery Truck	Rolling 12-month total (tons/year)												0.00	0.00	0.00	0.00
Offsite Worker Travel	Rolling 12-month total (tons/year)												0.00	0.00	0.00	0.00
Onsite Fugitive (Off-Road)	(tons/month)	3.00E-04	3.00E-04	3.00E-04	3.00E-04	3.00E-04	3.00E-04	3.00E-04	3.00E-04	3.00E-04	3.00E-04	3.00E-04	3.00E-04	3.00E-04	3.00E-04	3.00E-04
Onsite Fugitive (Onsite Vehicle)	(tons/month)	1.50E-05	2.81E-05	2.60E-05	1.30E-04	1.41E-04	1.58E-04	2.21E-04	2.00E-04	2.30E-04	1.91E-04	1.90E-04	1.39E-04	1.08E-04	9.63E-05	8.58E-05
Onsite Off-Road + Onsite Vehicle	(tons/month)	3.15E-04	3.28E-04	3.26E-04	4.30E-04	4.41E-04	4.58E-04	5.21E-04	5.00E-04	5.30E-04	4.91E-04	4.90E-04	4.39E-04	4.08E-04	3.96E-04	3.86E-04
Offsite Fugitive - Haul Truck	(tons/month)	1.20E-04	2.40E-04	2.20E-04	7.20E-04	6.90E-04	8.20E-04	1.07E-03	9.30E-04	1.12E-03	1.04E-03	1.04E-03	6.90E-04	5.00E-04	5.00E-04	4.30E-04
Offsite Fugitive - Delivery Truck	(tons/month)	0.00E+00	0.00E+00	0.00E+00	1.90E-04	1.90E-04	1.80E-04	3.90E-04	3.70E-04	5.10E-04	1.90E-04	1.90E-04	1.90E-04	1.90E-04	1.90E-04	1.90E-04
Offsite Fugitive - Worker Travel	(tons/month)	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Onsite Fugitive (Off-Road)	Rolling 12-month total (tons/year)												0.00	0.00	0.00	0.00
Onsite Fugitive - Off-Road + Onsite Veh	Rolling 12-month total (tons/year)												0.01	0.01	0.01	0.01
Offsite Fugitive - Haul Truck	Rolling 12-month total (tons/year)												0.01	0.01	0.01	0.01
Offsite Fugitive - Delivery Truck	Rolling 12-month total (tons/year)												0.00	0.00	0.00	0.00
Offsite Fugitive - Worker Travel	Rolling 12-month total (tons/year)												0.10	0.10	0.11	0.11

TABLE 4.1-8 (CONT.)

Demolition of the MGS Units 1 and 2 – Monthly and Annual Emission Calculations

Project Month		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		CO2														
Onsite Off-Road Equipment	(MT/month)	126.11	143.91	168.42	214.10	222.33	201.52	190.22	166.88	151.65	170.60	148.96	148.96	139.91	87.52	84.27
Onsite Vehicle	(MT/month)	0.017	0.029	0.027	0.093	0.118	0.123	0.167	0.151	0.180	0.151	0.150	0.111	0.089	0.081	0.072
Onsite Off-Road + Onsite Vehicle	(MT/month)	126.13	143.94	168.44	214.19	222.45	201.64	190.39	167.03	151.83	170.75	149.11	149.07	140.00	87.60	84.35
Offsite Haul Truck	(MT/month)	1.61	3.29	3.04	9.84	9.50	11.22	14.70	12.73	15.43	14.24	14.24	9.49	6.85	6.85	5.88
Offsite Delivery Truck	(MT/month)	0.00	0.00	0.00	1.88	1.95	1.81	3.90	3.76	5.20	1.95	1.88	1.88	1.88	1.95	1.88
Offsite Worker Travel	(MT/month)	9.06	12.54	12.07	12.07	34.03	26.54	33.14	31.52	29.10	32.74	31.52	28.11	25.56	17.69	16.19
Onsite Off-Road Equipment	Rolling 12-month total (MT/year)												2,054	2,067	2,011	1,927
Onsite Off-Road + Onsite Vehicle	Rolling 12-month total (MT/year)												2,055	2,069	2,012	1,928
Offsite Haul Truck	Rolling 12-month total (MT/year)												119	125	128	131
Offsite Delivery Truck	Rolling 12-month total (MT/year)												24	26	28	30
Offsite Worker Travel	Rolling 12-month total (MT/year)												292	309	314	318
		CH4														
Onsite Off-Road Equipment	(MT/month)	0.039	0.045	0.053	0.058	0.060	0.054	0.050	0.043	0.039	0.044	0.038	0.038	0.035	0.027	0.026
Onsite Vehicle	(MT/month)	4.52E-07	6.51E-07	6.30E-07	1.01E-06	1.93E-06	1.68E-06	2.17E-06	1.99E-06	2.12E-06	2.05E-06	2.00E-06	1.71E-06	1.45E-06	1.11E-06	9.80E-07
Onsite Off-Road + Onsite Vehicle	(MT/month)	0.04	0.04	0.05	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03
Offsite Haul Truck	(MT/month)	1.00E-05	2.00E-05	2.00E-05	6.00E-05	5.00E-05	6.00E-05	8.00E-05	7.00E-05	9.00E-05	8.00E-05	8.00E-05	6.00E-05	4.00E-05	4.00E-05	3.00E-05
Offsite Delivery Truck	(MT/month)	0.00E+00	0.00E+00	0.00E+00	1.00E-05	1.00E-05	1.00E-05	2.00E-05	2.00E-05	3.00E-05	1.00E-05	1.00E-05	1.00E-05	1.00E-05	1.00E-05	1.00E-05
Offsite Worker Travel	(MT/month)	4.00E-04	5.50E-04	5.30E-04	5.30E-04	1.49E-03	1.16E-03	1.45E-03	1.34E-03	1.24E-03	1.39E-03	1.34E-03	1.20E-03	1.09E-03	7.50E-04	6.90E-04
Onsite Off-Road Equipment	Rolling 12-month total (MT/year)												0.56	0.56	0.54	0.51
Onsite Off-Road + Onsite Vehicle	Rolling 12-month total (MT/year)												1	1	1	1
Offsite Haul Truck	Rolling 12-month total (MT/year)												6.80E-04	7.10E-04	7.30E-04	7.40E-04
Offsite Delivery Truck	Rolling 12-month total (MT/year)												1.30E-04	1.40E-04	1.50E-04	1.60E-04
Offsite Worker Travel	Rolling 12-month total (MT/year)												1.26E-02	1.33E-02	1.35E-02	1.37E-02
		N2O														
Onsite Off-Road Equipment	(MT/month)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onsite Vehicle	(MT/month)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onsite Off-Road + Onsite Vehicle	(MT/month)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsite Haul Truck	(MT/month)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsite Delivery Truck	(MT/month)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsite Worker Travel	(MT/month)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onsite Off-Road Equipment	Rolling 12-month total (MT/year)												0	0	0	0
Onsite Off-Road + Onsite Vehicle	Rolling 12-month total (MT/year)												0	0	0	0
Offsite Haul Truck	Rolling 12-month total (MT/year)												0	0	0	0
Offsite Delivery Truck	Rolling 12-month total (MT/year)												0	0	0	0
Offsite Worker Travel	Rolling 12-month total (MT/year)												0	0	0	0
		CO2e														
Onsite Off-Road Equipment	(MT/month)	127.09	145.03	169.73	215.54	223.83	202.88	191.47	167.96	152.63	171.70	149.90	149.90	140.77	88.20	84.93
Onsite Vehicle	(MT/month)	0.017	0.029	0.027	0.093	0.118	0.123	0.167	0.151	0.180	0.151	0.150	0.111	0.089	0.081	0.072
Onsite Off-Road + Onsite Vehicle	(MT/month)	127.10	145.06	169.76	215.63	223.95	203.00	191.64	168.12	152.81	171.85	150.05	150.01	140.86	88.28	85.00
Offsite Haul Truck	(MT/month)	1.61	3.29	3.05	9.84	9.50	11.22	14.70	12.73	15.43	14.24	14.24	9.49	6.86	6.86	5.88
Offsite Delivery Truck	(MT/month)	0.00	0.00	0.00	1.88	1.95	1.81	3.90	3.76	5.20	1.95	1.88	1.88	1.88	1.95	1.88
Offsite Worker Travel	(MT/month)	9.07	12.55	12.09	12.09	34.07	26.57	33.17	31.56	29.13	32.77	31.56	28.14	25.59	17.71	16.20
Onsite Off-Road Equipment	Rolling 12-month total (MT/year)												2,068	2,081	2,025	1,940
Onsite Off-Road + Onsite Vehicle	Rolling 12-month total (MT/year)												2,069	2,083	2,026	1,941
Offsite Haul Truck	Rolling 12-month total (MT/year)												119	125	128	131
Offsite Delivery Truck	Rolling 12-month total (MT/year)												24	26	28	30
Offsite Worker Travel	Rolling 12-month total (MT/year)												293	309	314	319

TABLE 4.1-9

Demolition of the MGS Units 1 and 2 – Summer (Peak) Daily Emissions

Project Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	ROG (lbs/day)														
Onsite Off-Road Equipment	1.77	1.94	2.40	2.97	2.97	2.89	2.56	2.31	2.27	2.27	2.03	2.03	1.90	1.15	1.15
Onsite Vehicle	2.05E-04	3.31E-04	3.22E-04	1.15E-03	1.39E-03	1.58E-03	1.97E-03	1.82E-03	2.37E-03	1.78E-03	1.83E-03	1.35E-03	1.06E-03	9.47E-04	8.74E-04
Onsite Off-Road + Onsite Vehicle	1.77	1.94	2.40	2.97	2.97	2.89	2.56	2.31	2.27	2.27	2.03	2.03	1.90	1.15	1.15
Offsite Haul Truck	0.02	0.04	0.04	0.12	0.12	0.15	0.18	0.16	0.21	0.17	0.18	0.12	0.09	0.08	0.07
Offsite Delivery Truck	0.00	0.00	0.00	0.02	0.02	0.02	0.05	0.04	0.07	0.02	0.02	0.02	0.02	0.02	0.02
Offsite Worker Travel	0.10	0.14	0.14	0.14	0.38	0.32	0.37	0.35	0.35	0.35	0.35	0.31	0.28	0.19	0.18
	NOx (lbs/day)														
Onsite Off-Road Equipment	37.82	40.70	48.48	59.43	59.43	57.65	49.36	44.72	44.12	44.12	40.14	40.14	38.04	25.46	25.46
Onsite Vehicle	0.00	0.00	0.00	0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.02	0.01	0.01	0.01	0.01
Onsite Off-Road + Onsite Vehicle	37.82	40.71	48.49	59.44	59.44	57.67	49.39	44.74	44.15	44.14	40.16	40.15	38.05	25.47	25.47
Offsite Haul Truck	0.35	0.69	0.66	2.16	2.01	2.57	3.11	2.19	2.87	2.36	2.45	1.63	1.18	1.13	1.01
Offsite Delivery Truck	0.00	0.00	0.00	0.38	0.38	0.38	0.75	0.57	0.86	0.29	0.29	0.29	0.29	0.29	0.29
Offsite Worker Travel	0.27	0.36	0.36	0.36	0.99	0.83	0.96	0.90	0.90	0.90	0.90	0.81	0.73	0.49	0.46
	CO (lbs/day)														
Onsite Off-Road Equipment	68.46	74.27	89.33	110.13	110.13	107.22	92.10	83.98	82.77	82.77	75.06	75.06	70.82	46.23	46.23
Onsite Vehicle	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Onsite Off-Road + Onsite Vehicle	68.46	74.28	89.34	110.15	110.16	107.24	92.13	84.00	82.80	82.80	75.08	75.08	70.83	46.25	46.24
Offsite Haul Truck	0.19	0.38	0.36	1.27	1.20	1.54	1.85	1.66	2.19	1.81	1.88	1.25	0.89	0.86	0.77
Offsite Delivery Truck	0.00	0.00	0.00	0.22	0.22	0.22	0.44	0.43	0.64	0.21	0.21	0.21	0.21	0.21	0.21
Offsite Worker Travel	3.15	4.20	4.20	4.20	11.39	9.59	11.09	10.47	10.47	10.47	10.47	9.34	8.49	5.66	5.38
	SO2 (lbs/day)														
Onsite Off-Road Equipment	0.11	0.12	0.15	0.18	0.18	0.18	0.16	0.14	0.14	0.14	0.13	0.13	0.12	0.07	0.07
Onsite Vehicle	1.87E-05	2.93E-05	2.86E-05	8.82E-05	1.13E-04	1.24E-04	1.56E-04	1.47E-04	1.87E-04	1.43E-04	1.46E-04	1.10E-04	8.89E-05	7.67E-05	7.10E-05
Onsite Off-Road + Onsite Vehicle	0.11	0.12	0.15	0.18	0.18	0.18	0.16	0.14	0.14	0.14	0.13	0.13	0.12	0.07	0.07
Offsite Haul Truck	1.45E-03	2.85E-03	2.74E-03	8.86E-03	8.24E-03	1.05E-02	1.28E-02	1.15E-02	1.51E-02	1.24E-02	1.28E-02	8.55E-03	6.17E-03	5.95E-03	5.29E-03
Offsite Delivery Truck	0.00E+00	0.00E+00	0.00E+00	1.70E-03	1.70E-03	1.70E-03	3.39E-03	3.39E-03	5.09E-03	1.70E-03	1.70E-03	1.70E-03	1.70E-03	1.70E-03	1.70E-03
Offsite Worker Travel	1.12E-02	1.49E-02	1.49E-02	1.49E-02	4.05E-02	3.41E-02	3.94E-02	3.96E-02	3.96E-02	3.96E-02	3.96E-02	3.53E-02	3.21E-02	2.14E-02	2.03E-02
	PM10 (lbs/day)														
Onsite Off-Road Equipment	0.18	0.20	0.24	0.30	0.30	0.29	0.25	0.23	0.23	0.23	0.20	0.20	0.19	0.12	0.12
Onsite Vehicle	4.43E-05	8.13E-05	7.77E-05	3.80E-04	3.91E-04	4.77E-04	6.11E-04	5.41E-04	7.32E-04	5.25E-04	5.42E-04	3.84E-04	2.92E-04	2.79E-04	2.56E-04
Onsite Off-Road + Onsite Vehicle	0.18	0.20	0.24	0.30	0.30	0.29	0.25	0.23	0.23	0.23	0.20	0.20	0.19	0.12	0.12
Offsite Haul Truck	0.01	0.01	0.01	0.05	0.04	0.05	0.06	0.06	0.07	0.06	0.06	0.04	0.03	0.03	0.03
Offsite Delivery Truck	0.00E+00	0.00E+00	0.00E+00	8.55E-03	8.55E-03	8.55E-03	1.71E-02	1.52E-02	2.27E-02	7.58E-03	7.58E-03	7.58E-03	7.58E-03	7.58E-03	7.58E-03
Offsite Worker Travel	6.13E-03	8.18E-03	8.18E-03	8.18E-03	2.22E-02	1.87E-02	2.16E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	1.94E-02	1.77E-02	1.18E-02	1.12E-02
Onsite Fugitive (Off-Road)	0.15	0.15	0.15	0.15	0.15	0.16	0.15	0.15	0.16	0.15	0.15	0.15	0.15	0.15	0.15
Onsite Fugitive (Onsite Vehicle)	0.01	0.02	0.02	0.09	0.10	0.12	0.15	0.14	0.18	0.13	0.14	0.10	0.08	0.07	0.06
Onsite Fugitive - Off-Road + Onsite Veh	0.16	0.16	0.17	0.25	0.24	0.28	0.30	0.30	0.35	0.28	0.29	0.25	0.23	0.21	0.21
Offsite Fugitive - Haul Truck	0.03	0.07	0.06	0.20	0.19	0.24	0.29	0.26	0.34	0.28	0.29	0.20	0.14	0.14	0.12
Offsite Fugitive - Delivery Truck	0.00	0.00	0.00	0.05	0.05	0.05	0.10	0.10	0.15	0.05	0.05	0.05	0.05	0.05	0.05
Offsite Fugitive - Worker Travel	0.88	1.18	1.18	1.18	3.19	2.69	3.11	3.11	3.11	3.11	3.11	2.77	2.52	1.68	1.60

TABLE 4.1-9 (CONT.)

Demolition of the MGS Units 1 and 2 – Summer (Peak) Daily Emissions

Project Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PM2.5 (lbs/day)															
Onsite Off-Road Equipment	0.18	0.20	0.24	0.30	0.30	0.29	0.25	0.23	0.23	0.23	0.20	0.20	0.19	0.12	0.12
Onsite Vehicle	4.08E-05	7.47E-05	7.16E-05	3.49E-04	3.60E-04	4.39E-04	5.62E-04	4.99E-04	6.74E-04	4.83E-04	4.99E-04	3.53E-04	2.69E-04	2.57E-04	2.35E-04
Onsite Off-Road + Onsite Vehicle	0.18	0.20	0.24	0.30	0.30	0.29	0.25	0.23	0.23	0.23	0.20	0.20	0.19	0.12	0.12
Offsite Haul Truck	0.01	0.01	0.01	0.04	0.04	0.05	0.06	0.05	0.07	0.06	0.06	0.04	0.03	0.03	0.02
Offsite Delivery Truck	0.00E+00	0.00E+00	0.00E+00	7.87E-03	7.87E-03	7.87E-03	1.57E-02	1.40E-02	2.09E-02	6.97E-03	6.97E-03	6.97E-03	6.97E-03	6.97E-03	6.97E-03
Offsite Worker Travel	5.69E-03	7.58E-03	7.58E-03	7.58E-03	2.06E-02	1.73E-02	2.00E-02	2.02E-02	2.02E-02	2.02E-02	2.02E-02	1.80E-02	1.64E-02	1.09E-02	1.04E-02
Onsite Fugitive (Off-Road)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Onsite Fugitive (Onsite Vehicle)	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Onsite Fugitive - Off-Road + Onsite Veh	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.04	0.03	0.03	0.03	0.03
Offsite Fugitive - Haul Truck	0.01	0.02	0.02	0.06	0.05	0.07	0.08	0.07	0.09	0.08	0.08	0.05	0.04	0.04	0.03
Offsite Fugitive - Delivery Truck	0.00	0.00	0.00	0.01	0.01	0.01	0.03	0.03	0.04	0.01	0.01	0.01	0.01	0.01	0.01
Offsite Fugitive - Worker Travel	0.24	0.31	0.31	0.31	0.85	0.72	0.83	0.83	0.83	0.83	0.83	0.74	0.67	0.45	0.43
CO2 (lbs/day)															
Onsite Off-Road Equipment	10,693	11,751	14,281	18,154	18,154	17,771	15,532	14,150	13,930	13,930	12,631	12,631	11,863	7,146	7,146
Onsite Vehicle	1.51	2.42	2.36	7.96	9.75	10.96	13.78	12.91	16.66	12.48	12.81	9.55	7.61	6.70	6.20
Onsite Off-Road + Onsite Vehicle	10,695	11,753	14,283	18,162	18,164	17,782	15,546	14,163	13,947	13,943	12,644	12,640	11,871	7,153	7,152
Offsite Haul Truck	136	268	258	834	776	990	1,201	1,080	1,418	1,163	1,208	805	581	560	498
Offsite Delivery Truck	0	0	0	159	159	159	319	319	478	159	159	159	159	159	159
Offsite Worker Travel	801	1,068	1,068	1,068	2,898	2,440	2,822	2,788	2,788	2,788	2,788	2,486	2,260	1,507	1,432
CH4 (lbs/day)															
Onsite Off-Road Equipment	3.30	3.64	4.46	4.90	4.90	4.80	4.08	3.67	3.60	3.60	3.18	3.18	2.93	2.23	2.23
Onsite Vehicle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Off-Road + Onsite Vehicle	3.30	3.64	4.46	4.90	4.90	4.80	4.08	3.67	3.60	3.60	3.18	3.18	2.93	2.23	2.23
Offsite Haul Truck	7.70E-04	1.52E-03	1.46E-03	4.76E-03	4.44E-03	5.67E-03	6.86E-03	6.32E-03	8.30E-03	6.81E-03	7.07E-03	4.72E-03	3.40E-03	3.27E-03	2.91E-03
Offsite Delivery Truck	0.00E+00	0.00E+00	0.00E+00	8.10E-04	8.10E-04	8.10E-04	1.61E-03	1.61E-03	2.42E-03	8.10E-04	8.10E-04	8.10E-04	8.10E-04	8.10E-04	8.10E-04
Offsite Worker Travel	0.03	0.04	0.04	0.04	0.12	0.10	0.12	0.11	0.11	0.11	0.11	0.10	0.09	0.06	0.06
N2O (lbs/day)															
Onsite Off-Road Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onsite Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onsite Off-Road + Onsite Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsite Haul Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsite Delivery Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsite Worker Travel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CO2e (lbs/day)															
Onsite Off-Road Equipment	10,776	11,842	14,392	18,276	18,276	17,891	15,634	14,242	14,020	14,020	12,710	12,710	11,936	7,202	7,202
Onsite Vehicle	1.51	2.42	2.36	7.96	9.75	10.96	13.78	12.91	16.67	12.49	12.81	9.55	7.61	6.71	6.20
Onsite Off-Road + Onsite Vehicle	10,778	11,844	14,395	18,284	18,286	17,902	15,648	14,255	14,037	14,032	12,723	12,720	11,944	7,208	7,208
Offsite Haul Truck	136	268	258	835	776	990	1,201	1,080	1,418	1,163	1,208	805	581	560	498
Offsite Delivery Truck	0	0	0	159	159	159	319	319	478	159	159	159	159	159	159
Offsite Worker Travel	802	1,069	1,069	1,069	2,901	2,443	2,825	2,791	2,791	2,791	2,791	2,489	2,263	1,508	1,433

TABLE 4.1-10

Demolition of the MGS Units 1 and 2 – Winter (Peak) Daily Emissions

Project Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	ROG (lbs/day)														
Onsite Off-Road Equipment	1.77	1.94	2.40	2.97	2.97	2.89	2.56	2.31	2.27	2.27	2.03	2.03	1.90	1.15	1.15
Onsite Vehicle	2.08E-04	3.36E-04	3.27E-04	1.18E-03	1.42E-03	1.62E-03	2.03E-03	1.87E-03	2.44E-03	1.83E-03	1.88E-03	1.38E-03	1.09E-03	9.71E-04	8.96E-04
Onsite Off-Road + Onsite Vehicle	1.77	1.94	2.40	2.97	2.97	2.89	2.56	2.31	2.27	2.27	2.03	2.03	1.90	1.15	1.15
Offsite Haul Truck	0.02	0.04	0.04	0.13	0.12	0.15	0.18	0.17	0.22	0.18	0.19	0.12	0.09	0.09	0.08
Offsite Delivery Truck	0.00	0.00	0.00	0.02	0.02	0.02	0.05	0.05	0.07	0.02	0.02	0.02	0.02	0.02	0.02
Offsite Worker Travel	0.10	0.14	0.14	0.14	0.38	0.32	0.37	0.35	0.35	0.35	0.35	0.31	0.28	0.19	0.18
	NOx (lbs/day)														
Onsite Off-Road Equipment	37.82	40.70	48.48	59.43	59.43	57.65	49.36	44.72	44.12	44.12	40.14	40.14	38.04	25.46	25.46
Onsite Vehicle	0.00	0.00	0.00	0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.02	0.02	0.01	0.01	0.01
Onsite Off-Road + Onsite Vehicle	37.82	40.71	48.49	59.44	59.45	57.67	49.39	44.74	44.15	44.14	40.16	40.16	38.05	25.47	25.47
Offsite Haul Truck	0.36	0.72	0.69	2.24	2.09	2.67	3.23	2.28	2.99	2.45	2.55	1.70	1.23	1.18	1.05
Offsite Delivery Truck	0.00	0.00	0.00	0.39	0.39	0.39	0.78	0.60	0.89	0.30	0.30	0.30	0.30	0.30	0.30
Offsite Worker Travel	0.32	0.43	0.43	0.43	1.16	0.98	1.13	1.06	1.06	1.06	1.06	0.94	0.86	0.57	0.54
	CO (lbs/day)														
Onsite Off-Road Equipment	68.46	74.27	89.33	110.13	110.13	107.22	92.10	83.98	82.77	82.77	75.06	75.06	70.82	46.23	46.23
Onsite Vehicle	0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Onsite Off-Road + Onsite Vehicle	68.46	74.28	89.34	110.15	110.16	107.24	92.13	84.00	82.81	82.80	75.09	75.08	70.83	46.25	46.25
Offsite Haul Truck	0.22	0.42	0.41	1.46	1.40	1.79	2.14	1.92	2.54	2.09	2.17	1.45	1.03	1.00	0.89
Offsite Delivery Truck	0.00	0.00	0.00	0.25	0.25	0.25	0.51	0.49	0.74	0.25	0.25	0.25	0.25	0.25	0.25
Offsite Worker Travel	2.92	3.89	3.89	3.89	10.57	8.90	10.29	9.70	9.70	9.70	9.70	8.65	7.86	5.24	4.98
	SO2 (lbs/day)														
Onsite Off-Road Equipment	0.11	0.12	0.15	0.18	0.18	0.18	0.16	0.14	0.14	0.14	0.13	0.13	0.12	0.07	0.07
Onsite Vehicle	1.81E-05	2.86E-05	2.79E-05	8.74E-05	1.11E-04	1.23E-04	1.54E-04	1.45E-04	1.85E-04	1.41E-04	1.44E-04	1.09E-04	8.73E-05	7.55E-05	6.99E-05
Onsite Off-Road + Onsite Vehicle	0.11	0.12	0.15	0.18	0.18	0.18	0.16	0.14	0.14	0.14	0.13	0.13	0.12	0.07	0.07
Offsite Haul Truck	1.45E-03	2.85E-03	2.74E-03	8.86E-03	8.24E-03	1.05E-02	1.28E-02	1.15E-02	1.51E-02	1.24E-02	1.28E-02	8.55E-03	6.17E-03	5.94E-03	5.29E-03
Offsite Delivery Truck	0.00E+00	0.00E+00	0.00E+00	1.69E-03	1.69E-03	1.69E-03	3.39E-03	3.39E-03	5.08E-03	1.69E-03	1.69E-03	1.69E-03	1.69E-03	1.69E-03	1.69E-03
Offsite Worker Travel	1.06E-02	1.42E-02	1.42E-02	1.42E-02	3.85E-02	3.24E-02	3.74E-02	3.77E-02	3.77E-02	3.77E-02	3.77E-02	3.36E-02	3.05E-02	2.04E-02	1.93E-02
	PM10 (lbs/day)														
Onsite Off-Road Equipment	0.18	0.20	0.24	0.30	0.30	0.29	0.25	0.23	0.23	0.23	0.20	0.20	0.19	0.12	0.12
Onsite Vehicle	4.43E-05	8.13E-05	7.77E-05	3.80E-04	3.91E-04	4.78E-04	6.12E-04	5.42E-04	7.33E-04	5.25E-04	5.43E-04	3.84E-04	2.93E-04	2.79E-04	2.56E-04
Onsite Off-Road + Onsite Vehicle	0.18	0.20	0.24	0.30	0.30	0.29	0.25	0.23	0.23	0.23	0.20	0.20	0.19	0.12	0.12
Offsite Haul Truck	0.01	0.01	0.01	0.05	0.04	0.05	0.06	0.06	0.07	0.06	0.06	0.04	0.03	0.03	0.03
Offsite Delivery Truck	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Offsite Worker Travel	6.13E-03	8.18E-03	8.18E-03	8.18E-03	2.22E-02	1.87E-02	2.16E-02	2.18E-02	2.18E-02	2.18E-02	2.18E-02	1.94E-02	1.77E-02	1.18E-02	1.12E-02
Onsite Fugitive (Off-Road)	0.15	0.15	0.15	0.15	0.15	0.16	0.15	0.15	0.16	0.15	0.15	0.15	0.15	0.15	0.15
Onsite Fugitive (Onsite Vehicle)	0.01	0.02	0.02	0.09	0.10	0.12	0.15	0.14	0.18	0.13	0.14	0.10	0.08	0.07	0.06
Onsite Fugitive - Off-Road + Onsite Veh	0.16	0.16	0.17	0.25	0.24	0.28	0.30	0.30	0.35	0.28	0.29	0.25	0.23	0.21	0.21
Offsite Fugitive - Haul Truck	0.03	0.07	0.06	0.20	0.19	0.24	0.29	0.26	0.34	0.28	0.29	0.20	0.14	0.14	0.12
Offsite Fugitive - Delivery Truck	0.00	0.00	0.00	0.05	0.05	0.05	0.10	0.10	0.15	0.05	0.05	0.05	0.05	0.05	0.05
Offsite Fugitive - Worker Travel	0.88	1.18	1.18	1.18	3.19	2.69	3.11	3.11	3.11	3.11	3.11	2.77	2.52	1.68	1.60

TABLE 4.1-10 (CONT.)

Demolition of the MGS Units 1 and 2 – Winter (Peak) Daily Emissions

Project Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PM2.5 (lbs/day)															
Onsite Off-Road Equipment	0.18	0.20	0.24	0.30	0.30	0.29	0.25	0.23	0.23	0.23	0.20	0.20	0.19	0.12	0.12
Onsite Vehicle	4.08E-05	7.47E-05	7.16E-05	3.49E-04	3.60E-04	4.39E-04	5.64E-04	4.99E-04	6.75E-04	4.84E-04	4.99E-04	3.54E-04	2.69E-04	2.57E-04	2.36E-04
Onsite Off-Road + Onsite Vehicle	0.18	0.20	0.24	0.30	0.30	0.29	0.25	0.23	0.23	0.23	0.20	0.20	0.19	0.12	0.12
Offsite Haul Truck	0.01	0.01	0.01	0.04	0.04	0.05	0.06	0.05	0.07	0.06	0.06	0.04	0.03	0.03	0.02
Offsite Delivery Truck	0.00E+00	0.00E+00	0.00E+00	7.88E-03	7.88E-03	7.88E-03	1.58E-02	1.40E-02	2.10E-02	6.98E-03	6.98E-03	6.98E-03	6.98E-03	6.98E-03	6.98E-03
Offsite Worker Travel	5.69E-03	7.58E-03	7.58E-03	7.58E-03	2.06E-02	1.73E-02	2.00E-02	2.02E-02	2.02E-02	2.02E-02	2.02E-02	1.80E-02	1.64E-02	1.09E-02	1.04E-02
Onsite Fugitive (Off-Road)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Onsite Fugitive (Onsite Vehicle)	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Onsite Fugitive - Off-Road + Onsite Veh	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03
Offsite Fugitive - Haul Truck	0.01	0.02	0.02	0.06	0.05	0.07	0.08	0.07	0.09	0.08	0.08	0.05	0.04	0.04	0.03
Offsite Fugitive - Delivery Truck	0.00	0.00	0.00	0.01	0.01	0.01	0.03	0.03	0.04	0.01	0.01	0.01	0.01	0.01	0.01
Offsite Fugitive - Worker Travel	0.24	0.31	0.31	0.31	0.85	0.72	0.83	0.83	0.83	0.83	0.83	0.74	0.67	0.45	0.43
CO2 (lbs/day)															
Onsite Off-Road Equipment	10,693	11,751	14,281	18,154	18,154	17,771	15,532	14,150	13,930	13,930	12,631	12,631	11,863	7,146	7,146
Onsite Vehicle	1.47	2.37	2.31	7.90	9.60	10.83	13.63	12.76	16.52	12.34	12.66	9.42	7.49	6.63	6.13
Onsite Off-Road + Onsite Vehicle	10695	11753	14,283	18,162	18,164	17,782	15,546	14,163	13,947	13,942	12,644	12,640	11,871	7,153	7,152
Offsite Haul Truck	136	268	258	834	775	989	1200	1079	1417	1162	1207	805	581	559	498
Offsite Delivery Truck	0	0	0	159	159	159	318	318	478	159	159	159	159	159	159
Offsite Worker Travel	762	1,015	1,015	1,015	2,756	2,321	2,684	2,651	2,651	2,651	2,651	2,365	2,150	1,433	1,361
CH4 (lbs/day)															
Onsite Off-Road Equipment	3.30	3.64	4.46	4.90	4.90	4.80	4.08	3.67	3.60	3.60	3.18	3.18	2.93	2.23	2.23
Onsite Vehicle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Off-Road + Onsite Vehicle	3.30	3.64	4.46	4.90	4.90	4.80	4.08	3.67	3.60	3.60	3.18	3.18	2.93	2.23	2.23
Offsite Haul Truck	7.70E-04	1.52E-03	1.47E-03	4.79E-03	4.47E-03	5.71E-03	6.91E-03	6.36E-03	8.35E-03	6.86E-03	7.12E-03	4.75E-03	3.42E-03	3.30E-03	2.93E-03
Offsite Delivery Truck	0.00E+00	0.00E+00	0.00E+00	8.10E-04	8.10E-04	8.10E-04	1.62E-03	1.62E-03	2.43E-03	8.10E-04	8.10E-04	8.10E-04	8.10E-04	8.10E-04	8.10E-04
Offsite Worker Travel	0.03	0.04	0.04	0.04	0.12	0.10	0.12	0.11	0.11	0.11	0.11	0.10	0.09	0.06	0.06
N2O (lbs/day)															
Onsite Off-Road Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onsite Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onsite Off-Road + Onsite Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsite Haul Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsite Delivery Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsite Worker Travel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CO2e (lbs/day)															
Onsite Off-Road Equipment	10,776	11,842	14,392	18,276	18,276	17,891	15,634	14,242	14,020	14,020	12,710	12,710	11,936	7,202	7,202
Onsite Vehicle	1.47	2.37	2.31	7.91	9.60	10.83	13.64	12.77	16.52	12.34	12.67	9.42	7.50	6.63	6.13
Onsite Off-Road + Onsite Vehicle	10,777	11,844	14,394	18,284	18,286	17,902	15,648	14,255	14,036	14,032	12,723	12,720	11,944	7,208	7,208
Offsite Haul Truck	136	268	258	834	775	989	1,200	1,079	1,417	1,162	1,207	805	581	560	498
Offsite Delivery Truck	0	0	0	159	159	159	318	318	478	159	159	159	159	159	159
Offsite Worker Travel	762	1,017	1,017	1,017	2,759	2,324	2,687	2,654	2,654	2,654	2,654	2,367	2,152	1,435	1,363

TABLE 4.1-11

Demolition of the MGS Units 1 and 2 – CalEEMod Equipment Schedule Input

Demolition Equipment	Fuel	CalEEMod Equip Type	HP															
Month					2	3	4	5	6	7	8	9	10	11	12	13	14	15
DEMOLITION																		
Articulating Boom Manlift (120, 80, 60 and 40)	Gas	Aerial Lifts	75	2	2	4	4	4	3	3	3	3	3	2	2	2	1	1
Air Compressor	Gas	Air Compressors	50	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1
Hydraulic Crane (75 ton)	Diesel	Cranes	350	1	2	3	3	3	3	2	2	2	2	1	1	1	1	1
JXT Jaw Crusher/Impact Crusher	Diesel	Crushing/Proc. Equipment	300	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0
Hydraulic Excavator	Diesel	Excavators	250	2	2	3	3	3	3	3	2	1	1	1	1	1	1	1
Forklift	Gas	Forklifts	40	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1
Pickup Truck	Gas	Off-Highway Trucks	150	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2
1-ton flat bed Truck	Gas	Off-Highway Trucks	150	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1
Fuel/Lube truck	Gas	Off-Highway Trucks	150	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dump Truck (30 ton)	Diesel	Off-Highway Trucks	300	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
Water Truck	Diesel	Off-Highway Trucks	300	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Spyder Screening plant	Diesel	Other Material Handling Equipment	84	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0
Tractor/Front Loader	Diesel	Tractors/Loaders/Backhoes	200	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1
Welding Machine	Diesel	Welders	25	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1
TOTAL				19	20	24	27	27	25	22	19	19	19	17	17	16	12	12

Notes:

Gasoline equipment are included and assumed to be Diesel-fueled in the CalEEMod calculation.

CalEEMod default load factors were used for all equipment

TABLE 4.1-12

Demolition of the MGS Units 1 and 2 – CalEEMod Vehicle Trips Input

Project Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Craft/Trade															
Asbestos Removal Certified Workers	6	12	12	12	12										
Asbestos Removal Helpers	3	6	6	6	6										
Boilermakers					8	8	8	8	8	8	8	8	6	4	4
Carpenters	2	2	2	2	2	2	4	4	4	4	4	4	4	2	2
Electricians	2				8	8	8	8	8	8	8	8	6	4	4
Ironworkers					8	8	8	8	8	8	8	4	4	2	2
Laborers	2	4	4	4	8	8	10	10	10	10	10	8	8	6	6
Pipefitters	2				8	8	8	8	8	8	8	8	8	6	6
Painters & Insulators					6	6	10	10	10	10	10	6	4	4	4
Cement Workers					0	0	0	0	0	0	0	4	4	4	2
Millwrights					2	2	4	4	4	4	4	2	2	2	2
Operators	2	2	2	2	2	8	8	8	8	8	8	8	8	2	2
Teamsters					2	2	2	2	2	2	2	2	2	2	2
Number of Craft Labor (Subtotal)	19	26	26	26	72	60	70	70	70	70	70	62	56	38	36
Construction Staff	2	2	2	2	4	4	4	4	4	4	4	4	4	2	2
Worker Trips (trips/day)	21	28	28	28	76	64	74	74	74	74	74	66	60	40	38
Worker Trips Length (miles)	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Worker Trips, Percent Paved (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Delivery Trucks (Roundtrips per month)															
Fuel Delivery Trucks (Roundtrips per month)				30	30	30	60	60	60	30	30	30	30	20	20
Number of Workdays	26	27	26	26	27	25	27	26	24	27	26	26	26	27	26
Fuel Delivery Trucks (Roundtrips/day)	0	0	0	1	1	1	2	2	3	1	1	1	1	1	1
Delivery Truck Trips Length (miles)	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Delivery Truck Trips, Percent Paved (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Note:

Worker trips and delivery truck trips length are assumed to be from the LA County line to the project site using HW 101 (a one-way trip of 30 miles, roundtrip 60 miles).

TABLE 4.1-12 (CONT.)

Demolition of the MGS Units 1 and 2 – CalEEMod Vehicle Trips Input

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Project Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Hauling Trucks (Roundtrips per month)															
Asbestos to Licensed Facility	8	16	16	16											
Hazardous Fluid Removal	4	2													
Concrete to recycling				10	30	30	30	10	30	40	40	30	20	20	10
Metal to recycling				30	30	40	60	60	60	60	60	30	20	20	20
General debris to landfill				30	30	40	40	40	50	40	40	30	20	20	20
Hazardous to qualified landfill		6	6	10	10	10	20	20	20	10	10	10	10	10	10
Total Hauling Trips	12	24	22	96	100	120	150	130	160	150	150	100	70	70	60
Hauling Truck Trips Length (miles)	89	91	92	68	63	62	65	65	64	63	63	63	65	65	65
Hauling Truck Trips, Percent Paved (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Note:

Haul truck trips length are assumed to be from the LA County line to the project site from various disposal sites via major freeways.

APPENDIX B

TRAFFIC AND TRANSPORTATION

Mandalay AFC
 Demo Year Baseline (2022) - No Project Conditions
 AM Peak Hour

Impact Analysis Report
 Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 Victoria Ave (NS) at Gonzales	D	xxxxx	0.866	D	xxxxx	0.866	+ 0.000 V/C
# 2 Harbor Blvd (NS) at Gonzales R	D	xxxxx	0.802	D	xxxxx	0.812	+ 0.010 V/C
# 3 Harbor Blvd (NS) at MEC Entran	E	46.2	0.000	E	47.4	0.000	+ 1.210 D/V
# 4 Harbor Blvd (NS) at 5th St (EW	D	xxxxx	0.842	D	xxxxx	0.852	+ 0.010 V/C
# 5 Victoria Ave (NS) at 5th St (E	B	xxxxx	0.636	B	xxxxx	0.636	+ 0.000 V/C
# 6 Victoria Ave (NS) at Doris Ave	D	xxxxx	0.841	D	xxxxx	0.841	+ 0.000 V/C

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Victoria Ave (NS) at Gonzales Rd (EW) - #1

Cycle (sec): 100 Critical Vol./Cap. (X): 0.866

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 107 Level Of Service: D

Street Name:	Victoria Ave						Gonzales Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	3	0	2	1	1	0	2	0	2	1

Volume Module:	Victoria Ave NB			Victoria Ave SB			Gonzales Rd EB			Gonzales Rd WB		
Base Vol:	32	1610	622	151	863	23	40	67	9	294	146	478
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	36	1835	709	172	984	26	46	76	10	335	166	545
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	36	1835	709	172	984	26	46	76	10	335	166	545
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	36	1835	709	172	984	26	46	76	10	335	166	545
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	1835	709	172	984	26	46	76	10	335	166	545
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	36	1835	709	172	984	26	46	76	10	335	166	545

Saturation Flow Module:	Victoria Ave NB			Victoria Ave SB			Gonzales Rd EB			Gonzales Rd WB		
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	4800	1600	3200	3200	1600	1600	3200	1600	3200	3200	1600

Capacity Analysis Module:	Victoria Ave NB			Victoria Ave SB			Gonzales Rd EB			Gonzales Rd WB		
Vol/Sat:	0.02	0.38	0.44	0.05	0.31	0.02	0.03	0.02	0.01	0.10	0.05	0.34
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Harbor Blvd (NS) at Gonzales Rd (EW) - #2

Cycle (sec): 100 Critical Vol./Cap. (X): 0.812
Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Street Name:	Harbor Blvd						Gonzales Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ignore			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	1	0	0	0	0	0	1	0

Volume Module:	Harbor Blvd NB			Harbor Blvd SB			Gonzales Rd EB			Gonzales Rd WB		
Base Vol:	0	1048	59	48	432	0	0	0	0	30	0	151
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	0	1195	67	55	492	0	0	0	0	34	0	172
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
AM Cumu Add:	0	16	0	0	4	0	0	0	0	0	0	0
Initial Fut:	0	1211	67	55	496	0	0	0	0	34	0	172
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	0	1211	0	55	496	0	0	0	0	34	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1211	0	55	496	0	0	0	0	34	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	0	1211	0	55	496	0	0	0	0	34	0	0

Saturation Flow Module:	Harbor Blvd NB			Harbor Blvd SB			Gonzales Rd EB			Gonzales Rd WB		
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1600	1600	1600	1600	0	0	0	0	1600	0	1600

Capacity Analysis Module:	Harbor Blvd NB			Harbor Blvd SB			Gonzales Rd EB			Gonzales Rd WB		
Vol/Sat:	0.00	0.76	0.00	0.03	0.31	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Crit Moves:	****			****			****			****		

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Harbor Blvd (NS) at MEC Entrance (EW) - #3

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: E[47.4]

Harbor Blvd						MEC Entrance						
North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	0	0	0	1	0	0	0	0	0
----- ----- ----- -----												
Volume Module:												
Base Vol:	2	1127	0	0	449	0	1	0	0	0	0	0
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	2	1285	0	0	512	0	1	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
AM Cumu Add:	0	16	0	0	4	0	0	0	0	0	0	0
Initial Fut:	2	1301	0	0	516	0	1	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	1301	0	0	516	0	1	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	2	1301	0	0	516	0	1	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
----- ----- ----- -----												
Capacity Module:												
Cnflct Vol:	516	xxxx	xxxxx	xxxx	xxxx	xxxxx	1821	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	1060	xxxx	xxxxx	xxxx	xxxx	xxxxx	86	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	1060	xxxx	xxxxx	xxxx	xxxx	xxxxx	86	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
----- ----- ----- -----												
Level Of Service Module:												
Queue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	47.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	E	*	*	*	*	*
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shared Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			47.4			xxxxxx		
ApproachLOS:	*			*			E			*		

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Harbor Blvd (NS) at 5th St (EW) - #4

Cycle (sec): 100 Critical Vol./Cap. (X): 0.852

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 100 Level Of Service: D

Street Name:	Harbor Blvd						5th St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	1	1	0	1	1	0	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	7	897	95	56	374	20	83	31	11	42	20	146
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	8	1023	108	64	426	23	95	35	13	48	23	166
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
AM Cumu Add:	0	16	0	0	4	0	0	0	0	0	0	0
Initial Fut:	8	1039	108	64	430	23	95	35	13	48	23	166
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	1039	0	64	430	23	95	35	13	48	23	166
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	1039	0	64	430	23	95	35	13	48	23	166
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	8	1039	0	64	430	23	95	35	13	48	23	166

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.90	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1600	1600	1600	1600	3039	161	1600	1600	1600	1600	1600	1600

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.65	0.00	0.04	0.14	0.14	0.06	0.02	0.01	0.03	0.01	0.10
Crit Moves:	****			****			****			****		

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Victoria Ave (NS) at 5th St (EW) - #5

Cycle (sec): 100 Critical Vol./Cap. (X): 0.636

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 100 Level Of Service: B

Street Name:	Victoria Ave						5th St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	0	1	0	1	1	0	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	58	1607	127	130	719	32	0	7	2	81	146	292
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	66	1832	145	148	820	36	0	8	2	92	166	333
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	66	1832	145	148	820	36	0	8	2	92	166	333
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	66	1832	145	148	820	36	0	8	2	92	166	333
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	1832	145	148	820	36	0	8	2	92	166	333
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	66	1832	145	148	820	36	0	8	2	92	166	333

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	2.87	0.13	1.00	1.56	0.44	2.00	2.00	1.00
Final Sat.:	3200	4800	1600	3200	4595	205	1600	2489	711	3200	3200	1600

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.02	0.38	0.09	0.05	0.18	0.18	0.00	0.00	0.00	0.03	0.05	0.21
Crit Moves:	****			****			****			****		

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Victoria Ave (NS) at Doris Ave (EW) - #6

Cycle (sec): 100 Critical Vol./Cap. (X): 0.841

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 117 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	0	0	0	1	0	0	1

Volume Module: 7-9 AM

Base Vol:	4	1913	89	52	978	7	3	0	7	93	0	124
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	5	2181	101	59	1115	8	3	0	8	106	0	141
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	2181	101	59	1115	8	3	0	8	106	0	141
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	2181	101	59	1115	8	3	0	8	106	0	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	2181	101	59	1115	8	3	0	8	106	0	141
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	5	2181	101	59	1115	8	3	0	8	106	0	141

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.91	0.09	1.00	1.99	0.01	0.30	0.00	0.70	1.00	0.00	1.00
Final Sat.:	1600	3058	142	1600	3177	23	480	0	1120	1600	0	1600

Capacity Analysis Module:

Vol/Sat:	0.00	0.71	0.71	0.04	0.35	0.35	0.00	0.00	0.01	0.07	0.00	0.09
Crit Moves:	****			****			****					****

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection		Base		Future		Change
		Del/ V/		Del/ V/		in
		LOS Veh C		LOS Veh C		
# 1 Victoria Ave (NS) at Gonzales	D	xxxxx 0.884	D	xxxxx 0.884	+	0.000 V/C
# 2 Harbor Blvd (NS) at Gonzales R	C	xxxxx 0.792	D	xxxxx 0.826	+	0.034 V/C
# 3 Harbor Blvd (NS) at MEC Entran	E	48.1 0.000	F	53.9 0.000	+	5.763 D/V
# 4 Harbor Blvd (NS) at 5th St (EW	A	xxxxx 0.534	A	xxxxx 0.577	+	0.043 V/C
# 5 Victoria Ave (NS) at 5th St (E	B	xxxxx 0.657	B	xxxxx 0.657	+	0.000 V/C
# 6 Victoria Ave (NS) at Doris Ave	C	xxxxx 0.750	C	xxxxx 0.750	+	0.000 V/C

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Victoria Ave (NS) at Gonzales Rd (EW) - #1

Cycle (sec): 100 Critical Vol./Cap. (X): 0.884

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 124 Level Of Service: D

Street Name:	Victoria Ave						Gonzales Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	3	0	1	2	0	2	1	2	0	1

Volume Module:	Victoria Ave NB			Victoria Ave SB			Gonzales Rd EB			Gonzales Rd WB		
Base Vol:	24	1245	325	398	1724	35	31	156	78	333	104	324
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	27	1419	370	454	1965	40	35	178	89	380	119	369
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	1419	370	454	1965	40	35	178	89	380	119	369
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	1419	370	454	1965	40	35	178	89	380	119	369
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	1419	370	454	1965	40	35	178	89	380	119	369
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	27	1419	371	454	1965	40	35	178	89	380	119	369

Saturation Flow Module:	Victoria Ave NB			Victoria Ave SB			Gonzales Rd EB			Gonzales Rd WB		
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	4800	1600	3200	3200	1600	1600	3200	1600	3200	3200	1600

Capacity Analysis Module:	Victoria Ave NB			Victoria Ave SB			Gonzales Rd EB			Gonzales Rd WB		
Vol/Sat:	0.02	0.30	0.23	0.14	0.61	0.02	0.02	0.06	0.06	0.12	0.04	0.23
Crit Moves:	****			****			****			****		

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Harbor Blvd (NS) at Gonzales Rd (EW) - #2

Cycle (sec): 100 Critical Vol./Cap. (X): 0.826

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 100 Level Of Service: D

Street Name:	Harbor Blvd						Gonzales Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ignore			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	1	0	0	0	0	0	1	0

Volume Module:	Harbor Blvd NB			Harbor Blvd SB			Gonzales Rd EB			Gonzales Rd WB		
Base Vol:	0	551	39	149	1058	0	0	0	0	53	0	108
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	0	628	44	170	1206	0	0	0	0	60	0	123
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PM Cumu Add:	0	31	0	0	55	0	0	0	0	0	0	0
Initial Fut:	0	659	44	170	1261	0	0	0	0	60	0	123
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	0	659	0	170	1261	0	0	0	0	60	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	659	0	170	1261	0	0	0	0	60	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	0	659	0	170	1261	0	0	0	0	60	0	0

Saturation Flow Module:	Harbor Blvd NB			Harbor Blvd SB			Gonzales Rd EB			Gonzales Rd WB		
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1600	1600	1600	1600	0	0	0	0	1600	0	1600

Capacity Analysis Module:	Harbor Blvd NB			Harbor Blvd SB			Gonzales Rd EB			Gonzales Rd WB		
Vol/Sat:	0.00	0.41	0.00	0.11	0.79	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Crit Moves:	****			****						****		

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Harbor Blvd (NS) at MEC Entrance (EW) - #3

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: F[53.9]

Street Name:	Harbor Blvd						MEC Entrance					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	0	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	2	576	0	0	1110	4	3	0	1	0	0	0
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	2	657	0	0	1265	5	3	0	1	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PM Cumu Add:	0	31	0	0	55	0	0	0	0	0	0	0
Initial Fut:	2	688	0	0	1320	5	3	0	1	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	688	0	0	1320	5	3	0	1	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	2	688	0	0	1320	5	3	0	1	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	1325	xxxx	xxxxx	xxxx	xxxx	xxxxx	2013	xxxx	1320	xxxx	xxxx	xxxxx
Potent Cap.:	528	xxxx	xxxxx	xxxx	xxxx	xxxxx	65	xxxx	194	xxxx	xxxx	xxxxx
Move Cap.:	528	xxxx	xxxxx	xxxx	xxxx	xxxxx	65	xxxx	194	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.05	xxxx	0.01	xxxx	xxxx	xxxx

Level Of Service Module:

Queue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	11.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	78	xxxxx	xxxx	xxxx	xxxxx
Shared Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	53.9	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	F	*	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	53.9	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	F	*	*	*	*	*

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Harbor Blvd (NS) at 5th St (EW) - #4

Cycle (sec): 100 Critical Vol./Cap. (X): 0.577

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 100 Level Of Service: A

Street Name:	Harbor Blvd						5th St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	1	1	0	1	1	0	1

Volume Module:

Base Vol:	13	489	34	140	912	62	21	42	14	78	46	66
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	15	557	39	160	1040	71	24	48	16	89	52	75
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PM Cumu Add:	0	29	4	40	23	0	0	0	0	0	0	0
Initial Fut:	15	586	43	200	1063	71	24	48	16	89	52	75
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	586	0	200	1063	71	24	48	16	89	52	75
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	586	0	200	1063	71	24	48	16	89	52	75
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	15	586	0	200	1063	71	24	48	16	89	52	75

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.88	0.12	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1600	1600	1600	1600	3000	200	1600	1600	1600	1600	1600	1600

Capacity Analysis Module:

Vol/Sat:	0.01	0.37	0.00	0.12	0.35	0.35	0.01	0.03	0.01	0.06	0.03	0.05
Crit Moves:	****			****			****			****		

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Victoria Ave (NS) at 5th St (EW) - #5

Cycle (sec): 100 Critical Vol./Cap. (X): 0.657

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 100 Level Of Service: B

Street Name:	Victoria Ave					5th St						
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	0	2	0	2	1	0	0

Volume Module:	>>	Count	Date:	18 Aug 2015	<<
Base Vol:	48	1344	131	341	1632
Growth Adj:	1.14	1.14	1.14	1.14	1.14
Initial Bse:	55	1532	149	389	1860
Added Vol:	0	0	0	0	0
PasserByVol:	0	0	0	0	0
Initial Fut:	55	1532	149	389	1860
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	1532	149	389	1860
Reduct Vol:	0	0	0	0	0
Reduced Vol:	55	1532	149	389	1860
PCE Adj:	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00
Final Vol.:	55	1532	149	389	1860

Saturation Flow Module:					
Sat/Lane:	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	2.90
Final Sat.:	3200	4800	1600	3200	4638

Capacity Analysis Module:					
Vol/Sat:	0.02	0.32	0.09	0.12	0.40
Crit Moves:	****	****	****	****	****

Mandalay AFC
Demo Year Baseline (2022) - No Project Conditions
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Victoria Ave (NS) at Doris Ave (EW) - #6

Cycle (sec): 100 Critical Vol./Cap. (X): 0.750

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 74 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	0	1	0	0	1

Volume Module: 4-6 PM

Base Vol:	3	1488	100	129	1879	6	8	7	7	85	2	48
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	3	1696	114	147	2142	7	9	8	8	97	2	55
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	1696	114	147	2142	7	9	8	8	97	2	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	1696	114	147	2142	7	9	8	8	97	2	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	1696	114	147	2142	7	9	8	8	97	2	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	1696	114	147	2142	7	9	8	8	97	2	55

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.87	0.13	1.00	1.99	0.01	0.36	0.32	0.32	1.00	0.04	0.96
Final Sat.:	1600	2998	202	1600	3190	10	582	509	509	1600	64	1536

Capacity Analysis Module:

Vol/Sat:	0.00	0.57	0.57	0.09	0.67	0.67	0.01	0.02	0.02	0.06	0.04	0.04
Crit Moves:	****			****			****			****		

Mandalay AFC
 Demo Year Baseline (2022) - Plus Project Demo Conditions
 AM Peak Hour

Impact Analysis Report
 Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 Victoria Ave (NS) at Gonzales	D	xxxxx	0.866	D	xxxxx	0.866	+ 0.000 V/C
# 2 Harbor Blvd (NS) at Gonzales R	D	xxxxx	0.802	D	xxxxx	0.824	+ 0.022 V/C
# 3 Harbor Blvd (NS) at MEC Entran	E	46.2	0.000	E	47.7	0.000	+ 1.521 D/V
# 4 Harbor Blvd (NS) at 5th St (EW	D	xxxxx	0.842	D	xxxxx	0.853	+ 0.011 V/C
# 5 Victoria Ave (NS) at 5th St (E	B	xxxxx	0.636	B	xxxxx	0.636	+ 0.000 V/C
# 6 Victoria Ave (NS) at Doris Ave	D	xxxxx	0.841	D	xxxxx	0.841	+ 0.000 V/C

Mandalay AFC
Demo Year Baseline (2022) - Plus Project Demo Conditions
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Victoria Ave (NS) at Gonzales Rd (EW) - #1

Cycle (sec): 100 Critical Vol./Cap. (X): 0.866

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 107 Level Of Service: D

Street Name:	Victoria Ave						Gonzales Rd								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Permitted			Permitted			Permitted			Permitted					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	3	0	1	2	0	2	0	1	2	0	2	0	1

Volume Module:

Base Vol:	32	1610	622	151	863	23	40	67	9	294	146	478
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	36	1835	709	172	984	26	46	76	10	335	166	545
Added Vol:	0	0	0	0	0	19	0	0	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	36	1835	709	172	984	45	46	76	10	335	167	545
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	36	1835	709	172	984	45	46	76	10	335	167	545
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	1835	709	172	984	45	46	76	10	335	167	545
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	36	1835	709	172	984	45	46	76	10	335	167	545

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	4800	1600	3200	3200	1600	1600	3200	1600	3200	3200	1600

Capacity Analysis Module:

Vol/Sat:	0.02	0.38	0.44	0.05	0.31	0.03	0.03	0.02	0.01	0.10	0.05	0.34
Crit Moves:	****			****			****			****		

Mandalay AFC
Demo Year Baseline (2022) - Plus Project Demo Conditions
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Harbor Blvd (NS) at Gonzales Rd (EW) - #2

Cycle (sec): 100 Critical Vol./Cap. (X): 0.824

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 100 Level Of Service: D

Street Name:	Harbor Blvd						Gonzales Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ignore			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	1	0	0	0	0	0	1	0

Volume Module:	Harbor Blvd NB			Harbor Blvd SB			Gonzales Rd EB			Gonzales Rd WB		
Base Vol:	0	1048	59	48	432	0	0	0	0	30	0	151
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	0	1195	67	55	492	0	0	0	0	34	0	172
Added Vol:	0	0	0	0	1	0	0	0	0	19	0	0
AM Cumu Add:	0	16	0	0	4	0	0	0	0	0	0	0
Initial Fut:	0	1211	67	55	497	0	0	0	0	53	0	172
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	0	1211	0	55	497	0	0	0	0	53	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1211	0	55	497	0	0	0	0	53	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	0	1211	0	55	497	0	0	0	0	53	0	0

Saturation Flow Module:	Harbor Blvd NB			Harbor Blvd SB			Gonzales Rd EB			Gonzales Rd WB		
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1600	1600	1600	1600	0	0	0	0	1600	0	1600

Capacity Analysis Module:	Harbor Blvd NB			Harbor Blvd SB			Gonzales Rd EB			Gonzales Rd WB		
Vol/Sat:	0.00	0.76	0.00	0.03	0.31	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Crit Moves:	****			****			****			****		

Mandalay AFC
Demo Year Baseline (2022) - Plus Project Demo Conditions
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Harbor Blvd (NS) at MEC Entrance (EW) - #3

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: E[47.7]

Street Name:	Harbor Blvd						MEC Entrance					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	0	0	1	1	0	0	0	0	0
Volume Module:												
Base Vol:	2	1127	0	0	449	0	1	0	0	0	0	0
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	2	1285	0	0	512	0	1	0	0	0	0	0
Added Vol:	2	0	0	0	0	20	0	0	0	0	0	0
AM Cumu Add:	0	16	0	0	4	0	0	0	0	0	0	0
Initial Fut:	4	1301	0	0	516	20	1	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	1301	0	0	516	20	1	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	4	1301	0	0	516	20	1	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
FollowUpTim:	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Capacity Module:												
Cnflct Vol:	536	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	1825	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Potent Cap.:	1042	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	86	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Move Cap.:	1042	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	85	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Stopped Del:	8.5	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	47.7	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	*	*	*	E	*	*	*	*	*
Movement:	LT - LTR	- RT		LT - LTR	- RT		LT - LTR	- RT		LT - LTR	- RT	
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared Queue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shrd StpDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxxx			xxxxxxx			47.7			xxxxxxx		
ApproachLOS:	*			*			E			*		

Mandalay AFC
Demo Year Baseline (2022) - Plus Project Demo Conditions
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Harbor Blvd (NS) at 5th St (EW) - #4

Cycle (sec): 100 Critical Vol./Cap. (X): 0.853

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 100 Level Of Service: D

Street Name:	Harbor Blvd						5th St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	1	1	0	1	1	0	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	7	897	95	56	374	20	83	31	11	42	20	146
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	8	1023	108	64	426	23	95	35	13	48	23	166
Added Vol:	0	1	0	0	0	0	0	0	0	0	0	1
AM Cumu Add:	0	16	0	0	4	0	0	0	0	0	0	0
Initial Fut:	8	1040	108	64	430	23	95	35	13	48	23	167
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	1040	0	64	430	23	95	35	13	48	23	167
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	1040	0	64	430	23	95	35	13	48	23	167
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	8	1040	0	64	430	23	95	35	13	48	23	167

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.90	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1600	1600	1600	1600	3039	161	1600	1600	1600	1600	1600	1600

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.65	0.00	0.04	0.14	0.14	0.06	0.02	0.01	0.03	0.01	0.10
Crit Moves:	****			****			****			****		

Mandalay AFC
Demo Year Baseline (2022) - Plus Project Demo Conditions
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Victoria Ave (NS) at 5th St (EW) - #5

Cycle (sec): 100 Critical Vol./Cap. (X): 0.636

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 100 Level Of Service: B

Street Name:	Victoria Ave						5th St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	0	1	0	1	1	0	1

Volume Module:	Victoria Ave NB			Victoria Ave SB			5th St EB			5th St WB		
Base Vol:	58	1607	127	130	719	32	0	7	2	81	146	292
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	66	1832	145	148	820	36	0	8	2	92	166	333
Added Vol:	0	0	0	0	0	0	0	0	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	66	1832	145	148	820	36	0	8	2	92	167	333
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	66	1832	145	148	820	36	0	8	2	92	167	333
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	1832	145	148	820	36	0	8	2	92	167	333
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	66	1832	145	148	820	36	0	8	2	92	167	333

Saturation Flow Module:	Victoria Ave NB			Victoria Ave SB			5th St EB			5th St WB		
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	2.87	0.13	1.00	1.56	0.44	2.00	2.00	1.00
Final Sat.:	3200	4800	1600	3200	4595	205	1600	2489	711	3200	3200	1600

Capacity Analysis Module:	Victoria Ave NB			Victoria Ave SB			5th St EB			5th St WB		
Vol/Sat:	0.02	0.38	0.09	0.05	0.18	0.18	0.00	0.00	0.00	0.03	0.05	0.21
Crit Moves:	****			****			****			****		

Mandalay AFC
Demo Year Baseline (2022) - Plus Project Demo Conditions
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Victoria Ave (NS) at Doris Ave (EW) - #6

Cycle (sec): 100 Critical Vol./Cap. (X): 0.841

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 117 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	0	0	0	1	0	0	1

Volume Module: 7-9 AM

Base Vol:	4	1913	89	52	978	7	3	0	7	93	0	124
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	5	2181	101	59	1115	8	3	0	8	106	0	141
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	2181	101	59	1115	8	3	0	8	106	0	141
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	2181	101	59	1115	8	3	0	8	106	0	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	2181	101	59	1115	8	3	0	8	106	0	141
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	5	2181	101	59	1115	8	3	0	8	106	0	141

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.91	0.09	1.00	1.99	0.01	0.30	0.00	0.70	1.00	0.00	1.00
Final Sat.:	1600	3058	142	1600	3177	23	480	0	1120	1600	0	1600

Capacity Analysis Module:

Vol/Sat:	0.00	0.71	0.71	0.04	0.35	0.35	0.00	0.00	0.01	0.07	0.00	0.09
Crit Moves:	****			****			****					****

Mandalay AFC
 Demo Year Baseline (2022) - Plus Project Demo Conditions
 PM Peak Hour

Impact Analysis Report
 Level Of Service

Intersection		Base		Future		Change
		Del/ V/		Del/ V/		in
		LOS Veh C		LOS Veh C		
# 1 Victoria Ave (NS) at Gonzales	D	xxxxx 0.884	D	xxxxx 0.896	+	0.012 V/C
# 2 Harbor Blvd (NS) at Gonzales R	C	xxxxx 0.792	D	xxxxx 0.826	+	0.034 V/C
# 3 Harbor Blvd (NS) at MEC Entran	E	48.1 0.000	F	76.7 0.000	+	28.578 D/V
# 4 Harbor Blvd (NS) at 5th St (EW	A	xxxxx 0.534	A	xxxxx 0.589	+	0.056 V/C
# 5 Victoria Ave (NS) at 5th St (E	B	xxxxx 0.657	B	xxxxx 0.669	+	0.012 V/C
# 6 Victoria Ave (NS) at Doris Ave	C	xxxxx 0.750	C	xxxxx 0.750	+	0.000 V/C

Mandalay AFC
Demo Year Baseline (2022) - Plus Project Demo Conditions
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Victoria Ave (NS) at Gonzales Rd (EW) - #1

Cycle (sec): 100 Critical Vol./Cap. (X): 0.896

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 139 Level Of Service: D

Street Name:	Victoria Ave						Gonzales Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	3	0	2	1	1	0	2	0	2	1

Volume Module:

Base Vol:	24	1245	325	398	1724	35	31	156	78	333	104	324
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	27	1419	370	454	1965	40	35	178	89	380	119	369
Added Vol:	0	19	0	0	0	0	19	1	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	1438	370	454	1965	40	54	179	89	380	119	369
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	1438	370	454	1965	40	54	179	89	380	119	369
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	1438	370	454	1965	40	54	179	89	380	119	369
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	27	1438	371	454	1965	40	54	179	89	380	119	369

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	4800	1600	3200	3200	1600	1600	3200	1600	3200	3200	1600

Capacity Analysis Module:

Vol/Sat:	0.02	0.30	0.23	0.14	0.61	0.02	0.03	0.06	0.06	0.12	0.04	0.23
Crit Moves:	****			****			****			****		

Mandalay AFC
Demo Year Baseline (2022) - Plus Project Demo Conditions
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Harbor Blvd (NS) at Gonzales Rd (EW) - #2

Cycle (sec): 100 Critical Vol./Cap. (X): 0.826

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 100 Level Of Service: D

Street Name:	Harbor Blvd						Gonzales Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ignore			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	1	0	0	0	0	0	1	0

Volume Module:	Harbor Blvd NB			Harbor Blvd SB			Gonzales Rd EB			Gonzales Rd WB		
Base Vol:	0	551	39	149	1058	0	0	0	0	53	0	108
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	0	628	44	170	1206	0	0	0	0	60	0	123
Added Vol:	0	2	20	0	0	0	0	0	0	0	0	0
PM Cumu Add:	0	31	0	0	55	0	0	0	0	0	0	0
Initial Fut:	0	661	64	170	1261	0	0	0	0	60	0	123
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	0	661	0	170	1261	0	0	0	0	60	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	661	0	170	1261	0	0	0	0	60	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	0	661	0	170	1261	0	0	0	0	60	0	0

Saturation Flow Module:	Harbor Blvd NB			Harbor Blvd SB			Gonzales Rd EB			Gonzales Rd WB		
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1600	1600	1600	1600	0	0	0	0	1600	0	1600

Capacity Analysis Module:	Harbor Blvd NB			Harbor Blvd SB			Gonzales Rd EB			Gonzales Rd WB		
Vol/Sat:	0.00	0.41	0.00	0.11	0.79	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Crit Moves:	****			****						****		

Mandalay AFC
Demo Year Baseline (2022) - Plus Project Demo Conditions
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Harbor Blvd (NS) at MEC Entrance (EW) - #3

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: F[76.7]

Street Name:	Harbor Blvd						MEC Entrance					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	0	0	1	0	0	1	0	0	0
Volume Module:												
Base Vol:	2	576	0	0	1110	4	3	0	1	0	0	0
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	2	657	0	0	1265	5	3	0	1	0	0	0
Added Vol:	0	0	0	0	0	0	22	0	22	0	0	0
PM Cumu Add:	0	31	0	0	55	0	0	0	0	0	0	0
Initial Fut:	2	688	0	0	1320	5	25	0	23	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	688	0	0	1320	5	25	0	23	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	2	688	0	0	1320	5	25	0	23	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflct Vol:	1325	xxxx	xxxxx	xxxx	xxxx	xxxxx	2013	xxxx	1320	xxxx	xxxx	xxxxx
Potent Cap.:	528	xxxx	xxxxx	xxxx	xxxx	xxxxx	65	xxxx	194	xxxx	xxxx	xxxxx
Move Cap.:	528	xxxx	xxxxx	xxxx	xxxx	xxxxx	65	xxxx	194	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.39	xxxx	0.12	xxxx	xxxx	xxxx
Level Of Service Module:												
Queue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	11.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	95	xxxxx	xxxx	xxxx	xxxxx
Shared Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	76.7	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	F	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			76.7			xxxxxx		
ApproachLOS:	*			*			F			*		

Mandalay AFC
Demo Year Baseline (2022) - Plus Project Demo Conditions
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Harbor Blvd (NS) at 5th St (EW) - #4

Cycle (sec): 100 Critical Vol./Cap. (X): 0.589

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 100 Level Of Service: A

Street Name:	Harbor Blvd						5th St					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	1	0	1	1	0	1

Volume Module:

Base Vol:	13	489	34	140	912	62	21	42	14	78	46	66
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	15	557	39	160	1040	71	24	48	16	89	52	75
Added Vol:	0	0	0	20	2	0	0	0	0	0	0	0
PM Cumu Add:	0	29	4	40	23	0	0	0	0	0	0	0
Initial Fut:	15	586	43	220	1065	71	24	48	16	89	52	75
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	586	0	220	1065	71	24	48	16	89	52	75
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	586	0	220	1065	71	24	48	16	89	52	75
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	15	586	0	220	1065	71	24	48	16	89	52	75

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.88	0.12	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1600	1600	1600	1600	3001	199	1600	1600	1600	1600	1600	1600

Capacity Analysis Module:

Vol/Sat:	0.01	0.37	0.00	0.14	0.35	0.35	0.01	0.03	0.01	0.06	0.03	0.05
Crit Moves:	****			****			****			****		

Mandalay AFC
Demo Year Baseline (2022) - Plus Project Demo Conditions
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Victoria Ave (NS) at 5th St (EW) - #5

Cycle (sec): 100 Critical Vol./Cap. (X): 0.669

Loss Time (sec): 0 (Y+R = 0 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 100 Level Of Service: B

Street Name:	Victoria Ave					5th St						
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0	1	0	2	0	2	1	0	0

Volume Module:	>>	Count	Date:	18 Aug 2015	<<
Base Vol:	48	1344	131	341	1632
Growth Adj:	1.14	1.14	1.14	1.14	1.14
Initial Bse:	55	1532	149	389	1860
Added Vol:	0	0	0	0	0
PasserByVol:	0	0	0	0	0
Initial Fut:	55	1532	149	389	1860
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	1532	149	389	1860
Reduct Vol:	0	0	0	0	0
Reduced Vol:	55	1532	149	389	1860
PCE Adj:	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00
Final Vol.:	55	1532	149	389	1860

Saturation Flow Module:					
Sat/Lane:	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	2.90
Final Sat.:	3200	4800	1600	3200	4638

Capacity Analysis Module:					
Vol/Sat:	0.02	0.32	0.09	0.12	0.40
Crit Moves:	****	****	****	****	****

Mandalay AFC
Demo Year Baseline (2022) - Plus Project Demo Conditions
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Victoria Ave (NS) at Doris Ave (EW) - #6

Cycle (sec): 100 Critical Vol./Cap. (X): 0.750

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 74 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	0	0	1	0	0

Volume Module: 4-6 PM

Base Vol:	3	1488	100	129	1879	6	8	7	7	85	2	48
Growth Adj:	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Initial Bse:	3	1696	114	147	2142	7	9	8	8	97	2	55
Added Vol:	0	19	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	1715	114	147	2142	7	9	8	8	97	2	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	1715	114	147	2142	7	9	8	8	97	2	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	1715	114	147	2142	7	9	8	8	97	2	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	1715	114	147	2142	7	9	8	8	97	2	55

Saturation Flow Module:

Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.88	0.12	1.00	1.99	0.01	0.36	0.32	0.32	1.00	0.04	0.96
Final Sat.:	1600	3001	199	1600	3190	10	582	509	509	1600	64	1536

Capacity Analysis Module:

Vol/Sat:	0.00	0.57	0.57	0.09	0.67	0.67	0.01	0.02	0.02	0.06	0.04	0.04
Crit Moves:	****			****			****			****		

APPENDIX C

VISUAL RESOURCES

KOP 1: Mandalay State Beach

Landscape Inventory

Landscape View Inventory	
Outstanding	
High	
Moderate to High	
Moderate	
Low to Moderate	The existing view from KOP 1 is rated moderate due to its recreational potential and elevated sensitivity due to its proximity to the ocean. However, the scale of the existing MGS contrasts with is visually discordant with the undeveloped natural topography of the beach and coastal dunes. The existing MGS is a focal and dominant feature in northerly views from this location.
Low	

Public View	
High	
Moderate	The existing view from KOP 1 is rated moderate due the locations use for recreation and assumed sensitivity due to its proximity to the ocean. While it has a high recreation value, it is not unique when compared to other locations along the coastline of Oxnard.
Low	

Visibility	
Dominant	The existing view from KOP 1 is rated dominant because the MGS commands viewer attention from this location looking north. The existing stack is a focal feature of the view. The proposed stack would be a lesser height, but would still occupy most of the field of view and draw attention of the viewer from this location.
High	
Moderate to High	
Moderate	
Low to Moderate	
Low	

Project Prominence

Contrast Rating			
Contrast	Rating	Weighting	Score
Form	High = 3	x 2	0
	Medium = 2		
	Low = 1		
	None = 0		
Line	High = 3	x 1	0
	Medium = 2		
	Low = 1		
	None = 0		
Color	High = 3	x 3	0
	Medium = 2		
	Low = 1		
	None = 0		
Texture	High = 3	x 1	0
	Medium = 2		
	Low = 1		
	None = 0		
Scale	High = 3	x 2	2
	Medium = 2		
	Low = 1		
	None = 0		
Contrast Rating Score			2

Scale Dominance Evaluation	
Rating	Score
Dominant	12
Co-Dominant	8
Subordinate	4
Insignificant	0
Score	4

Spatial Dominance Evaluation			
	Rating		Rating
Composition of Landscape	Prominent		
	Significant	X	
	Inconspicuous		
Spatial Position of the Project	Prominent		
	Significant		
	Inconspicuous	X	
Backdrop to the Project	Prominent		
	Inconspicuous	X	
Score			2 Subordinate
Ratings Explanation and Definitions: Dominant: If 2-3 ratings are prominent = 6 Co-dominant: If 1 rating is prominent or 2 highest ratings significant = 4 Subordinate: If 1 highest rating significant = 2 Insignificant: If all ratings are inconspicuous = 0 (Maximum highest score is 6 points)			

Project Prominence				
KOP	Contrast	Scale Dominance	Spatial Dominance	Score
#1	2	4	2	8
36-45 = severe 27-35 = strong 18-26 = moderate 9-17 = weak 0-8 = negligible				

Visual Impact Significance					
Landscape View Inventory		Project Prominence		Visual Absorption Capability	Level of Significance
High		Severe		High Absorption	Significant
Moderate to High		Strong		Moderate to High Absorption	
Moderate		Moderate		Moderate Absorption	Less Than Significant
Low to Moderate		Weak		Low to Moderate Absorption	
Low	X	Negligible	X	Low Absorption	

KOP 2: Mandalay State Beach

Landscape Inventory

Landscape View Inventory	
Outstanding	
High	
Moderate to High	
Moderate	
Low to Moderate	The existing MGS dominates northerly views from this location on Mandalay State Beach. The scale of the plant has creates a higher degree of contrast compared to KOP 1 because it is due to its geographical proximity closer to the plant (< 0.25-mile). The existing view inventory is was not rated Low due to the high recreational value of the beach location.
Low	

Public View	
High	
Moderate	The coastal dunes within Mandalay County Park are a designated scenic resource within the Oxnard Local Coastal Plan. This, combined with the recreational value of the beach location, serves to elevate the rating.
Low	

Visibility	
Dominant	The existing view from KOP 2 is rated dominant because the MGS commands viewer attention from this location. The existing stack is a focal feature of the view due to its bulk, mass, and bright orange and white coloring. Views of the stack can only be avoided if the viewer turns their head more than 45 degrees east or west when facing north at this location.
High	
Moderate to High	
Moderate	
Low to Moderate	
Low	

Project Prominence

Contrast Rating			
Contrast	Rating	Weighting	Score
Form	High = 3	x 2	0
	Medium = 2		
	Low = 1		
	None = 0		
Line	High = 3	x 1	0
	Medium = 2		
	Low = 1		
	None = 0		
Color	High = 3	x 3	0
	Medium = 2		
	Low = 1		
	None = 0		
Texture	High = 3	x 1	0
	Medium = 2		
	Low = 1		
	None = 0		
Scale	High = 3	x 2	2
	Medium = 2		
	Low = 1		
	None = 0		
Contrast Rating Score			2

Scale Dominance Evaluation	
Rating	Score
Dominant	12
Co-Dominant	8
Subordinate	4
Insignificant	0
Score	

Spatial Dominance Evaluation			
	Rating		Rating
Composition of Landscape	Prominent		
	Significant	X	
	Inconspicuous		
Spatial Position of the Project	Prominent		
	Significant		
	Inconspicuous	X	
Backdrop to the Project	Prominent		
	Inconspicuous	X	
Score			2 Subordinate
Ratings Explanation and Definitions: Dominant: If 2-3 ratings are prominent = 6 Co-dominant: If 1 rating is prominent or 2 highest ratings significant = 4 Subordinate: If 1 highest rating significant = 2 Insignificant: If all ratings are inconspicuous = 0 (Maximum highest score is 6 points)			

Project Prominence				
KOP	Contrast	Scale Dominance	Spatial Dominance	Score
#2	2	4	2	8
36-45 = severe 27-35 = strong 18-26 = moderate 9-17 = weak 0-8 = negligible				

Visual Impact Significance					
Landscape View Inventory		Project Prominence		Visual Absorption Capability	Level of Significance
High		Severe		High Absorption	Significant
Moderate to High		Strong		Moderate to High Absorption	
Moderate	X	Moderate		Moderate Absorption	Less Than Significant
Low to Moderate	X	Weak		Low to Moderate Absorption	
Low		Negligible	X	Low Absorption	

KOP 3: McGrath State Beach

Landscape Inventory

Landscape View Inventory	
Outstanding	
High	
Moderate to High	
Moderate	
Low to Moderate	Views from KOP 3 are ranked Low to Moderate for landscape conditions. Its location along McGrath State Beach/ Mandalay Beach elevates scenic quality of views toward the Pacific Ocean, and offers active and passive recreation which both elevate the ranking. However, the presence of the existing MGS substantially contrasts with the natural form, line, color and texture of the landscape, appearing visually discordant.
Low	

Public View	
High	
Moderate	McGrath Lake is a designated scenic resource within the Oxnard Local Coastal Plan. The beach provides This, combined with the recreational value of the beach location serves to elevate the rating.
Low	

Visibility	
Dominant	Similar to KOP 1 and 2, the existing view from KOP 3 is rated dominant because the MGS commands viewer attention from this location. The existing stack is a focal feature of the view due to its bulk, mass, and bright orange and white coloring. Views of the stack can only be avoided if the viewer turns their head more than 45 degrees east or west when facing south at this location.
High	
Moderate to High	
Moderate	
Low to Moderate	
Low	

Project Prominence

Contrast Rating			
Contrast	Rating	Weighting	Score
Form	High = 3	x 2	0
	Medium = 2		
	Low = 1		
	None = 0		
Line	High = 3	x 1	0
	Medium = 2		
	Low = 1		
	None = 0		
Color	High = 3	x 3	0
	Medium = 2		
	Low = 1		
	None = 0		
Texture	High = 3	x 1	0
	Medium = 2		
	Low = 1		
	None = 0		
Scale	High = 3	x 2	2
	Medium = 2		
	Low = 1		
	None = 0		
Contrast Rating Score			2

Scale Dominance Evaluation	
Rating	Score
Dominant	12
Co-Dominant	8
Subordinate	4
Insignificant	0
Score	

Spatial Dominance Evaluation			
	Rating		Rating
Composition of Landscape	Prominent		
	Significant		
	Inconspicuous	X	
Spatial Position of the Project	Prominent		
	Significant	X	
	Inconspicuous		
Backdrop to the Project	Prominent		
	Inconspicuous	X	
Score			2 Subordinate
Ratings Explanation and Definitions: Dominant: If 2-3 ratings are prominent = 6 Co-dominant: If 1 rating is prominent or 2 highest ratings significant = 4 Subordinate: If 1 highest rating significant = 2 Insignificant: If all ratings are inconspicuous = 0 (Maximum highest score is 6 points)			

Project Prominence				
KOP	Contrast	Scale Dominance	Spatial Dominance	Score
#3	2	8	2	12
36-45 = severe 27-35 = strong 18-26 = moderate 9-17 = weak 0-8 = negligible				

Visual Impact Significance						
Landscape View Inventory		Project Prominence		Visual Absorption Capability		Level of Significance
High		Severe		High Absorption		Significant
Moderate to High		Strong		Moderate to High Absorption		
Moderate		Moderate	X	Moderate Absorption	X	
Low to Moderate	X	Weak	X	Low to Moderate Absorption		Less Than Significant
Low		Negligible		Low Absorption		

KOP 4: Rancho Victoria Plaza

Landscape Inventory

Landscape View Inventory	
Outstanding	
High	
Moderate to High	
Moderate	
Low to Moderate	KOP 4 was rated moderate for landscape value. This ranking is based the panoramic nature of the view, and on the arrangement of agricultural uses in the foreground, coastal dune/topographic relief in the midground, and Pacific Ocean in the background.
Low	

Public View	
High	
Moderate	Views from KOP 4 are rated Moderate for public view. This ranking is based on the fact that the City of Oxnard has identified the “Oxnard-Ventura Greenbelt” (agricultural lands in the foreground), and the Oxnard Dunes in the midground both as scenic areas. Additionally, West 5th Street is a locally designated scenic road. The confluence of these attributes indicates the City of Oxnard places a high degree of value and interest in protecting the existing visual character and quality of this view.
Low	

Visibility	
Dominant	
High	
Moderate to High	KOP 4 is ranked moderate to high based on the reduced dominance of the MGS within the existing viewshed. From this distance, the dunes partially obscure the MGS, though the stack is still somewhat prominent. Viewer attention is drawn to the MGS facility, but it does not strongly attract viewer attention.
Moderate	
Low to Moderate	
Low	

Project Prominence

Contrast Rating			
Contrast	Rating	Weighting	Score
Form	High = 3	x 2	0
	Medium = 2		
	Low = 1		
	None = 0		
Line	High = 3	x 1	0
	Medium = 2		
	Low = 1		
	None = 0		
Color	High = 3	x 3	0
	Medium = 2		
	Low = 1		
	None = 0		
Texture	High = 3	x 1	0
	Medium = 2		
	Low = 1		
	None = 0		
Scale	High = 3	x 2	0
	Medium = 2		
	Low = 1		
	None = 0		
Contrast Rating Score			0

Scale Dominance Evaluation	
Rating	Score
Dominant	12
Co-Dominant	8
Subordinate	4
Insignificant	0
Score	0

Spatial Dominance Evaluation			
	Rating		Rating
Composition of Landscape	Prominent		
	Significant		
	Inconspicuous	X	
Spatial Position of the Project	Prominent		
	Significant		
	Inconspicuous	X	
Backdrop to the Project	Prominent		
	Inconspicuous	X	
Score			0 Insignificant
Ratings Explanation and Definitions: Dominant: If 2-3 ratings are prominent = 6 Co-dominant: If 1 rating is prominent or 2 highest ratings significant = 4 Subordinate: If 1 highest rating significant = 2 Insignificant: If all ratings are inconspicuous = 0 (Maximum highest score is 6 points)			

Project Prominence				
KOP	Contrast	Scale Dominance	Spatial Dominance	Score
#4	0	0	0	0
36-45 = severe 27-35 = strong 18-26 = moderate 9-17 = weak 0-8 = negligible				

Visual Impact Significance						
Landscape View Inventory		Project Prominence		Visual Absorption Capability		Level of Significance
High		Severe		High Absorption		Potentially Significant
Moderate to High		Strong		Moderate to High Absorption		
Moderate	X	Moderate		Moderate Absorption		
Low to Moderate		Weak		Low to Moderate Absorption	X	Less Than Significant
Low	X	Negligible	X	Low Absorption		

KOP 5: North Shore at Mandalay Bay

Landscape Inventory

Landscape View Inventory	
Outstanding	
High	
Moderate to High	
Moderate	
Low to Moderate	KOP 5 was rated low to moderate for landscape value. This ranking is based the semi-panoramic nature of the view, which includes views of the Pacific Ocean and Oxnard Dunes. The dynamic and dramatic form of the Los Padres Mountains in the background also increased the value of this view. The view was not ranked more highly due to the disruptive nature of the form and line to this landscape caused by the existing MGS, SCE switchyard, McGrath Peaker, and oil and gas drilling equipment.
Low	

Public View	
High	
Moderate	Views from KOP 5 are rated Moderate for public view. This rating was influenced by the fact that the Oxnard Dunes, Pacific Ocean, and Los Padres Mountains are all valued aesthetic resources by the City of Oxnard, and are visible from N. Harbor Drive. However, N. Harbor Drive is not specifically enumerated as a locally scenic road.
Low	

Visibility	
Dominant	
High	KOP 5 is ranked High based on the reduced dominance of the MGS within the existing viewshed. The Oxnard Dunes partially obscure the MGS, though the stack is still somewhat prominent. Viewer attention is drawn to the MGS facility, but it does not dominate viewer attention. The distant ridgelines and silhouette of the Los Padres Mountains soften the degree of contrast the existing MGS has within this viewshed.
Moderate to High	
Moderate	
Low to Moderate	
Low	

Project Prominence

Contrast Rating			
Contrast	Rating	Weighting	Score
Form	High = 3	x 2	2
	Medium = 2		
	Low = 1		
	None = 0		
Line	High = 3	x 1	1
	Medium = 2		
	Low = 1		
	None = 0		
Color	High = 3	x 3	3
	Medium = 2		
	Low = 1		
	None = 0		
Texture	High = 3	x 1	1
	Medium = 2		
	Low = 1		
	None = 0		
Scale	High = 3	x 2	1
	Medium = 2		
	Low = 1		
	None = 0		
Contrast Rating Score			8

Scale Dominance Evaluation	
Rating	Score
Dominant	12
Co-Dominant	8
Subordinate	4
Insignificant	0
Score	

Spatial Dominance Evaluation			
	Rating		Rating
Composition of Landscape	Prominent		
	Significant	X	
	Inconspicuous		
Spatial Position of the Project	Prominent		
	Significant	X	
	Inconspicuous		
Backdrop to the Project	Prominent	X	
	Inconspicuous		
Score			4 Co-dominant
Ratings Explanation and Definitions: Dominant: If 2-3 ratings are prominent = 6 Co-dominant: If 1 rating is prominent or 2 highest ratings significant = 4 Subordinate: If 1 highest rating significant = 2 Insignificant: If all ratings are inconspicuous = 0 (Maximum highest score is 6 points)			

Project Prominence				
KOP	Contrast	Scale Dominance	Spatial Dominance	Score
#5	8	8	4	20
36-45 = severe 27-35 = strong 18-26 = moderate 9-17 = weak 0-8 = negligible				

Visual Impact Significance						
Landscape View Inventory		Project Prominence		Visual Absorption Capability		Level of Significance
High		Severe		High Absorption		Significant
Moderate to High		Strong		Moderate to High Absorption		
Moderate	X	Moderate		Moderate Absorption	X	Less Than Significant
Low to Moderate		Weak	X	Low to Moderate Absorption		
Low		Negligible		Low Absorption		